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## **Combining the Benefits of Traditional Commerce and E-Commerce with M- Commerce benefits in the Retail Industry**

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## Abstract

*The convergence of traditional and electronic commerce practices is being driven by the need for businesses to keep up with the ever increasing competition of online retailing. This thesis aims to examine and analyze the possible benefits that may arise via the use and development of rapidly evolving mobile technology, through analyzing the benefits of each of the forms of commerce during outlined stages of retail process, in order to evaluate to what extent the benefits can be combined. The benefits of each form of commerce were studied by observing existing theories and validated as perceived benefits through consumer surveys and management interviews.*

*The theoretical part of this thesis is based on academic literature in the subject of Traditional commerce, Electronic commerce and Mobile commerce. The empirical studies were conducted as both qualitative and quantitative research, with a consumer survey conducted with 350 students, as well as two interviews with managers of retail stores in Västerås, Sweden.*

*Results of the analysis shows that Mobile commerce has a role to play in better combining the benefits of traditional and electronic commerce and results in a combined figure implementing the findings into a working model, which we have dubbed 'the four I's of commerce'. The results are aimed at aiding retail managers in determining whether or not to implement a revised business model including the aspect of mobile commerce.*

*Keywords: M-commerce, Clicks-and-Mortar, Interactive Marketing.*

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# 1 Introduction

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*This chapter introduces the selected area of study by discussing the background and the problem of connecting the aspects of E-Commerce and Traditional Commerce to M-Commerce. The problem formulation is followed by a presentation of the purpose, audience and disposition.*

## 1.1 Background

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Commerce is the typical and traditional way of doing business, where two or more parties interact and exchange value in some form, may it be money, products, or services. The form of commerce that has the most awareness involves the selling of goods to the final customer and is known as retailing. This usually takes place in a physical setting, namely a store or a market. This basic business model of selling a good or service in a store environment is referred to as a bricks-and-mortar business (Gay et al., 2007).

Business today is, however, also conducted via networks, with the most common network being the 'World Wide Web' where consumers shop and browse for products without leaving home (Gay et al., 2007). This form of commerce where the internet facilitates the search, payment, and delivery of a product or service is known as E-commerce. Rayport and Jaworski (2001, cited in Gay et al., 2007 p.5) define E-commerce as 'technology mediated exchanges between parties (individuals or organizations) as well as the electronically based intra or inter organizational activities that facilitate such exchanges.' Stores operating over the internet have seen massive growth in their customer numbers and sales. The online retail market in Europe grew by 41% from 2008 to 2010, and is expected to increase by a further 18.7% during 2011 (center for retail research). They are able to grow at a far higher rate than bricks-and-mortar businesses because of the absence for the need to invest in infrastructure and the ability to access a large amount of consumers on one channel (Enders & Jelassi, 2000).

E-commerce (clicks-only) and bricks-and-mortar businesses both however, have their advantages and disadvantages. The benefits of E-commerce when it comes to information exchange, efficiency, and convenience far exceeds that of the traditional bricks-and-mortar company. Bricks-and-mortar companies on the other hand have the benefit of the physical presence of the store, the use of the physical goods, and human interaction to create value through trust and security. The benefits and drawbacks of each of these business models have led to a trend of convergence of the two as to try to eliminate the drawbacks (Enders & Jelassi, 2000).

This convergence of the traditional bricks-and-mortar business and of E-commerce created a new business model 'clicks-and-mortar' (Enders & Jelassi, 2000). The 'clicks' refers to the action of using a computer's mouse to interact online whilst the 'mortar' is connected to the physical store. Clicks-and-mortar businesses use both the physical store and the internet to interact with

customers, opposed to bricks-and-mortar and pure-players (clicks-only) that operate solely in the physical world and the internet respectively (Gay et al., 2007).

Over the past few years there have been significant growth in the adoption of advanced mobile devices in the form of Smartphones. According to Comscore, Smartphone usage in EU5 (UK, DE, FR, ES, IT) increased by 41% to 60.8 million users between 2009 and 2010 (Comscore). The large adoption rates and ever increasing mobile technology now means that more people are connected to the World Wide Web than ever before.

E-commerce and E-marketing practices have also expanded into the quickly evolving mobile phone industry in the form of M-commerce and M-marketing. This means that people can purchase, browse, and sell products over the mobile phone (Gay et al., 2007).

## **1.2 Problem Formulation**

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The clicks-and-mortar model strives to integrate the online aspects from E-commerce with the physical aspects of traditional commerce (bricks-and-mortar). The trend has been for retail stores to develop their own web site or non-store based sales areas as to keep up with the changing environment (Kotler & Keller, 2006). Clicks-and-mortar businesses combine the benefits they receive from their physical storefronts and presence with those from their websites or online presence.

As Enders & Jelassi (2000) explain however, the seamless integration of these two business models is hard to achieve. The advantages of both the bricks-and-mortar and E-commerce models are well covered by theories. The theory on the advantages available to retail stores from M-commerce is however thin since the available technology is relatively new and constantly evolving.

The large adoption rate and evolving technology extends the reach of M-commerce. The developments and widespread usage of mobile technology along with the new hybrid clicks-and-mortar business model could make a rather interesting pairing as Smartphones might bring the benefits of both traditional bricks-and-mortar and E-commerce together.

The possible effect of M-commerce on clicks-and-mortar retail businesses could perhaps then be determined by the abilities of mobile devices to potentially deliver the benefits of both traditional commerce (bricks-and-mortar) and E-commerce (clicks-only).

## **1.3 Purpose**

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*The purpose of this thesis is to describe and analyze to what extent the benefits of M-commerce can combine the benefits of E-commerce and traditional commerce in the retail industry.*

## **1.4 Audience**

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The audience of this thesis is primarily managers in the retail industry. We strive to provide information in order to advise managers in the retail industry on the application of M-commerce technology. Understanding the aim of the thesis requires some pre-existing knowledge on the functions of basic marketing concepts, such as marketing management, traditional commerce and Electronic commerce. Definitions of concepts will be clearly explained in the thesis based on theoretical framework. Students and scholars in the field of business can also possibly find interest in the understanding of the theories and concepts involved.

## **1.5 Disposition**

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This thesis uses the following disposition: Chapter one contains a description of the background, the purpose and the problem formulation. Chapter two contains the concepts of theory and benefit, and definitions behind traditional commerce, E-commerce, and M-commerce based on literature review. Chapter three will provide the conceptual framework on the practical uses of the theory in chapter two. Chapter four contains the methodology and methods used to conduct the research for this thesis. Chapter five contains empirical data discovered. Chapter six contains an analysis of the possible benefits that exist for M-commerce and then to combine the benefits from both E-commerce and traditional commerce with the benefits of M-commerce based on surveys and interviews. Chapter seven contains discussions and conclusion, as well as contributions and suggestions for further research.

## **1.6 Limitations**

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The focus of the paper is solely on the positive influences from further integrating E-commerce and T-commerce. The disadvantages are therefore ignored and treated as nonexistent.

## 2 Traditional Commerce, E-Commerce, and M-Commerce

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*This chapter will contain clear descriptions and theoretical overview of traditional commerce, E-Commerce, and M-commerce. The concepts and definitions serve as theoretical framework applied to the analysis.*

### 2.1 Traditional Commerce

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According to Kotler & Keller, 2006, commerce is defined as: ‘the exchange of something of value between two entities’. Whether it is goods, services, information, money, or anything else the two entities consider to have value (investordictionary.com). An exchange is a process whereby one party receives a desired product by offering something of value in return. There are five conditions that need to be satisfied for exchange potential to exist (Kotler & Keller, 2006).

- There are at least two parties
- Each party has something that might be of value to the other party
- Each part is capable of communication and delivery
- Each party is free to accept or reject the exchange offer
- Each party believes it is appropriate or desirable to deal with the other party.

It is up to the parties to agree on the terms of the exchange in order for it to take place, when they agree, a transaction takes place and each party is better off than before the transaction (Kotler & Keller, 2006). Traditionally, these transactions take place in physical environments, with face to face negotiations, and evaluations of the goods or services to be exchanged. The two parties involved are a buyer and a seller. The seller's goal is to exchange his offering/product for something that the buyer has, usually money. The buyer's goal is to exchange money for something that can satisfy his/her need. This involves the buyer making a decision before the transaction can take place.

#### 2.1.1 Bricks-and-Mortar

The bricks-and-mortar model combines the aspects of physical space and human interaction to facilitate the sale of merchandise to the customer. This process involves the content delivery and transaction of the merchandise (Enders & Jelassi, 2000). There are three important cornerstones for a bricks-and-mortar retailer; Location, Customer, and Workforce (Kotler & Keller, 2006)

##### **Location**

One aspect of the physical retail store is the importance of its location. The physical retail store is a fixed location and therefore needs to be positioned to achieve an acquisition of a high amount of traffic, be it in a CBD (central business district) or shopping mall. Shopping malls or locations within larger stores offer the advantage of being around other stores which attract consumers to the location (Kotler & Keller, 2006).

## **Workforce**

The workforce is a key element for a retail store as the in store staff provide the human interaction with the customer. Salespeople interact with customers through face to face contact in which to provide information and help customers select products or offerings (Kotler & Keller, 2006). Langeard *et al.* (1981) add that the front line workforce also make up part of the service delivery system.

## **Customer**

The customer is a key part of the retail store, as the retailer provides for the customers' needs. Without the customer the business will fail. The aspects of location and workforce are driven by the customer; both the location and workforce are ways of connecting and communicating with the customer through physical and social mediums (Kotler & Keller, 2006).

## **2.1.2 The Benefits of Traditional Commerce**

### **Physical presence**

The physical aspects use the human senses to communicate with customers and to generate traffic. The senses of sight, touch, smell and hearing are incorporated to convey certain messages to customers both inside and outside the store. Customers get to touch, test, and examine products which therefore, involve all the senses to be used. Retailers stimulate by playing music, placing scents in the air, and putting eye catching advertising inside and outside the store in the form of billboards, promotional pamphlets, and coupons (Kotler & Keller, 2006).

### **Social interaction**

Social interactions are created through the physical presence of humans. The face to face, and generally verbal communication between people develops the social atmosphere and experience (Kotler & Keller, 2006). The social experience can be created between the customer and the workforce or between customers. This can take place within or around stores which leads to one of the biggest benefits that bricks-and-mortar retailers have, the shopping experience (Enders & Jelassi, 2000).

### **Experience**

The physical and social elements work together in attracting customers. Bricks-and-mortar retail stores are increasingly providing their customers with various activities or experiences which set their stores apart and bring in customers on a regular basis (Kotler & Keller, 2006). Enders & Jelassi (2000) emphasize the shopping experience as possibly the most important advantage that bricks-and-mortar retailers have over their online counterparts. The shopping trip is as much about the experiences, both physical and social, as the process of purchasing products for the customers' required needs (Enders & Jelassi, 2000).

## 2.2 The Service Perspective

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The concept of the service perspective is that, in today's market a firm cannot rely solely on its physical product if it wants to be effective (Grönroos, 2007). Grönroos (2007) describes that customers do not consume a physical product, but rather the service which the product provides to them. The core product needs to be combined with the support services to form an integrated service offering that can compete with the offerings of competitors. This is a relational approach to managing customers with as large an emphasis on customer retention as traditional marketing puts on customer attraction (Grönroos, 2007).

The different marketing activities involved are illustrated below in 'The service marketing triangle'.

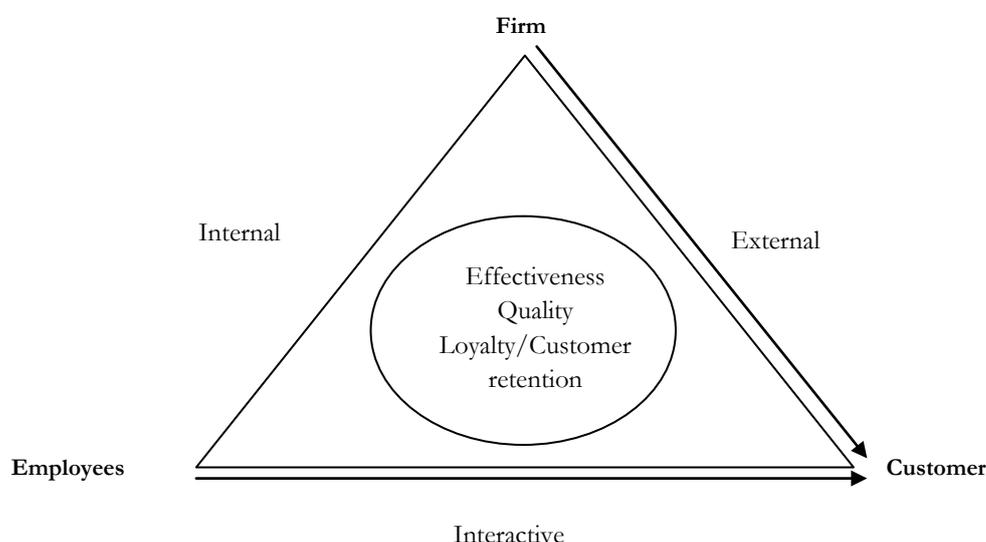


Figure 2.1 - The service marketing triangle, sourced from Grönroos, 2007.

With the customer being the focus we can see two marketing approaches. The external marketing which takes place between the firm and the customer, this involves the traditional marketing activities like advertising and promotional campaigns through various channels (Grönroos, 2007). This is part of the process of customer attraction (Kotler & Keller, 2006), Grönroos (2007 p.61) also refers to it as 'making promises'. Interactive marketing takes place between the front-line employees and the customer. This activity affects the customers' experience and builds the customer relationship, which in turn aims to ensure return business and customer loyalty/retention (Grönroos, 2007).

## 2.3 E-commerce

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Electronic Commerce, commonly known as E-commerce, is the use of the internet and the web to transact business. Laudon and Traver (2008) suggest that E-commerce is more formal and digitally enabled commercial transactions between and among organizations and individuals. Turban et al. (2006) define E-commerce as the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, including the internet. Drucker (2002) defines E-commerce as ‘a major, world-wide distribution-channel for goods, services, and managerial- and professional jobs’ (Drucker, 2002, pp. 3-4). Furthermore, Drucker (2002) states that ‘E-commerce is changing economics, market, and industry structures, products, and services, and their flow; consumer segmentation, consumer values and consumer behavior; jobs and labor markets’ (pp. 3-4).

### 2.3.1 Business to Consumer (B2C) E-commerce

E-commerce consists of different classifications of transactions or interactions. It deals with various kinds of business concerns such as the retail site of the consumers, and the business site of the retailer. The main focus of the classifications is to focus on the business substitutes, which all involve goods and services between various organizations and consumers. The primary type of E-commerce is Business to Consumer (B2C) (Turban, 2006).

The internet offers a wide diversity of possibilities for businesses to meet consumers, and a number of different technologies and services represent a variety of models created specifically for the purpose. The *business-to-consumer (B2C)* E-commerce, in which online businesses seek to reach individual consumers, is the most well-known and familiar type of E-commerce. The online transactions of products between businesses and individual consumers are done directly between the two parties through electronic channels without any ties to the physical store (Laudon and Traver, 2008). According to Turban et al. (2006), the most common variation of B2C E-Commerce is known as electronic retailing, or *e-tailing*, and involves an online transaction of retail products. The e-tailing business model is similar to the typical bricks-and-mortar storefront, except that customers only have to connect to the internet in order to check their inventory and place an order.



Figure 2.2 – The E-tailing business model (sales). Own figure adapted from Turban et al. (2006)

Figure 2.1 shows the transaction and related activities between business and consumer in E-tailing. The E-tailing business model creates a relationship between buyer and seller, through direct marketing taking place without intermediaries. The connection between the two parties have the advantage of providing businesses with a better understanding of the market because of the direct connection to consumers, which creates a large opportunity for businesses to influence the buying decision with no physical presence (Turban et al. 2006).

## 2.3.2 The Benefits of E-commerce

The E-commerce technology dimensions features eight unique technologies that challenge the business thinking and suggests new possibilities for marketing and selling of products and services. Laudon and Traver (2008) suggest that these unique dimensions are a powerful set of interactive, personalized, and rich messages to the targeted audience, have significance for business, and distinguish E-commerce from traditional offline business transactions. The purpose of the eight E-commerce technologies is furthermore explained as providing a tool making it possible for merchants to increase knowledge about consumers and to be able to use the information more effectively. Observing the eight dimensions, the E-commerce technology shows justification for their business significance, and for the organizational benefits they provide:

- **Ubiquity**

In traditional commerce, a marketplace is a physical place you visit in order to make a transaction. For example, large products such as television and computers, typically motivates the consumer to go to a physical store to make the purchase. E-commerce is ubiquitous, meaning that it is characterized by its availability everywhere, at all times. The ubiquity of E-commerce frees the market from being limited to a physical store and makes it possible for the consumer to shop from their own home (Laudon & Traver, 2008).

- **Global reach**

E-commerce technology allows commercial transactions to cross cultural and national boundaries far more conveniently and effectively as compared to traditional commerce. As a result, the potential market size for e-commerce merchants is roughly equal to the size of world's online population (Laudon & Traver, 2008).

- **Universal Standards**

According to Laudon and Traver (2008), the technical standards for carrying out E-commerce are shared by all nations around the world. In contrast, traditional commerce is being carried out differently depending on market and nation. The benefits of having a universal standard for doing E-commerce are a lowered *market entry cost*; the cost merchants must pay to bring goods to the market, and a reduced *search cost*; the effort consumers are required to make in order to find a product.

- **Information Richness**

According to Evans & Wurster (in Laudon & Traver, 2008), the information richness in traditional commerce, refers to the complexity of a message delivered to consumers, i.e. the face-to-face service information offered in a traditional store using aural and visual aids, providing the consumer with knowledge of a product. E-commerce have adapted the information richness, and according to Fink et al. (2004) the aspect of E-commerce offers considerably more information, and allows retailers to sell complex products and services, that would otherwise require a face-to-face arrangement, such as cars and vacations.

- **Interactivity**

Different from all other commercial technologies of the twentieth century, with the exception of the telephone, E-commerce allows for a two-way communication between consumer and retailers. In contrast, conventional television does not have the possibility to engage in conversation with the viewer and ask questions concerning their buying behavior, nor can it request information about the consumer's needs and wants. All of these activities are possible on an E-commerce website. The interactivity of the E-commerce website allows retailers to engage in conversation with the consumer, similar to a face-to-face experience, on a global scale (Laudon & Traver, 2008).

- **Information Density**

The total amount and quality of information available to the participants in a market, including consumers and retailers, have been increased with the internet and web. The E-commerce technologies reduce the information collection, storage, processing and communication costs (Laudon & Traver, 2008). E-commerce market density creates a *price transparency*; the effort required by consumers to find prices in a market, and a *cost transparency*; the ability of consumers to discover the actual price paid by retailers (Sinha, 2000 in Laudon & Traver, 2008).

- **Personalization/Customization**

E-commerce technology gives access to a large variety of personalization options for retailers, meaning they can target a specific individual by creating a personal message including the person's name, interests, and prior purchases (Laudon & Traver, 2008). The personalization of customers, allows retailers to customize the product or service according to the information gathered about a customer's preferences based on prior behavior. The result of personalization and customization is a personal bond between customer and retailer, which allows the firms to precisely identify market segments and adjust messages accordingly (Laudon & Traver, 2008).

- **Social Technology**

The E-commerce technology has evolved into allowing users to create and share content in the form of text, video, music, or photos within a worldwide community. E-commerce has the potential to invert the standard media model of one-to-one technology, such as the telephone, to permit retailers to program their own content utilization and reach millions of potential customers worldwide (Laudon & Traver, 2008).

## 2.4 M-commerce

M-commerce is a continuation of a wireless connection product that goes beyond the television (TV) or personal computer (PC) in the form of a handheld portable device such as a personal device assistant (PDA) that offers a connection at all times and all places that the owner or carrier of this device may be on (O’Dea, 2000). A newer definition is Mobile Commerce is the transactions that take place through the mobile phone in terms of monetary exchange and information gathering (Veijalainen et al., 2003).

The essence of M-commerce is an emerging E-commerce that benefits customers and vendors. Wireless applications in the area of banking, financial services, shopping, ticketing, and travel will and have been developed to be used easy and effectively. Moreover, M-commerce is continuing to create beneficial applications and modes that can catapult companies and customers into a new way business is applied (Joseph & Mahatanankoon, 2004).

Figure 2.3 shows the aspect of mobility and driving forces behind the modes and applications of M-Commerce.

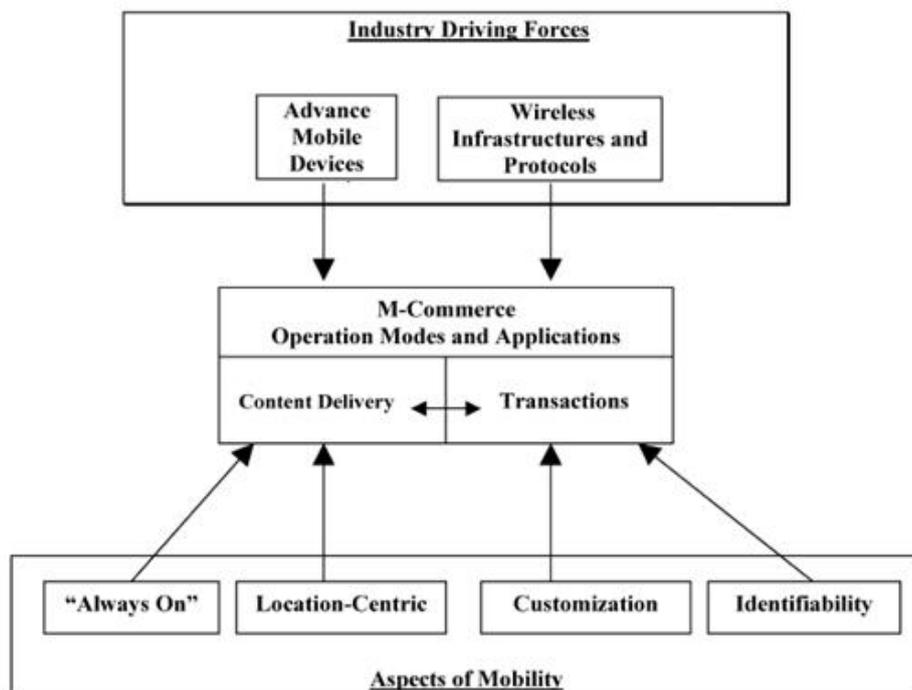


Figure 2.3 - Modified model of M-commerce Operation Modes, sourced from: Joseph Wen, H. and Mahatanankoon, P. (2004)

The idea behind this figure is how m-commerce works in terms of creating modes and applications but realize no one has found a revolutionary application or mode that will take off M-commerce. For example, Amazon.com was that take off application to E-commerce thus giving birth to a whole set of market places online (Joseph & Mahatanankoon, 2004).

### **2.4.1 Wireless Infrastructure and Protocols**

This section describes the wireless technologies that are used during the writing of this thesis. The wireless technologies described gives knowledge of the connection between the mobile phones and Personal Digital Assistants (PDA's) modes and applications to the proper information channel being accessed.

#### **3G**

3G is the third generation of wireless technology for the mobile phone and other PDA's. This upgraded technology brings high speed transmissions, advanced multimedia access, and can be used all over the world where available. These improvements allows for better video and sound streaming quality (Nadeem Unith). According to the U.S company 'Sprint,' the average download speed is 600Kbps - 1.4 Mbps and its maximum rate at 3.1Mbps (sprint.com)

#### **4G**

The newest mobile network 4G, which is the fourth generation of wireless technology. This however is split into two technologies Long Term Evolution (LTE) and WiMax. Both provide faster speeds that are between three and ten times faster than the 3G mobile network. The average speed of Sprints WiMax is 3-6 Mbps and its maximum over 10Mbps (sprint.com)

#### **Wi-Fi**

Wi-Fi which is uncommonly known as IEEE 802.11b is the commonly used network for wireless broadband internet access for mobile phones and PDA's. Wi-Fi can be used in 'hotspots' which are open public and private internet access points for the device to connect to (Henry & Hui, 2002).

#### **GPS**

Global Positioning System (GPS) is a technological device that provides highly accurate reading of your position and velocity that can be obtained on your mobile device or PDA. This technological device is now standard on Smartphones and mobile telephones, which provides a more accurate and cost effective use when obtaining the information. Now these phones have added measurements of direction of travel, acceleration, elevation, and instantaneous velocity (Herrera et al, 2002).

### **2.4.2 Advanced Mobile Devices**

With all these small advances towards the mobile phones usability will always remain a challenge. Phones need to continue advancing in technology to make the device adequate and easy to use when reading or using content from the mobile phone (Joseph & Mahatanankoon, 2004, p.303). Smartphone's are being designed for the consumer in mind when surfing the web with newer technologies such as High Definition (HD) screens, touch-screens, and high data storage (Sadeh, 2002). The other idea is the software platform of these modes and applications that can be universal in the terms of being adaptable into other types of phone devices and platforms. Meaning, all modes and operation software that provide the service can be downloaded or installed into other mobile device product models and the different companies that provide these phones (Joseph & Mahatanankoon, 2004).

### 2.4.3 Aspects of Mobility

Joseph and Mahatanankoon (2004) describe 4 aspects of mobility in M-commerce operations and applications; 'Always on,' Location centric, Customization, and Identifiable.

First, a phone is '**always on**' means that there is little time users turn off their cell phone. This is comparing to how mobile phones are better to the PC because they take a longer time to power up and power down (Joseph & Mahatanankoon, 2004).

Second, mobile phones are also '**location centric**' due to GPS technology knowing where the phone is to personalize the services out there accordingly (Joseph & Mahatanankoon, 2004).

Third, '**customization**' in mobile phones has a better market in targeting the segments that wish to purchase the diverse range of phones. These phones come with their own tools and applications that can best fit the lifestyle of the consumer (Joseph & Mahatanankoon, 2004).

Fourth, mobile phone is also '**identifiable**' which allows built in ID support such as phone number and personal data information that connects the user to the mobile phone to ensure security and trust with transactions made. A PC however, is virtually anonymous and lack security (Joseph & Mahatanankoon, 2004).

### 2.4.4 M-commerce Modes and Applications

In this section we describe the mobile modes and applications that are being used on the mobile phone or PDA's. Such is to explain how the mobile phone provides content to the user and in what way. Next explained, is the transactions of the mobile phone with purchases done by the user.

#### **Content Delivery**

Content delivery is the presentation of information through different channels such as the mobile web, applications, notifications, etc. The content should be delivered with high quality and usability. Content deliveries on mobile phones are to be personalized to the consumer depending on where they stand and previous information preferences. The mobile phone user also chooses to release information to better serve the consumers information preferences (Joseph & Mahatanankoon, 2004).

#### **Real-time information accessing**

'Real-time information services are able to provide customers with 'just-in-case' mobile applications to stay in touch with world markets at all times.' This information can also be accessed to retail industries and can check for customer reviews, ratings, and alternatives: 'always on', location-centric, and customization. Users can also discover special offerings (customizable) and are suited to their individual information (identifiable) (Joseph & Mahatanankoon, 2004).

#### **Location-centric information**

'The location-centric applications enable consumers to find a specific merchant (customization), within a predetermined radius of their geographic location (location-centric) using the signal

emitted by the transmitter within their wireless device (identifiable)' These three aspects can be sent to the mobile device at anytime because the phone is 'always on'(Joseph & Mahatanankoon, 2004).

### **Transactions**

In the transactions of M-commerce, companies depend upon their business transactions being done over the internet. Consumers shop on the mobile catalogue and make a purchase of the product online. Whilst security, speed, and ease of use are part of the hidden obstacles, there still shows to be cases of successful M-commerce transactions such as taxi, train, and bus fares shown on the screen as ticket receipts. In addition, purchases can be made wirelessly on vending and coke machines. These operations are successful based on time sensitivity and simple yes or no questions (Joseph & Mahatanankoon, 2004).

### **M-wallets**

Mobile wallets are software ideas that can open the information from the mobile phone which the information holder has agree to leave to the offering banks secure server. With the push of a button banks can send the appropriate information to the company giving the product offering. This type of transaction system could replace the wallet (Joseph & Mahatanankoon, 2004). Steps have already been taken with applications for smart phones such as by Moxier, in which information is stored on a secured company server that is password locked to the application holders chosen user name. The idea is not for transactions yet but holds the users information in case of a lost or stolen wallet or items in the wallet (moxier.com).

### **One-touch transaction**

One touch transaction is payment by mobile phone by the consumer at the location centric point of sale as opposed to pulling out a credit card. After approval of the payment a digital copy of the store receipt would then be transferred for the mobile telephone for the user to do as pleased such as personal finance software to a bank or personal computer (Joseph & Mahatanankoon, 2004).

The near field communication (NFC) technology is already under testing that could lead to paying with the mobile phone. This technology requires a short range radio frequency between two devices that can offer secure transactions with no outside interference since it requires a very short range of radio frequency of around 4 centimeters (Benyo et al, 2007).

## **2.4.5 Retail Mobility Services**

Retail Mobility Services is NFC and GPS applications that involve tagging to transactions and content delivery. According to Banerjee et al. (2009) 'With the growing popularity of social networking, traditional Internet Service Providers (ISPs) and Telecom operators have both started exploring new opportunities to boost their revenue streams.' What they are doing is providing a service that helps you find your desired business or places of interest (customized) that is identifiable around your current location (Location centric).

GPS is delivering the co-ordinate which is stored on the internet which is provided to the consumer through Wi-Fi, 3G, and/or 4G (real-time information). What is proposed is that a customer who goes inside a store with the mobile device can access information on each product at

a designated 'hot spot' near the product. This then could be used to decide further if the consumer wishes to buy the product or not. Once it is decided checkout can be done immediately or at a 'one touch' designated station. Also the payment can be attached to the specific customer's loyalty program (Benyo et al, 2007).

## 2.5 The Consumer Buying Decision Process

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Kotler and Keller (2006) describe a five-stage-model for the buying decision process, which can be used by sellers to better understand the buyers' behavior. This section is to explain the graph of the buying decision process below.

**The buying decision process in Traditional- (T), Electronic- (E) and Mobile- (M) commerce**



Figure 2.4 – The buying decision process in Traditional-, Electronic- and Mobile commerce. Sourced from Kotler and Keller, 2006.

### **Problem recognition**

Kotler and Keller (2006) say this is where the buying process starts, when a buyer recognizes a problem or need. The need is created by either internal or external stimuli. Gathering information on what triggers certain needs is an important tool for marketers.

### **Information search**

Once a potential customer is aroused by a need or problem they are inclined to search for more information on the particular satisfier. Kotler and Keller (2006) distinguish between two levels of arousal. The first being 'heightened attention' where the individual is more receptive to information about the product. At the next level the individual might enter an 'active information search'. They also identify four main groups of information sources that the individual in this state might turn to. And they are: personal, which would be by asking family, friends or acquaintances; commercial, by studying advertising, web sites, sales persons and packaging; public, mass media and consumer-rating organizations; experiential, by examining or using the product.

The different information sources do also carry differing amounts of influence according to Kotler and Keller (2006), the most information about the product is received from commercial sources, and however the personal and public sources are the most effective as they legitimize the product by being independent authorities and likely trusted sources.

### **Evaluation of alternatives**

At this stage the consumer is processing the different information about the product and the competing products. Kotler and Keller (2006) explain that no one consumer process is alike, with regards to other consumers or products. There are several models for these processes, the most current of which see the process as a conscious and rational judgment of the different problem solving attributes that the product offers the consumer. The customer's beliefs and attitudes also

often effect the evaluation, these are personal feelings or emotions that can affect the evaluation process and their decision to purchase (Kotler & Keller, 2006).

### **Purchase decisions**

During this stage the consumer will already have preferences among the different products or brands to choose from and might form an intention to purchase the most preferred. Kotler and Keller (2006) outline five sub-decisions that a consumer might make whilst executing a purchase intention: brand, dealer, quantity, timing, and payment method. The more common the purchase the fewer decisions will need to be made as they become less important with regards to place, time and payment method. There are also two intervening factors that can influence the process between the purchase intention and the purchase decision (Kotler & Keller, 2006)

Factor 1: The attitudes of others, the extent to which the attitude of another person reduces the preference of an alternative depends on two things

- 'The intensity of the other person's negative attitude towards the consumer's preferred alternative.'
- 'The consumer's motivation to comply with the other person's wishes.'

Thus the consumer will be more inclined to change their intention to purchase depending on how intense the other person's opinions or attitudes are and how much influence they have on the consumer, usually depending on how close they are to the consumer and how much respect they carry. It is also important to note that if another person favors the brand then the consumer's preference for the brand or product will therefore increase (Kotler & Keller, 2006). Intermediaries who publish evaluations and unbiased reviews are also closely related to these factors and due to the large amount of information available online, via websites and chat rooms, many consumers are influenced by these reviews and evaluations (Kotler & Keller, 2006).

Factor 2: Unanticipated situational factors that change the purchaser's intentions. These are any external factors which may change a consumer's mind or intention to purchase. The consumer's decision is usually heavily influenced by perceived risk (Kotler & Keller, 2006). The level of uncertainty and perceived risk involved in a transaction is determined by the amount of money involved and the amount of consumer self confidence. Consumer's will often take steps to avoid risks, this involves gathering information from trusted sources, looking for trusted brands or warranties or even deciding not to purchase (Kotler & Keller, 2006).

### **Post-purchase behavior**

The consumer's perception of whether their purchase was a successful on or not is determined after the purchase and thus it is important for marketers to ensure the consumer that it was and reinforce their choice (Kotler & Keller, 2006). The consumer's satisfaction is determined by the difference between their perceived performance and their expectations. If the performance meets or exceeds expectations the consumer will be satisfied, if it does not, the consumer will be dissatisfied (Kotler & Keller, 2006). The consumer's satisfaction or dissatisfaction will likely influence the probability of their return business as well as their perceptions of the brand or

product and what they communicate to people that they may know. Thus, they might either promote the product/brand or warn friends not to make the same decision (Kotler & Keller, 2006). There is also an argument to be made for monitoring the consumer's use and disposal of the products as it could provide valuable information on consumption rates and sales frequency. This may provide opportunities for marketers to increase the frequency of product use, as consumers might fail to replace products with short lifespan in time. This can be done by finding ways to inform the consumer when the product needs replacing, due to either a period of time or product wear (Kotler & Keller, 2006).

## **2.6 The Retailers' Perspective**

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There are three main objectives that can be deduced from the theory in terms of the seller's viewpoint.

### **Customer attraction**

Customer attraction is the role of external marketing process, in which the retailer alerts the customer to a specific need which the retailer can provide for. We can link this to the Problem recognition stage of the buyer decision process (Kotler & Keller, 2006).

### **Facilitating the exchange/transaction**

Facilitating the exchange is done through assisting customers and providing information in order for them to make the decision to purchase (Kotler & Keller, 2006). This process includes the transaction and delivery. This is the process of direct dealings between the customer and the employees, interactive marketing, through traditional or electronic mediums (Grönroos, 2007). The facilitation of the transaction can be at the, information search, evaluation of alternatives and purchase decision stage of the buying decision process.

### **Customer retention**

Customer retention is done by the interactive marketing and the physical product and after sales service. Providing the customer with a complete service offering, satisfying their needs and expectations will build customer loyalty and retention (Grönroos, 2007). The after sales service is also a critical factor in retaining customers (Kotler & Keller, 2006). All these elements affect the post purchase behavior stage of the buying decision process.

### 3 Conceptual Framework

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*This chapter contains the conceptual framework developed through understanding the theoretical framework of this thesis. The four I's of Commerce is a conceptual figure created by the authors, by combining the appropriate aspects of the theories of commerce in chapter 2.*

#### 3.1 The Four I's of Commerce

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What is evident from the theory is that every form of commerce is being supported by aspects which provide the various benefits posed. The cornerstones of traditional commerce (location, customer and workforce) (Kotler & Keller, 2006), create the key aspect of **'Interaction.'** In E-commerce the internet is called the **'Interface'** that allows the user to access the information in the form of a web site or application (Laudon & Traver, 2008). The benefits of mobile commerce are not yet evident, but it could be that the advanced mobile devices using wireless connections are the **'Infrastructure'** which supports the interface and interactivity (Joseph & Mahatanankoon, 2004).

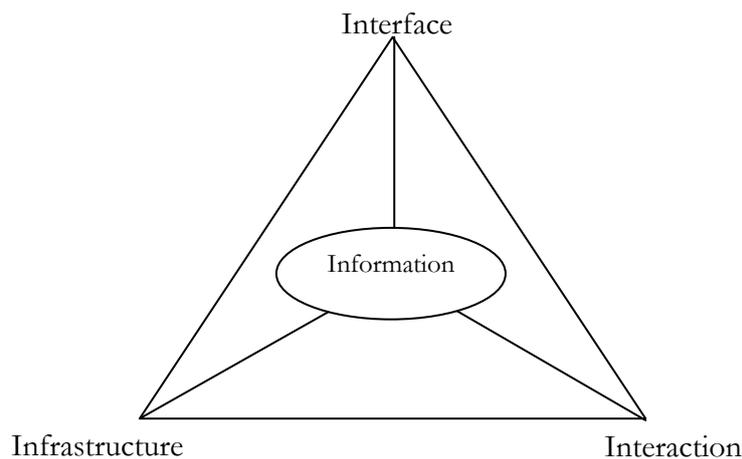


Figure 3.1- Conceptual Model of the 'four I's of commerce' (Authors model)

We can say that all three of these elements are required for the hybrid of combined traditional, electronic, and mobile commerce which represent the 'retailer's perspective' that could be better used to the 'buyer decision process model' with each approach consisting of **'Information.'** This leads us to a new concept of 'The four I's of Commerce.'

This model represents the idea that the 'Infrastructure' used in M-commerce better ties the linkage of the 'Interface' of E-commerce to physical 'Interaction' of traditional commerce. Basically, the wireless infrastructure and protocols and the advance mobile devices (which are the Industry driving forces of M-commerce) provide the mobility of the interface of E-commerce to the user. It also provides the usage of communicating between buyer and seller during the shopping experience. This interaction could be used through interface or to entice buyers to come in the place of sale straight through the infrastructure itself in terms of wireless connection.

Buyers are now offered what could be a more positively ideal way to retrieve information without there being gaps such as, fixed location, time, and two way communication such as TV and newspapers, between interface and interaction. However, this concept created lacks the proof of infrastructure through the benefits of M-commerce and the combined benefits of M-commerce to E- and traditional commerce. Therefore our analysis will prove these benefits to tie to the four I's of commerce model.

## 4 Methodology and Methods

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*This chapter describes the methodology and methods used to collect and analyze empirical findings in order to fulfill the purpose of this thesis. The chapter will include the researchers' attitudes and decisions taken during the process of forming this thesis.*

### 4.1 Methodology

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*The methodology section contains the theories related to conducting the research used for this thesis. The section includes a detailed explanation of the approaches taken to the research a model of qualitative vs. quantitative research methods, and the decisions made for the purpose of this thesis.*

#### 4.1.1 Research Approach

There are two different ways to conduct research: the inductive approach, and the deductive approach. Both research approaches describe the relationship between research and theory. In the *inductive approach*, research is based on the assumption that because things have always been so, that is how they will be in the future, whereas in the *deductive approach* (see figure 4.1 below), research is conducted based on ideas collected from theory (Bryman and Bell, 2011). Regarding this study, a deductive research approach is applied by using a theoretical framework, in order to explain the empirical data collected. The deductive approach is linear, meaning that each step of the research follows the preceding and contributes to the theoretical analysis. A deductive research approach is used when collecting quantitative data and evaluating the positive and negative sides (Bryman and Bell, 2011).

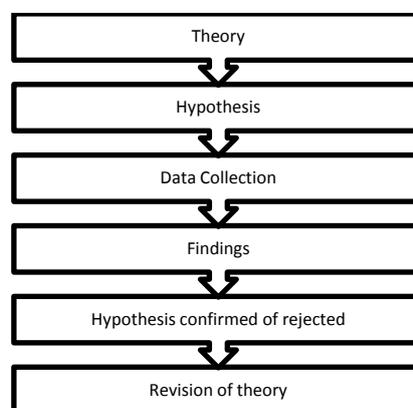


Figure 4.1 - The process of deductive research (Bryman & Bell, 2011)

In the theory stage, we overview the theoretical framework of three different commerce-strategies: E-commerce, M-commerce and traditional commerce. In the hypothesis stage, we formulate a purpose regarding the connection and benefits between the three commerce strategies in the retail industry. In the third stage, we collect data by conducting a questionnaire survey. When we have gathered the information, we analyze our findings and make a preliminary conclusion drawn upon data collected. In the final stage theory is revised and findings presented in order to create a final conclusion.

#### 4.1.2 Research Strategy: Quantitative and Qualitative

When collecting data, there are two different research strategies available: quantitative and qualitative research. *Quantitative research* is a hypothesis-testing method relying on the analysis of numbers and conducted by the researcher, whereas *qualitative research* is a hypothesis-creating method, focusing on the analysis of answers received from third-party participants. The quantitative research strategy is perceived as a stronger basis for collecting data than the qualitative strategy (Aurbach and Silverstein, 2003).

The main difference between quantitative and qualitative research is not the ‘quality’, but the methods and procedures used for conducting the research, and is not only a question of quantification but also a reflection of the different perspectives and knowledge of research objectives (Pervez and Grønhaug, 2005). Quantitative and qualitative research methods are not mutually exclusive. It is common that the collection of data is done through observations and interviews; methods normally connected with qualitative research, but the research may have been conducted in a way that allows for a statistical analysis, meaning that it is possible to quantify qualitative data (Pervez and Grønhaug, 2005). Table 4.2 shows the differences between quantitative and qualitative research methods.

Table 4.2 – The differences in quantitative and qualitative research (Pervez & Grønhaug, 2005)

Quantitative research	Qualitative research
<ul style="list-style-type: none"> <li>• Emphasis on testing and verification</li> <li>• Focus on facts and/or reasons for social events</li> </ul>	<ul style="list-style-type: none"> <li>• Emphasis on understanding</li> <li>• Focus on understanding from respondent’s/informant’s point of view</li> </ul>
<ul style="list-style-type: none"> <li>• Logical and critical approach</li> <li>• Controlled measurements</li> </ul>	<ul style="list-style-type: none"> <li>• Interpretation and rational point of view</li> <li>• Observations and measurements in natural settings</li> </ul>
<ul style="list-style-type: none"> <li>• Objective ‘outsider view’ distant from data</li> <li>• Hypothetical-deductive; focus on hypothesis testing</li> </ul>	<ul style="list-style-type: none"> <li>• Subjective ‘insider view’ and closeness to data</li> <li>• Explorative orientation</li> </ul>
<ul style="list-style-type: none"> <li>• Result oriented</li> <li>• Particularistic and analytical</li> </ul>	<ul style="list-style-type: none"> <li>• Process oriented</li> <li>• Holistic perspective</li> </ul>
<ul style="list-style-type: none"> <li>• Generalization by population membership</li> </ul>	<ul style="list-style-type: none"> <li>• Generalization by comparison of properties and contexts of individual organisms</li> </ul>

It was decided to conduct both qualitative and quantitative research on the benefits of M-commerce perceived by customers and managers in order to evaluate a broader perspective of to

what extend the benefits of E-commerce, M-commerce, and traditional commerce can be connected in the retail industry. It was determined that the decision of conducting both qualitative and quantitative research would be favored to facilitate and collect appropriate data, test and verify our measurements while taking a logical and critical approach, in order to confirm our observed hypothesis that there is in fact benefits of M-commerce, and it is possible to connect these benefits to the benefits of E-commerce and traditional commerce. Connecting the benefits of M-commerce, E-commerce and traditional commerce will be presented in the analysis chapter.

## 4.2 Methods

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*The method section includes the theories of methods used for the collection of data, including detailed explanations of appropriate measures and decisions taken for survey collection and conducting interviews for the purpose of this thesis.*

### 4.2.1 Methods for Data Collection

When conducting research, there are two different types of data available to collect: primary data and secondary data. *Primary data* is collected specifically with the research in mind, and is obtained through collecting information from surveys and experiments. The *secondary data* already exists and has been collected before by someone else through qualitative methodologies and research, in order to analyze samples of purpose and research questions and provide information (books, articles, databases etc.) (Fisher, 2007).

- **Primary data**

For the research for our thesis, we used interviews and a survey in order to collect empirical data. The main purpose of the survey is to provide information about the opinions and motives of people who qualify as eligible for the study. The most common survey used is paper questionnaires, but surveys can also be face-to-face interviews, telephone surveys, electronic surveys, and expert-panel questionnaires. A survey should be created by a clear definition of objectives, goals, subject, and concepts in order to prove or disprove a hypothesis, or in our case the purpose (Brace, 2008). Details and findings are presented in chapter 5.

- **Secondary data**

Secondary data is divided into two different types of data: internal data and external data. *Internal data* is used to indicate any information useful to the decision-making process found within an organization, such as financial reports. *External data* is obtained from outside sources such as libraries, articles, and annual reports (Fisher, 2007). For the purpose of our thesis we decided to collect external secondary data in form of books and various articles gathered through the library and databases at Mälardalen University, Västerås.

## 4.2.2 Administering a Questionnaire Survey

Scheaffer et al. (1996) present a list of stages to be considered during the development of a survey. This thesis follows the stages of figure 4.3 when creating the questionnaire.



Figure 4.3 – Planning a survey (Scheaffer et al., 1996)

- First stage is the *statement of objectives*. At this stage, the objectives of the survey are stated clearly. This stage should be considered and understood by those working on the survey through the survey progress.
- Second stage is the *target population*. At this stage the target populations should be carefully defined (if adults are sampled, define what is meant by *adults*). This stage must be complete before moving on to the next stage in order to select the right target. The statement of objective and target population is explained in section 4.2.2.1
- In the *design stage* the design of the survey is created. Carefully choose the number of elements and frames (i.e. number of questions, wording, style etc.). If not properly designed, a survey may not produce an efficient amount of information.
- The *measurements* of the survey are done by one or more methods: interview, telephone interview, paper questionnaire or direct observations. The design stage and measurements for this thesis is explained in section 4.2.2.2
- The *pretest* stage is the stage where a small sample should carefully be chosen. The pretest is crucial because it allows for a field test of the survey method. The results of the pretest indicate if a modification of the survey is necessary.
- The final stage is the *data analysis* stage. In this stage the data from the sample survey is carefully analyzed in order to make any final changes. The pretest- and data analysis stage for this thesis is explained in section 4.2.2.3

To get information relating to the perceived benefits of M-commerce by customers, the researchers decided to conduct a questionnaire survey with 350 people in Europe, primarily at the age of 18-30 years old, currently pursuing, or have already obtained, a university degree. Survey questions are attached to the thesis as *Appendix A*.

The sample for the questionnaire survey can be found in section 4.2.2.4.

### 4.2.2.1 Statement of Objectives and Target Population

The objective of our survey is related to the purpose of our thesis. The benefits of E-commerce and traditional commerce is obtained through empirical data collected from books and articles, but because the M-commerce technology is a relatively new aspect of commerce, there are no conventional benefits that have yet been backed up by research, nor as empirical data. In order to combine the benefits of E-commerce, traditional commerce, and M-commerce, we have decided to

conduct a quantitative survey and interviews in order to accept or reject the hypothetical benefits of M-commerce with customer- and business-perceptions.

To make sure we targeted the appropriate population for our research in customer perceived benefits of M-commerce, it was decided to narrow our target group down through demographically targeting a specific age and academic background in the population of Sweden. To target the appropriate businesses for our research, it was decided to choose a specific industry within the same area of business.

#### **4.2.2.2 Survey Design and Measurements**

According to Schaeffer et al. (1996), one of the objectives of a survey is to minimize the errors that may arise when creating questions, which means, the authors of any survey should be aware of this when conducting research. The appearance, understandability, and ability to answer the questions of a questionnaire are essential for a good survey (Bryman & Bell, 2011). Schaeffer et al. (1996) states that two major concerns arise when constructing a questionnaire; wording and order of questions. Wording is important when creating a survey, as the answers are reflected by the reader's ability to understand what the researchers mean, as well as their attitudes towards the questions in the survey (Schaeffer et al., 1996). The order of questions is important for the researchers to divide the questionnaire into general versus specific questions (Schaeffer et al., 1996).

The research conducted for this thesis were created in form of an attitude survey using the Likert scale, where a list of choices ranging from positive to negative: strongly agree, agree, neither agree nor disagree, disagree and strongly disagree, were presented to the respondents in order to avoid respondents skipping questions and to avoid "don't know"-answers. The alternative of "don't know" could be interpreted in different ways, and is too unclear to use for research. In the pretest conducted (see 4.2.2.3) it showed that the five alternatives presented to the respondents creates a decrease in time it took to answer the questions.

Brace (2008) advises researchers to use a middle alternative such as "neither agree nor disagree" unless there is a reason not to; because not all respondents may have the exact knowledge or experience required to answer the questionnaire. It is important for researchers to understand that when presented with a neutral alternative, it increases the number of neutral answers (Brace, 2008).

#### **4.2.2.3 Pretest and Analysis**

It is rare that anything succeeds on the first attempt, and questionnaires are no different. When creating a self-administered questionnaire, it is vital to go through several pretests of the questionnaire, because it may be difficult for the interviewer to see problems or confusion that may arise when administering the questionnaire (Bryman & Bell, 2011). Revising, testing, and improving the questionnaire is key before launching a large-scale research study, and failing to do so may cause the study to be unsuccessful (Brace, 2008). The two pretests were conducted with 10 colleagues of the authors in the age group of 18-30. First pretest was done with 5 people.

After the first pretest study of the questionnaire, the changes made were as follows:

- Combine questions with the same theme as to shorten the questionnaire down to 9 questions as opposed to 15.
- Introduce the expected time limit for the completion of the questionnaire 1-2 minutes in the invitation (not included in the questionnaire).
- Rephrase questions 4 and 5 to make them more concrete.

After the modifications a new pretest group of 5 people were asked to complete the questionnaire, and the modifications were as follows:

- Create a better introduction of the theme in the invitations
- Modify the design of the questionnaire in order to create a ‘red thread’ through the questions.
- Introduce the promises of full privacy when answering the questionnaire.

Five of the ten people used in pretest groups are native English speakers. In order to get different views on understandability of the questionnaire they were divided between the two groups as two in pretest 1 and three in pretest 2. After conducting the pretests we were able to eliminate a lot of problems and confusion, which means we ended up with an improved version of our survey, from which we would be receiving a range of answers useful for our analysis.

#### 4.2.2.4 Questionnaire Sample

The sample of this thesis consists of 350 students, primarily from Europe. Figure 4.4 shows that the demographical characteristics of this research primarily focus on the age group between 18 and 30 years old. 293 out of the 350 respondents, correlating to 83.71% belongs to this age group. The genders of the respondents were as follows: 183 male and 167 female. This corresponds to 52.29% male and 47.71% female respondents. The survey was conducted partly with an online survey, where 206 answers were received, and partly with paper questionnaires conducted in Uppsala, Sweden, where 144 answers were gathered. The survey was conducted over a 96-hour period from 29<sup>th</sup> of April to 3<sup>rd</sup> of May, 2011.

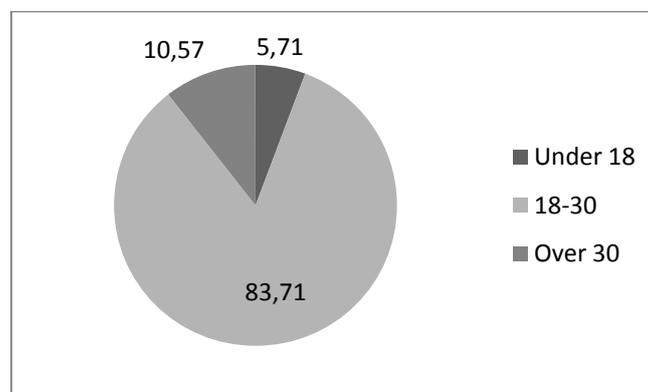


Figure 4.4 – Age distribution of respondents

### 4.2.3 Administering an Interview

Bryman and Bell (2011) present 3 major types of interview to be considered when conducting collecting empirical data: *structured interview*, *unstructured interview*, and *focused interview*.

- *Structured interview*, also called standardized interview, involves the administration of an interview schedule by the interviewer. The goal of a structured interview is for all interviewees to be given the exact same questions, meaning that each respondent will be given the same interview. The aim of the structured interview is to achieve reliability by ensuring the same opportunities for all interviewees to answer questions on the same terms. The questions are usually very specific, and offer a fixed range of answers (often called fixed choice) (Bryman & Bell, 2011).
- The *unstructured interview* often presents the interviewee with a range of topics or issues, also called ‘an interview guide’ which will be covered during the interview. The style of questioning in the unstructured interview is usually informal (Bryman & Bell, 2011).
- A *focused interview*, also called ‘focus group interview’, refers to an interview, often with the interviewees as members of a group, using predominantly open questions about a specific situation or event relevant to the researcher (Bryman & Bell, 2011).

For the purpose of this thesis a *structured interview* was conducted. In order to get the information concerning the perceived benefits of M-commerce by businesses, we decided to conduct interviews with managers of 2 retail stores engaged in both online- and retail sales in Västerås, Sweden. The interview questions are attached to the thesis as *Appendix C*.

The sample for the interviews can be found in section 4.2.3.1 below.

#### 4.2.3.1 Interview Sample

The interview sample consists of 2 retail stores based in Västerås, Sweden: *Gina Tricot* and *Harry’s Bar & Restaurant*. The stores were chosen specifically for the purpose of this thesis, because of their target audience in order to get broad information to use for the research analysis. *Gina Tricot* focuses their business primarily on the female demographic in the target age of 18-30. *Harry’s Bar & Restaurant* focuses their business on both the male and female demographic, and primarily serves the age group of 18-30 years old. The interviews were prepared beforehand and conducted with managers of the stores in Västerås over a weekly period in May, 2011.

### 4.2.4 Analysis of Data

In order to analyze the data from both questionnaire and interview, the analysis will be conducted in three parts; *content delivery benefits*, *transaction benefits*, and a *cross-analysis*.

- In the *analysis of content delivery benefits* the findings from the questionnaire survey and interview will be analyzed in terms of content delivery linked to the theory of M-commerce with the purpose of establishing that there are in fact benefits for the consumers and retailers in the theory of content delivery.

- In the *analysis of transaction benefits* the findings from the survey and interviews will be analyzed, with the purpose of linking the benefits of transaction to the theory of M-commerce for managers and consumers in the retail industry.
- The final analysis will be a *cross-analysis* of combining the benefits of M-commerce, E-commerce, and traditional commerce in order to produce a functional business-model for commerce in the retail industry.

#### 4.2.5 Reliability and Validity

When conducting a business research, it is important that the data collected and used are reliable, valid, and replicable. Perfect reliability and validity are almost impossible to achieve, and are consequently more of an ideal for researchers to make every effort to reach (Bryman & Bell, 2011).

*Reliability* is the fundamental concern with whether the measurements of research data and concepts are consistent and reasonable. Three factors are involved when considering the reliability of measurements: *Stability* entails whether the measurements are stable over time, allowing the researcher to be confident that the measurement data of respondents does not change over time. This means that, if conducting a research and taking measures, the measures will have little or no variation over time in the obtained results. *Internal reliability* involves whether or not the indicators for taking measurements and make up the scale or index are consistent, meaning that whether or not the respondents' scores in the research in one indicator, relate to the scores on other indicators. *Inter-observer consistency* is about the inconsistencies that might arise when dealing with subjective judgments from more than one third-party observer, meaning there is a possibility of lack of consistency in the decision-making process of open-ended questions (Bryman & Bell, 2011). For the purpose of this thesis, the design of the survey increased the inter-observer consistency by designing it as an opinion-based, objective questionnaire without open-ended questions.

*Validity* refers to whether or not an indicator or measure chosen for the research, really measures the appropriate concepts. Validity consists of three main factors. As the minimum measurement researchers are required to use is *face validity*; that is that the measure reflects the content of the concept in question. This can be done by asking other people if the measures used, helps them understand the concept. For the purpose of this thesis, face validity was tested during the pretest phase with colleagues of the authors. *Internal validity* is a mix of two concepts; concurrent validity and predictive validity. *Concurrent validity* seeks so measure the criteria relevant for understanding the current concept, whereas *predictive validity* is the measure of future criteria relevant for the concept. *External validity* is the concept of, to what extend the data obtained can be used in the context of other studies with the same target population (Bryman & Bell, 2011). For the purpose of this thesis, both reliability and validity have been considerably increased by conducting several pilot studies in order to avoid problems concerning the understanding of measurements and concept. The increase helps improving the questionnaire, and helps respondents understand the questions in order to make objective answers only based on the knowledge applied in the survey.

## 5 Findings

*This chapter shows the findings of the questionnaire and the findings of the interview conducted for the purpose of determining the benefits of M-commerce perceived from consumer and managers.*

### 5.1 Consumer Findings

If we assume the research study relates to the age of the majority of respondents (figure 4.4), the study shows the attitude of the age group of 18 to 30 years old and their opinions towards mobile commerce.

#### Figure 5.1 - Mobile transactions

This figure shows the perceived interest in the idea of paying for in-store purchases with a mobile telephone. A majority of 64.86% (agree and strongly agree combined) of the respondents asked think it would be an interesting idea to pay for in-store purchases with their mobile telephones.

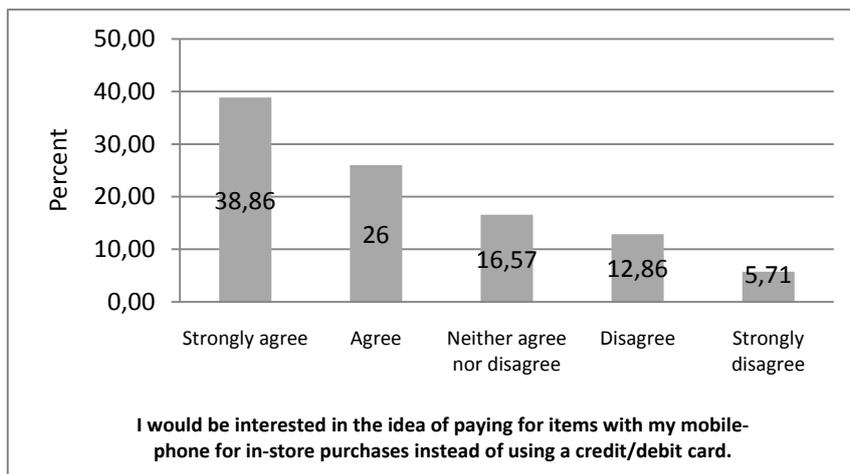


Figure 5.1 – Perceived interest for the use of mobile-phones for in-store purchases

On the other hand, figure 5.1 also shows a 16.57% attitude towards neither agree nor disagree which could indicate a lack of interest or a lack of knowledge in the field. If we assume the amount of positive respondents are combined with hesitant respondents (81.43% strongly agree, agree, neither agree nor disagree) because of an increase in the supply of information, it justifies an interest for increased mobile telephone use in the buying experience, and can therefore be considered an advantage of mobile commerce.

#### Figure 5.2 – Convenience of M-commerce

The perceived convenience in figure 5.2 of using the mobile telephone for in-store purchases were measured with a positive result, as the majority (57.14% agree and strongly agree combined) agrees that it would in fact be more convenient for them to use their mobile telephone for in-store payments than using a credit or debit card.

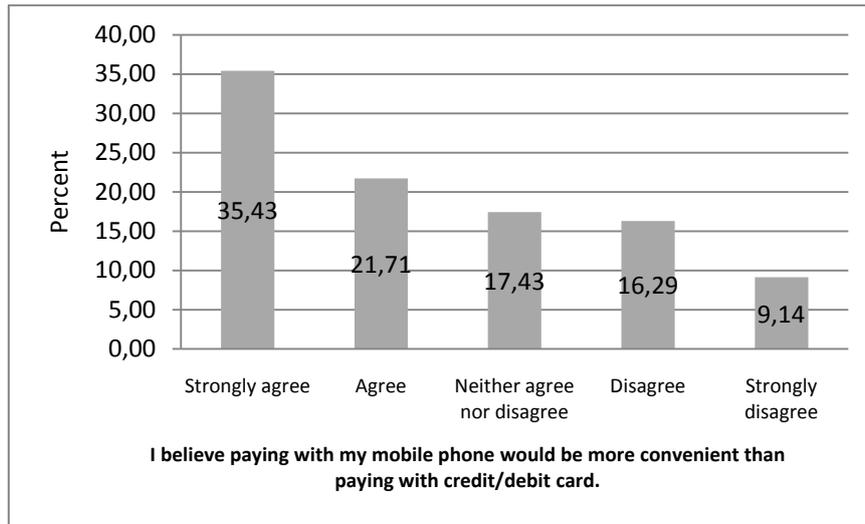


Figure 5.2 – The perceived convenience of mobile payments

Figure 5.2 shows a 17.43% attitude towards neither agree nor disagree, and as stated above it could indicate a lack of information surrounding the possibilities of mobile payments. The amount of negative attitude towards convenience, measured to 25.43% (disagree and strongly disagree combined), correlates to the negative attitude towards using mobile telephones for in-store payments (18.57% disagree and strongly disagree combined) and could consist of the same group of people.

### Figure 5.3 – M-commerce content delivery: advertisements

In relation to the application of mobile commerce as means for advertisement for business purposes, the research measurements shows that the consumer interest in receiving such advertisement, is divided between positive (47.72%) and negative (34.57%) attitudes, yet favored towards a positive attitude.

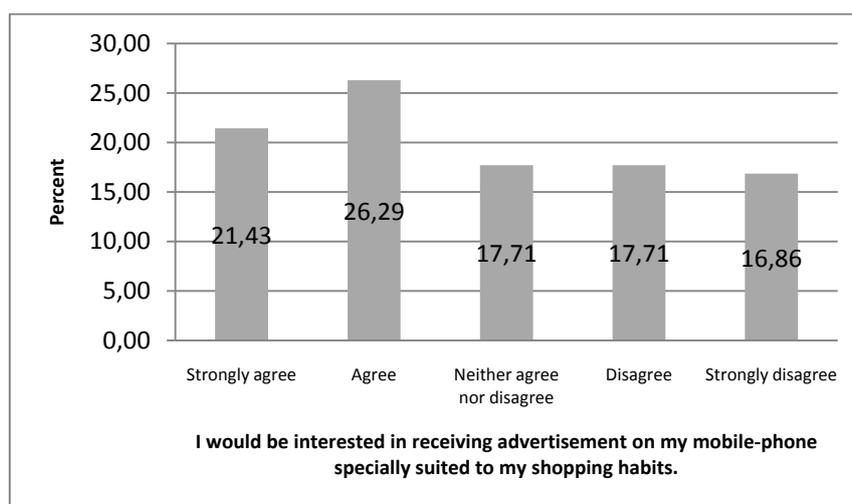


Figure 5.3 – The perceived interest in receiving advertisements based on specific shopping habits

The data received was conducted with a promise of advertisements specially suited to the consumers' shopping habits, because of an existing negative attitude towards mobile 'spam'-advertisement in Wong & Tang (2008), which showed that 48.70% of consumers are against receiving mobile advertisements which they have not chosen to receive (Wong & Tang, 2008).

**Figure 5.4 – M-commerce content delivery: discounts**

In relation to the application of mobile commerce as means for advertisement for business purposes, the interest in receiving various discounts from business is met with a predominant positive attitude (46%), yet shows that a large proportion is leaning towards uncertainty.

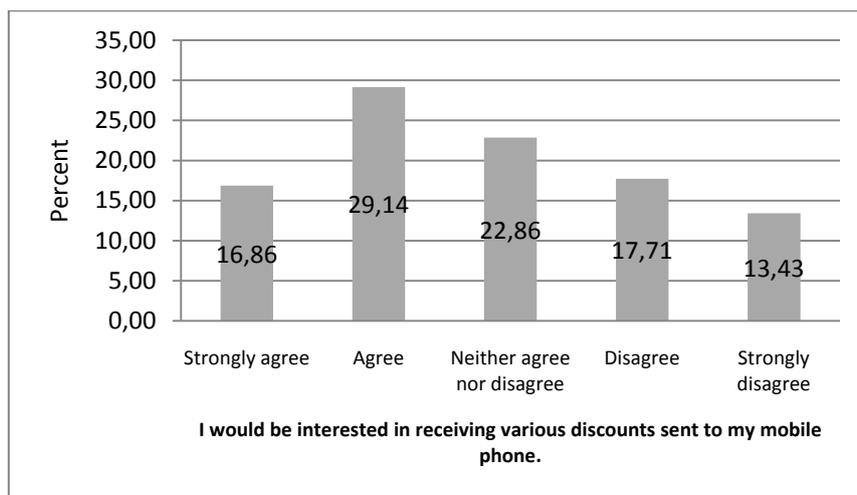


Figure 5.4 – The perceived interest in receiving various discounts

The observation of uncertainty in the respondents' answers can be explained by a hesitation linked to the Wong & Tang (2008) study, and consumers' negative attitude towards mobile spam-advertisement.

**Figure 5.5 – M-commerce content delivery: customer choice discounts**

In addition to the question of interest in receiving discounts, the respondents were asked if they would be interested if the discounts received were based on previous purchases, and a majority of respondents (52.57%) have a positive attitude towards the option of interest, and shows that businesses in addition to advertisement can use discounts in mobile commerce.

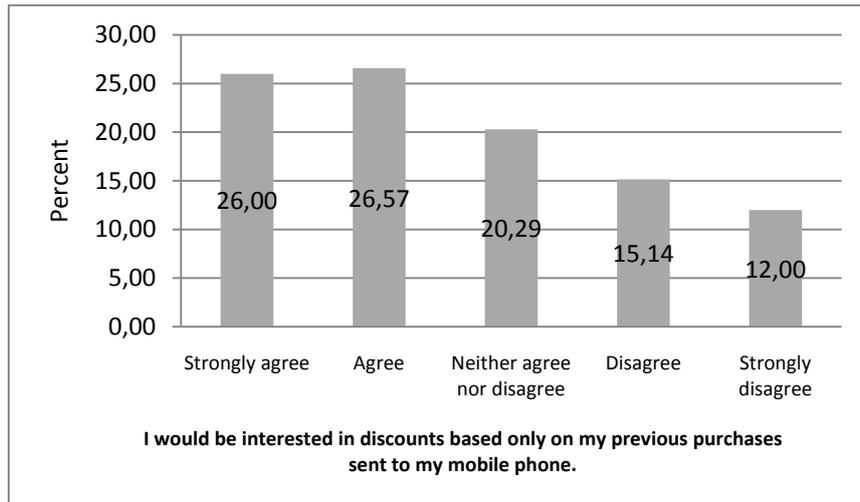


Figure 5.5 – The perceived interest in receiving discounts based on previous purchases

Figure 5.5 also shows a 27.14% (disagree and strongly disagree combined) towards a negative attitude of receiving discounts send to their mobile telephone based on their previous purchases, which may be linked to the study of Wong & Tank (2008) concerning a negative attitude towards spam messaging.

#### Figure 5.6 – M-commerce content delivery: the ‘anytime’ aspect

In relation to figure 5.3 it was decided to eliminate uncertainties surrounded the question of whether respondents were interested in just advertisements suited to their shopping habits, or if they would be interested in mobile advertisements at any time. These findings show a predominant attitude towards respondents disagreeing by 67.72%.

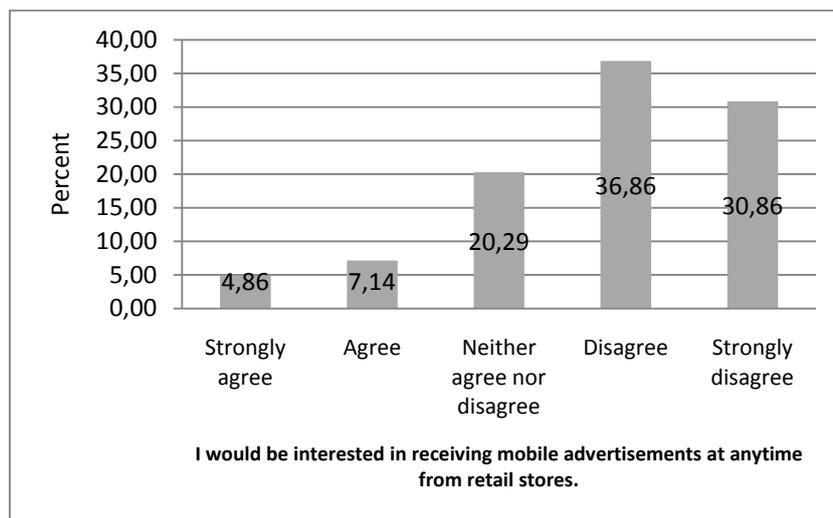


Figure 5.6 – The perceived interest in receiving advertisements at anytime

The measure shows a low attitude of 12% towards agreeing and strongly agreeing with receiving discounts at anytime, which shows that the trend is generally leaning towards the negative attitude, again this could indicate a disinterest in receiving advertisement which has not been chosen by the consumer.

### Figure 5.7 – M-commerce content delivery: customer choice advertisements

In order to furthermore eliminate uncertainty, it was decided to ask consumers about their attitude towards receiving advertisement only sent from stores which they have selected. The findings show that 70.86% agrees that they would be interested in receiving advertisements based on their own selection of stores. 17.43% of respondents disagreed with receiving advertisement. The negative position could be due to a personal attitude towards advertisements in general.

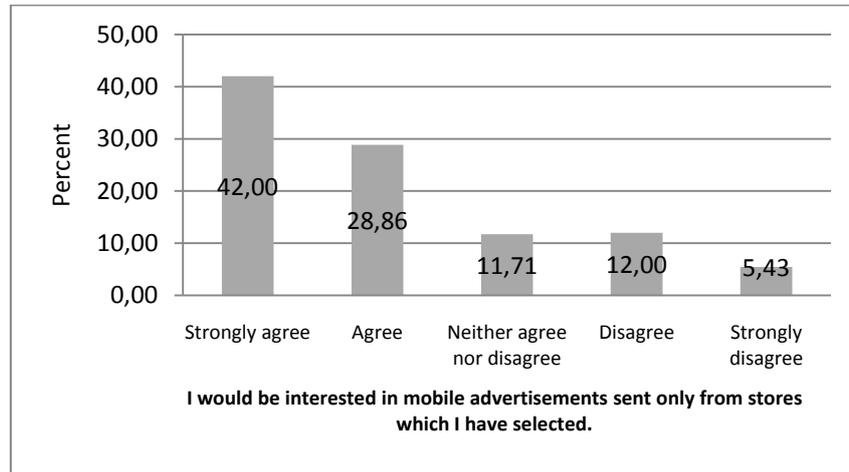


Figure 5.7 – The perceived interest in mobile adverts from selected stores

### Figure 5.8: M-commerce content delivery: the membership aspect

Concerning the question of whether respondents would be interested in using their mobile phone as a ‘membership card’, reinforcing the application-aspect of M-commerce. The findings from the survey show that 76% of respondents would be interested in using their mobile phone as a ‘membership card’ to stores. Only 10.25% said they would not be interested, which overall shows a good attitude towards the application-aspect.

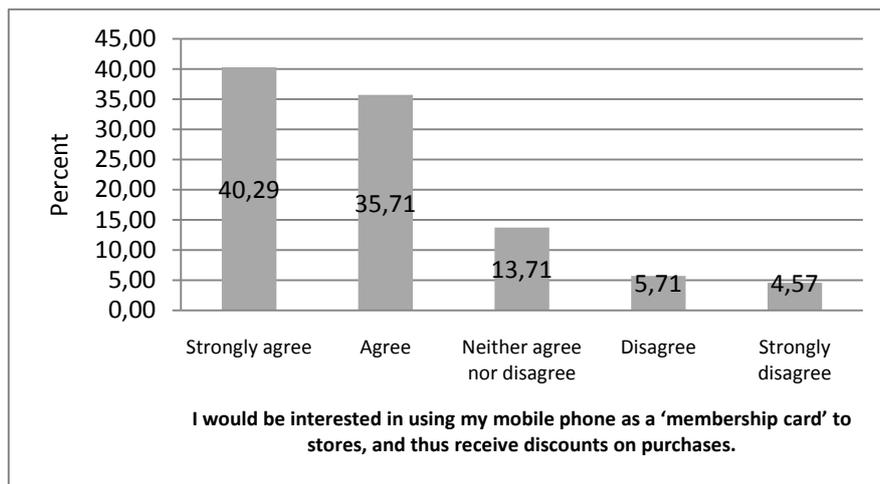


Figure 5.8 – The perceived interest in using the mobile telephone as a membership card

### Figure 5.9 – Information search: target audience

The question about if respondents currently use their mobile phone to browse products and information whilst shopping, is an extremely important question because it applies to the aspect of

information search during the shopping experience. Figure 5.9 show that 44.57% currently use their mobile phone for information search while shopping, and 55.43% does not. The findings facilitate the information search-aspect of M-commerce.

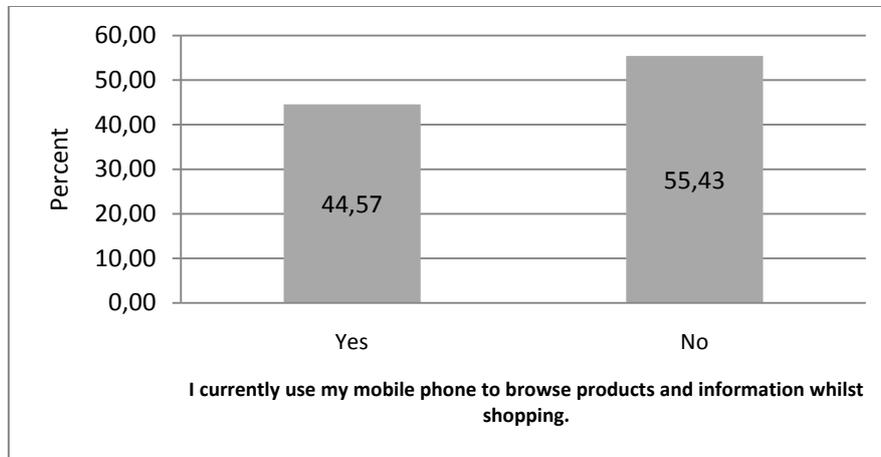


Figure 5.9 – The respondents’ current use of mobile telephones for shopping purposes

## 5.2 Management Findings

*The two interviews conducted with the managers of Gina Tricot and Harry’s Bar and Restaurant, have led to findings, which combined with the theoretical framework illustrate the views on mobile commerce in the retail industry.*

### 5.2.1 Interview with a manager of Gina Tricot

Marianne Ohlson is a 44 years old manager and owner of Gina Tricot’s Västerås, Sweden clothing store. She has been running the store as a franchisee owner for 12 years. Her involvement with advertising is covered for the local area of Västerås as well as using a local Facebook page with E-commerce and its uses in M-commerce. The interview also touches upon her views to traditional commerce and her new position towards it compared to the E-commerce and M-commerce.

#### 5.2.1.1 E-commerce

On the E-commerce side Marianne says she started to use Facebook to reach her local customers. The social media giant ‘Facebook’ has over 500 million users worldwide (Facebook.com). ‘I needed to use Facebook to reach out to our local customers because the newspaper just does not work anymore’. She continues with ‘just in the first week of opening our local Facebook page we received 400 clicks because we had to share our Easter holiday hours which were different from our standard hours.’ (Personal contact, 2011/05/10).

The biggest thing that helped her business was unsold cloths that are out of season are then moved to another store and have a large reduction in price. Marianne stated ‘when I shared the event and news about unsold clothes being moved to my discount store on Facebook, people lined up around the store to check out this deal. I found out by talking to the customers, that most of them were followers of the webpage.’ (Personal contact, 2011/05/10).

During the interview, Marianne mentioned, that a service she offered was to posts the new store hours over holidays such as Easter on the Facebook page as well. She followed up with the fact that she has afterwards received a large amount of visitors on the time table, which proves to her, that people are reading the information she sends out.

When asked about her segment market towards this type of advertisement she states that it is mostly people between 18 and 24. She calls them 'her modern customers' and says 'modern customers are prepared to participate more in the aspects of internet and mobile channels than her own generation. She furthermore stated that 'the younger generations are checking blogs of fashion girls which then runs out to the stores and help sell out our items. However, blog girls make the girls unfaithful because they bloggers talk about all fashion.' (Personal contact, 2011/05/10).

When asked about advertising through her local Facebook page, Marianne stated that she will advertise her special offers directly on the page, but it would reach most of her customers because of the information flow the social network provides.

She pointed out that the pictures of her store on the Facebook-page meant she had to re-structure the store in a way that would look appealing on the internet, with colors and lighting so customers would want to visit the store.

### **5.2.1.2 M-commerce**

According to facebook.com, 250 million users have accessed the website regularly through their mobile phone (Facebook.com). When asked about Facebook using the mobile phone GPS to 'check in' she smiled and said that, 'my 'followers' are important to me and if a customer shows the store they are 'followers' on their mobile phone I can offer a special discount to them. I feel that these people deserve discounts because they are really interested in the store.' (Personal contact, 2011/05/10).

When asked about an application on the smart phones that a customer can download as a way to reaching out she was very much for the idea but unfortunately, she is a franchisee and does not have the capability to implement new software. She furthermore stated, 'Gina Tricot head-office is waiting to launch an application the right way with a proper infrastructure. The reason is that Gina Tricot does not wish to act too quickly and become unprepared for the use of the application with glitches and bugs.' (Personal contact, 2011/05/10).

She then however states that it is important not to be second from the leaders in the technology race, because it is the leaders who have the initial control. She believes that everybody needs to learn and use a technology like that as she believes it is where society is heading. She also shared 'my 6 year old son is getting an iPad 2 to use. I have the income to afford it and I want to help push them {her children} to understand the technological age that surrounds us. I believe it is essential for the survival of future business.' (Personal contact, 2011/05/10).

The question about NFC technology with payments through the mobile phone in her store then came up. 'I strongly believe it should be, and will be, the new system when it comes out and I

definitely will add a system like that to my store, because, it is more convenient and can reduce the transaction costs for me due to the exclusion of debit card companies such as Visa and MasterCard.’ (Personal contact, 2011/05/10).

She continues to say ‘I believe cash is becoming obsolete in a sense, and that only the older generations still use cash. I think the adoption of paying with your mobile phone will catch on like the debit card-system.’ She gets at the point that participating generations will quickly launch off the new system and it will catch on faster because everyone has a cellular phone or will get one that works with this system (personal contact, 2011/05/10).

### **5.2.1.3 Traditional Commerce**

Gina Tricot relies mostly on TV for all the stores within the franchise, in which the franchisee pays 3 percent of the marketing costs. Other fixed locations of advertisement are sidewalk-signs. She states that she does local advertisements through the news paper but has found it ineffective in the sense of targeted population, because a lot of 18-30 year olds doesn’t read the paper anymore.

When asked what the most positive influence traditional commerce has on the consumer, she states ‘I think that the customer/employee interaction is still the best way to sell clothes, because the customer constantly seeks approval from an outside influence, i.e. the retailer. They also get the right information on the spot which can also help them make their decision.’ (Personal contact, 2011/05/10).

## **5.2.2 Interview with a manager of Harry’s Bar and Restaurant**

Emil Larsson is a 25 year old bar chief and restaurant manager for Harry’s Bar/Restaurant in Västerås. Emil Larsson is a manager of a bar that, according to himself, always involves himself in as much of *Harry’s* operations as possible. The focus of the interview is based on Harry’s Bar/Restaurant chain opening an application to be downloaded by Smartphone users.

### **5.2.2.1 M-commerce**

Emil Larsson is a manager of a bar that, according to himself, always involves himself in as much of *Harry’s* operations as possible – As he states ‘*Harry’s* currently use a Smartphone-application which is available for download.’ According to him, the application offers:

- Information about- and how to find the restaurant
- Information about the assortments of various beverages offered
- Information about the food menu offered in the restaurant
- Information about the schedule of special events

On the question of whether *Harry’s* is planning on including advertisements in the application, in terms of special offerings, Emil replied ‘*Harry’s* marketing department does not want to flood consumers with pointless advertisements for fear they will get sick of it and delete the application

or stop coming to *Harry's*. I believe they are talking of including special offers that are special to the application-users, in which can offer the consumers information of possible events, as well as price reductions.' (Personal contact, 2011/05/11).

When asking about how an application like that would affect *Harry's*, he said 'it would improve the reach to the segment of 21-30 year olds and that because applications for mobile telephones mostly because people are using them on a higher level.' He means the higher level being phones doing more advanced operations: 'It would allow for an increase of customers in that particular segment, along with higher sales because we are looking to lower our overall age.' (Personal contact, 2011/05/11).

On the subject of NFC technology in payments, Emil explained 'how great that would be for the consumer and the bar because the time it takes to use a debit card would be eliminated and the order would use the phone.' I feel it would improve the amount of customers the bar would be able to handle.' He adds that most of their customers currently pays with credit cards and rarely pays with cash. As he states: 'why add all those steps to waste both our time. It would be beneficial if NFC could just tie that whole process together.' (Personal contact, 2011/05/11).

He suggests that the bar would also benefit at the gambling-tables, allowing for more people to use their phones and not slow down the game, which a lot of the customers hate when happens.' He believes the head office would save money in transaction cost because, as he states 'time is money when serving drinks.' (Personal contact, 2011/05/11).

He believes that the application is a great start for a marketing tool as well as ease of information access for the consumers, as well as the retailers who save time and money. He mentions that newspapers are becoming an advertisement tool of the past and isn't useful to reach the target markets of the younger customer (21-30 years old), who doesn't take the time to look at them (newspaper advertisements, red.) anymore. He believes the generation grew up ignoring the newspaper and just accesses the information they need on a wireless connection (personal contact, 2011/05/11).

### **5.2.3 Conclusion of the two interviews**

The use of applications in the retail industry is according to the two managers starting to increase, because of the information it can provide the consumer with. The use of M-commerce in the retail industry in general, will according to the managers provide them with a tool to decrease the time it takes to transact. This proves the benefits of M-commerce in terms of problem recognition of the consumer buying behavior process, as well as the convenience for both consumer and retailer.

## 6 Analysis

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*This chapter links the relevant theories from the theoretical framework to the empirical findings and concepts. We determine the perceived benefits of M-commerce through assessing where the theoretical applications can satisfy the needs outlined by the findings from managers and consumers.*

### 6.1 Transaction Benefits

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A majority of the respondents, shown in figure 5.1 (64.86% agree and strongly agree combined) are positive about the idea of using their mobile telephone for in-store purchases. The positive attitude toward changing from credit and debit cards to mobile telephone payments backs up the assumption that combining and utilizing the theory of mobile commerce and traditional commerce would be received optimistically by the consumers. The cause for the positive reaction from the majority can be due to an increase in desire for continuous improvement in the technology surrounding the age group of 18 to 30 years old, compared to older generations. In the second question of the survey (figure 5.2), respondents were asked about their attitude towards convenience, and 57.14%, 227 out of 350 respondents, agrees that it would be convenient for them to use their mobile telephone to pay for in-store purchases over debit and credit card. The aspect convenience is not only confirmed by the survey on consumers. Both managers agree that the launch of NFC will be a benefit to the company as well. Marianne Ohlson states that NFC technology with one touch payments through the mobile phone should be and will be the new system when the technology is released. She also states that the system would definitely add to the convenience as it can reduce transaction costs due to the elimination of the debit card companies, such as Visa and MasterCard which take a small percentage of the transaction sale. Emil Larsson of Harry's Bar and Restaurant states in the interview that the convenience of NFC payment in regards to the convenience in reduction of the time it takes for a bartender to complete a transaction. The time of a purchase would be eliminated and the process would only require the consumer to use their phone.

The results of the surveys and interviews backs up the assumption that combining and utilizing the advantages of mobile commerce would be received optimistically in regards to the one-touch payment of M-commerce. Furthermore the analysis indicates that convenience of mobile commerce is perceived as a benefit.

### 6.2 Content Delivery Benefits

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Concerning the application of mobile commerce as means for advertisement (content delivery) for business purposes, the research measurements shows that the consumer interest in receiving such advertisements (Figure 5.3), is divided between positive (47.72%) and negative (34.57%) attitudes, yet favored towards a positive attitude. The data received was conducted with a promise of advertisements specially suited to the consumers' shopping habits(identifiable, customizable),

because of an existing negative attitude towards mobile ‘spam’-advertisement in Wong & Tang (2008), which showed that 48.70% of consumers are against receiving mobile advertisements which they have not chosen to receive (Wong & Tang, 2008). These findings are furthermore backed up by the findings from the survey in figure 5.6; the attitude towards receiving advertisements anytime and anywhere, which shows a predominantly negative attitude of 67.72% (disagree and strongly disagree combined). Findings from the interviews shows that the manager of Harry’s Restaurant is unsure about how much advertising the retail industry can do via mobile applications, as headquarters fears that consumers will have a negative attitude towards the anytime, anywhere advertising. Same findings was done in the interview with Gina Tricot’s manager, who also has reservations towards launching an advertisement application straight away, because of the uncertainty of how much advertisement consumers feel is too much..

Our findings shows that the managers are right about their hunch of the fact that consumers feel advertisement needs to be suited to their special needs, and not based on anytime, anywhere content delivery. Our consumer finding of ‘identifiability’ show that there are two modes and application on content delivery that needs to have a stipulation as well to become benefits. They are ‘Real-time information’ and ‘location-centric information.’ The first aspect to stipulate from the consumer is ‘real-time information.’ According to the findings from figure 5.7, consumers have taken a favor to the idea of receiving mobile advertisements to the stores that they have selected. Figure 5.7 shows that 70.86%, or 248 out of 350 respondents, agree they would be interested in receiving advertisements based on their own selection of stores. Findings from the interviews show that the theory of ‘Location centric information’ in terms of marketing would be perceived as a benefit by managers in the retail industry. The manager of Gina Tricot states that their new business-model includes plans of using mobile ‘check-ins’ to give special product offerings directly to the consumers. Harry’s Bar and Restaurant manager agrees that having an application is more convenient to have without going through an online mobile website. Harry’s application increases the usability and improving through its design in infrastructure when retrieving ‘real time information’ of specialized product offerings. The survey findings back up the consumer’s positive attitude towards using their mobile phone for membership to a store. Figure 5.8 shows that 76% of respondents would be interested in using their mobile phone as a membership card to stores, which allows the consumer to choose if they want to be ‘identified’ by the store, and receive discounts based on their purchases. The findings from the interview shows that the manager of Gina Tricot agrees with our findings and the fact that using advertisement such as memberships including discounts would be perceived as a benefit of both E-commerce and M-commerce.

### **6.3 Comparing the benefits of T, E and M-commerce**

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In order to fully grasp the effect of each form of commerce we will analyze and compare their benefits for supporting the individual stages of the combined consumer/retailer process introduced in chapter 3.

Table 6.1 - Comparative information of how M-commerce delivers the various benefits of T&E

Benefits	Traditional Commerce	Electronic Commerce	Mobile Commerce
Problem Recognition	<ul style="list-style-type: none"> <li>• Location</li> <li>• Physical evidence</li> <li>• Stimulate the senses</li> <li>• Experience</li> </ul>	<ul style="list-style-type: none"> <li>• Ubiquity</li> <li>• Global reach</li> <li>• Social technology</li> <li>• Personalization</li> </ul>	<ul style="list-style-type: none"> <li>• Location centric information</li> <li>• Real-time information</li> </ul>
Information Search	<ul style="list-style-type: none"> <li>• Physical evidence</li> <li>• Social Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Universal standards</li> <li>• Information richness</li> <li>• Social technology</li> <li>• Interactivity</li> <li>• Information density</li> </ul>	<ul style="list-style-type: none"> <li>• Location-centric information</li> <li>• Real time information</li> </ul>
Evaluation of Alternatives	<ul style="list-style-type: none"> <li>• First hand experience</li> </ul>	<ul style="list-style-type: none"> <li>• Information richness</li> <li>• Information Density</li> <li>• Social technology</li> </ul>	<ul style="list-style-type: none"> <li>• Location-centric information</li> <li>• Real-time information</li> </ul>
Purchase Decision	<ul style="list-style-type: none"> <li>• Social interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Social technology</li> </ul>	<ul style="list-style-type: none"> <li>• Location-centric information</li> <li>• Real-time information</li> </ul>
After Purchase Behaviour		<ul style="list-style-type: none"> <li>• Personalization</li> <li>• Interactivity</li> </ul>	<ul style="list-style-type: none"> <li>• Location-centric information</li> <li>• Real-time Information</li> </ul>

### 6.3.1 Customer Attraction / Problem recognition

The first stage is the main focus of traditional marketers (Kotler & Keller, 2006). This involves the external marketing activities which identify a need for the customers and attract business to the store. The interview with Marianne Ohlson (personal contact, 2011/05/10) found that the traditional marketing channels of newspaper ads that are still being used but are not as reliable as they once were. Marianne Ohlson states that very few of her customers are attracted by newspaper advertisements. Sidewalk posters and billboards hope to pull in passing by customers by alerting them to a need. She adds that the majority who enter the store were attracted through television ads and the store's online advertisements through social media like Facebook and fashion blogs. Marianne Ohlson calls this their "modern customer" whom are more active in the electronic medium of commerce. These customers take full advantage of all the benefits that E-commerce has to offer at this stage. E-commerce is ubiquitous, meaning that the information on the store can be accessed from anywhere; it has global reach in that it can connect to large amounts of customers (Laudon & Traver, 2008). This is highlighted by the numbers of people that responded to the social

media advertising done by Marianne Ohlson and Gina Tricot. It is this same demographic that are active mobile users, and can be targeted for the application of M-commerce. As a large focus is on attracting customers to the store and that social media seems to be having a very positive effect on this aspect, it is only natural to want to take this form of customer attraction one step further. This can be done through M-commerce. The aspects of location-centric and real time information that M-commerce provides makes it possible for social media, personalization and global reach to be combined with the traditional benefit of location through the mobile device and wireless infrastructure. The aspect of advertising via mobile phones opens up the possibilities for retailers in the form of any-time advertising. Figure 5.6 from the consumer study however shows a negative response from the customer to receiving advertising from anyone at any time. Figure 5.7 shows that customers are much more positive about receiving advertising from selected stores, which is made possible through the aspects of mobility (Joseph & Mahatanankoon, 2004), particularly the characteristics which make the mobile devices identifiable and customizable. This allows for users to personalize and select stores which they are interested in. Harry's Bar and Restaurant have already adopted the Smartphone application in order to connect with customers, but according to Emil Larsson they are hesitant to use the app to attract customers through advertising (personal contact, 2011/05/11). The application is a key part of the M-commerce process, as discussed before, in order to use the mobile device as a tool for external marketing it would need to be only to customers that have expressed interest in the particular retailer. They would express this interest through installing the interface required to interact with the retailer, this being the application. This should then be allow the retailer to send advertising or even allow customers to further specify the particular products which they are interested in, either through previous purchases, which consumers show is more acceptable (figure 5.3), or by personalizing their profile.

### **6.3.2 Information Search**

In traditional commerce this will be done by the customer in the store. The role of the retailer would be to help facilitate this search for information; this can be through providing product information in easily accessible places or be having well trained sales staff who can inform customers about the various products (Kotler & Keller, 2006). Marianne Ohlson highlights the customer employee interaction as the best way for Gina Tricot to facilitate this stage (personal contact, 2011/05/10). E-commerce too has benefits during this stage, the information richness and density. The amount of information available online is immense (Laudon & Traver, 2008), and allows customers participating in E-commerce to search for product information efficiently. Gina Tricot, and Harry's Bar and Restaurant both have web pages where customers can browse information on their products. The web pages, however, do not supply customers with the physical evidence and experience of a product that traditional commerce does. This is where there are possibilities for M-commerce to combine the benefits of both. The results from consumers indicate that browsing for information on mobile devices whilst shopping does occur. Figure 5.9 show that 44.57% of the respondent search information in this way whilst shopping. This is a large benefit to customers as they have the information density of E-commerce available in store through real time information via 3G, 4G or Wi-Fi networks. The location centric information grants them the possibility of physically experiencing the product and receiving information

through social interaction from sales people in the traditional context whilst receiving the benefits from E-commerce.

### **6.3.3 Evaluation of Alternatives**

This is the next step after the customer has the information on the desired product, and it is to compare the information and knowledge of the product to other similar products that can satisfy the same need. Once again the social interaction with the sales people facilitates this in traditional commerce; it is also done through experiencing the products in order to compare them (Kotler & Keller, 2006). In E-commerce it is the readily available information which makes it easy to compare the differences and similarities of various products. The information density and richness as well as social technology facilitate the evaluation process online. As previously discussed the information is further enhanced through the location centric element which it has in the form of M-commerce, thus utilizing the only benefits that traditional commerce has over E-commerce in conjunction with those provided online.

### **6.3.4 Purchase Decision & Transaction**

This is when the customer decides on whether or not to buy the product, based on the information gathered and the evaluation. This can of course be influenced by the sales people in a traditional environment. The location and convenience of the store as well as personal and social elements like how personal contacts of the customer view the product may also have a deciding factor in the process (Kotler & Keller, 2006). E-commerce's social technology facilitates this, through customers being able to gather opinions from friends and family through social networking sites, online forums and blogs. Marianne Ohlson mentions that the younger customers' purchases are influenced by fashion blogs, and the opinions of friends and role models, which through the internet are readily available (personal contact, 2011/05/10). The 'always on' aspect of real time and location centric information in the form of M-commerce means that the opinions of friends and other personal contacts are available to customers wherever they are (Joseph & Mahatanankoon, 2004). The social media and technology coupled with the large adoption rates of Smartphones (Comscore) and social networking sites (Facebook.com), figure 5.9 shows that 45.5% of the customers surveyed already use their mobile phones whilst shopping, greatly increasing the chance of the customer's decision to purchase being influenced by external sources. This can be in a positive or negative way, depending on the opinions and views offered by personal contacts. M-commerce does however have an added advantage over E-commerce in this process. Where E-commerce customers might be persuaded by personal contacts only, M-commerce customers' mobility means that if they are in store they can have positive social interactions with salespeople.

If the customer decides to purchase they need to decide on a payment method (Kotler & Keller, 2006). In traditional commerce the benefit is the security and trust of handing over payment in the form of cash or swiping a debit/credit card. This is an aspect of the physical presence and interaction. E-commerce is slightly disadvantaged due to the element of trust that is not reinforced with physical evidence of the product or the retailer. Users need to pay online via credit card or secure payment intermediaries. The development of mobile payment technologies goes a long way

in bridging this gap for M-commerce in this area with secure and convenient payment options available to customers through M-wallets and one-touch-transactions. Figure 5.2 shows that 57.14% of the consumers surveyed thought that mobile payment would be an efficient and desirable way to perform transactions. The efficiency and convenience of one touch transactions via mobile phones also benefits retailers, as Emil Larsson suggests, in the form of time saved (personal contact, 2011/05/11), and Marianne Ohlson who sees the benefits of being part of the technological evolution and appealing to the younger generation, and saving on transaction costs from debit/credit card companies such as Visa and MasterCard (personal contact, 2011/05/10).

### **6.3.5 Customer Retention/Post Purchase Behavior**

The customer's behavior during this stage is influenced by their perception of how well the product/service offering performed in satisfying their needs (Kotler & Keller, 2006). The retailer's goal then is to make sure that the customers' perception is in line with their expectations. This happens through communication between the buyer and the seller, and is crucial to ensure return business (Grönroos, 2007). This can be done through interacting with customers to build customer relationships and loyalty. Kotler and Keller (2006), argue the possibility in this stage to increase consumption frequency by finding ways to inform customers when products might need replacing. In traditional stores customer relationships are built through physical and social interactions with the store and salespeople. This means understanding the customer better and therefore being able to better cater for the customer's need. E-commerce has the benefit of personalization and creativity via the electronic channel. This is an efficient way of communicating with customers in order to improve on future performance through personalized communication and offerings (Laudon & Traver, 2008). We find evidence of this in the findings from Marianne Ohlson. Gina Tricot's store seems to have built a loyal following of customers through their social media page (personal contact, 2011/05/10). Their online approach has connected with the customers and is providing for the customer's needs through individual online interaction. Real-time information in M-commerce can facilitate this stage for both retailers and customers. Having the ability to easily rate and review retailer performances will benefit both the buyer and the seller. The identifiable nature of Smartphones also increases the retailer's ability to provide customized offerings to the customer (Joseph & Mahatanankoon, 2004). These offering can possibly be based on previous reviews, behavior, preferences or purchases.

The consumer survey shows that there are positive attitudes among the consumers about using mobile devices to interact with retailers on a relational basis, such as store membership (Figure 5.8). These findings combined with the findings from figure 5.5, that show positive interest in receiving discount coupons based on previous purchases via mobile devices, outline a basic desire for personalized and interactive service offerings from the stores which they frequent. Marianne Ohlson also discusses that she likes to reward her loyal followers with discounts and offers (personal contact, 2011/05/10), building strong loyalty. This also further highlights the fact that customers want to select the stores with which they interact and will not respond positively to spam messaging (Wong & Tang, 2008).

## 6.4 Four I's of commerce

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The four I's are present in each of the three forms of commerce. They each support the aspects which provide the benefits of T, E and M-commerce.

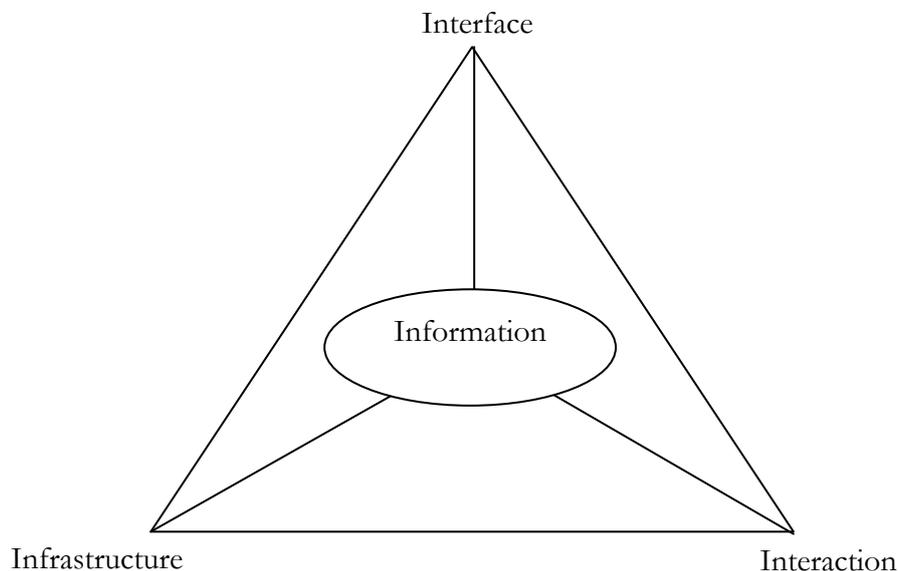


Figure 6.2 - Conceptual Model of the 'four I's of commerce'

### 6.4.1 Interface

An important aspect of E-commerce is the interface which users use to access the information available online. Marianne Ohlson uses the social networking site Facebook to connect to the customer and for the customer to interact with the store online (personal contact, 2011/05/10). This is also true for M-commerce in the form of applications or mobile web pages. This can be likened to the storefront in traditional commerce. Harry's Bar and restaurant already use a Smartphone app as an interface for users to interact with them via mobile phones. The users can use this interface to obtain information on the restaurant's location, offers and opening hours (personal contact, 2011/05/11). The key benefit of the M-commerce interface being its mobility, meaning that it is possible to use in conjunction with the traditional interface (the storefront).

### 6.4.2 Interaction

If we look at the findings from Gina Tricot, the social interaction in the store is still heavily relied on, so is the interaction via social media (personal contact, 2011/05/10). They use both T and E-commerce to interact with customers. Thus the interaction is with salespeople, physical aspects of the store or personal contacts via social networking and media. It is once again the aspects of mobility that allow for stores to combine traditional interaction with the interaction experienced in E-commerce. Marianne Ohlson plans to do this through mobile 'check-ins', encouraging customers to use Facebook mobile to interact with the store through M-commerce whilst in the store, to promote the store, by offering discounts for customers who do so (personal contact, 2011/05/10).

The same channels can also be used to facilitate customer retention and after sales service. We see in the case of Gina Tricot presenting offers to loyal followers. This relates to figure 5.5, where customers responded favorably to receiving discounts based on previous purchases via mobile phones.

### **6.4.3 Infrastructure**

The infrastructure is a major supporting factor of M-commerce, as the wireless infrastructure makes it possible for mobile information exchanges through 3G, 4G and Wi-Fi. The same infrastructure is also a part of T and E-commerce, in the form of physical structures, buildings, roads, parking lots etc, and networks, the internet and online communities/users. The infrastructures support the interface and interaction. It is the backbone behind commerce in all forms.

### **6.4.4 Information**

The buyer decision process revolves around information; sending information, collecting information, comparing information. Interface, Interaction and Infrastructure together facilitate the exchange and transfer of information. In traditional commerce it is done through physical and social aspects and in E-commerce through virtual, electronic and social aspects. Marianne Ohlson transfers information to her customers through both methods, physical aspects in the store and on the sidewalk, as well as online via Facebook (personal contact, 2011/05/10). The sending and gathering of information can happen at any time and in any place through mobile devices and wireless networks. The aspects real-time and location-centric information bring together the traditional and electronic methods of gathering and sharing information. Emil Larsson and Harry's Bar and Restaurant, have added the mobile form, but don't push the information; it is only there to be seen by customers who are interested (personal contact, 2011/05/11). This is done through both interaction and interface, which are supported by the infrastructure. Wireless networks and protocols combined with the social and physical networks that make up the internet, which make the seamless flow of information and transactions possible by making users independent of location. Customers also show their interest in acquiring information in figure 5.9.

## 7 Conclusion

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*This chapter draws the conclusions of the analysis, summarizes the analysis of the research question and answers the general purpose of this thesis. We examine the possible contributions of the findings to the field, as a guide for retailers in practice, and theory to support further studies.*

### 7.1 The Best of Traditional & Electronic

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After having analyzed the empirical findings in relation to the theoretical framework, it is possible to draw a conclusion to the purpose of the study. As mentioned in the analysis; to fully grasp the effect of each form of commerce, E, M, and traditional, the commerces have to be compared in terms of benefits in the individual stages of the combined consumer/retailer process. After experiencing several positive and negative reactions to M-commerce from both consumers and retailers, it is possible to indicate the perceived benefits of M-commerce.

The surveyed findings highlighted certain needs and trends from the perspective of the consumer and the retailer: consumers have a need for information and convenience, but stipulate that it needs to be on a selected basis. Retailers would like to send and receive more information to attract customers and improve on their performance, but realize that the need for selected and personalized marketing whilst not putting it to the category of spam-advertisement. Mobile commerce delivers solutions for the issue of spam advertisements by enabling the customization of services and information through the identifiable and selectable/personalized aspects, which allows for the effective transfer of rich and dense information from E-commerce between retailers and customers. The personalization of services and information is enhanced by the identifiable user through the interface, namely an application on a Smartphone. The infrastructure that supports the mobile phone provides the benefit of not being fixed by location, which allows the users to combine the physical aspects of traditional stores with the benefits of information exchanges online. The online interactions could now take place through the portable interface of Smartphone apps and be combined with the physical and social interactions which make up the shopping experience in traditional retail practice.

M-commerce then combines the convenience of information search and exchange of E-commerce with the experience and practicality of traditional methods. Customers can compare products between stores; get opinions from personal contacts, experts and customer reviews. All of which assists the customer in making a decision and selecting a product which is right for them. Mobile payment technology can prove convenient for buyers and sellers, through assisting quick one-touch-transactions and providing security and peace of mind for the customer. The anywhere anytime information and interactive element of social media make it possible for retailers to retain customers through receiving feedback on problems and rewarding loyal customers through membership programs, all of which is done through Smartphone apps and mobility services.

The success of advertising via mobile phones is still largely dependent on the customer initiating contact, either by subscribing through social media, or downloading retailer applications. The large

adoption rate and everyday use of Smartphones and social media can be used to spread word about retail stores through functions such as Facebook ‘check-in’ and ‘fan pages’. Another option is for retailers to promote the use of M-commerce in traditional stores and on web pages, so that customers might experience the benefits first hand and then subscribe. We find that the younger customers are driving the evolution of new technology to create more convenient and effective ways to do business and interact, and managers acknowledge that they need to implement the developing trends as well as pioneer them, in order to satisfy customer needs and develop new business models for the future.

## **7.2 Theory and Practice**

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It is our discovery that m-commerce can provide an excellent combination between the two ideas of traditional commerce and E-commerce. What is provided is a convenient and more accessible experience when it comes to the consumer buying decision process. What real-time information and location centric information do is provide proven linkage of advantages of e-commerce and traditional commerce in regards to the consumer decision buying process. The table represents where mobile commerce advantages fit in to the different stages in each one of these steps and how it uses location-centric and real-time information in order to combine these advantages.

We therefore view the concept of the ‘four Is’ as a possible contribution to the existing theory in the field. This concept unifies traditional, electronic and mobile commerce, in that all three forms depend on the four elements to make commerce possible. When analyzed through existing theory and our findings from managers and customers, the concept shows that it is possible to combine the interface and interaction of traditional and electronic commerce, through the information exchange possibilities that arise due to the infrastructure behind M-commerce. Essentially it is theoretically possible for a clicks-and-mortar retailer to achieve a fully integrated business model which combines the benefits of E and T-commerce, through developing the relevant infrastructure and interface to facilitate the interactions and information exchange via mobile phones. The findings should be a helpful aid in informing managers of the various benefits that M-commerce presents to the practice of retailing, both in terms of satisfying customer needs and expectations, and in creating more effective and innovative ways of doing business. The ‘always on’ and identifiable aspect of M-commerce will appeal to marketers as a powerful tool for external marketing and customer loyalty, whilst both customers and retailers might adopt mobile payments in the near future as a means to simplify and speed up the transaction process.

### **7.3 Future possibilities and considerations**

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This study has opened up the possibilities for M-commerce to have a large impact on the retail business model. The study however only focuses on the front line operations of the retailer. Further studies concentrating on the impact of M-commerce on the internal business processes of a retailer would prove helpful in determining whether M-commerce has the capability of increasing the overall effectiveness of an organization. We have studied the interactions between sellers and buyers; there may also be arguments for the implementation as to facilitate interactions between employees and as internal marketing applications for companies. More concentrated studies on how M-commerce will function with specific categories of products or services will also provide insight into new applications and areas for technology development. The new era of Smartphones has dramatically opened up the future of M-commerce; there are therefore almost endless possibilities for further applications in all fields of business, B2C, B2B or even C2C. The applications will undoubtedly also bring with them problems and disadvantages, as this paper completely ignores these disadvantages, future studies focusing on the negative impacts will greatly contribute to fully understanding the overall effectiveness of using M-commerce in this manner. We look forward to seeing where it leads and how it changes the way people do business.

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# Appendices

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## Appendix A - Questionnaire

Your age \_\_\_\_\_

Sex:        a. \_\_\_ male        b. \_\_\_ female

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Please indicate your level of agreement with the following statements by ticking the appropriate response.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. I would be interested in the idea of paying for items with my mobile-phone for in-store purchases instead of using a credit/debit card.	_____	_____	_____	_____	_____
2. I believe paying with my mobile phone would be more convenient than paying with credit/debit card.	_____	_____	_____	_____	_____
3. I would be interested in receiving advertisement on my mobile-phone specially suited to my shopping habits.	_____	_____	_____	_____	_____
4. I would be interested in receiving offers about various discounts sent to my mobile phone.	_____	_____	_____	_____	_____
5. I would be interested in discounts based <i>only</i> on my previous purchases sent to my mobile phone.	_____	_____	_____	_____	_____
6. I would be interested in receiving mobile advertisements at anytime from retail stores.	_____	_____	_____	_____	_____
7. I would be interested in mobile advertisements sent <i>only</i> from stores which I have selected.	_____	_____	_____	_____	_____
8. I would be interested in using my mobile phone as a 'membership card' to stores, and thus receive discounts on purchases.	_____	_____	_____	_____	_____
9. I currently use my mobile phone to browse products and information whilst shopping.	Yes_____		No_____		

## Appendix B – Results from the survey

### Age group

	Answers	Percentage
Under 18	20	5,71 %
18-30	293	83,71 %
Over 30	37	10,57 %
Total	350	100 %

### Question 1:

I would be interested in the idea of paying for items with my mobile-phone for in-store purchases instead of using a credit/debit card.

Strongly agree	136	38,86 %
Agree	91	26 %
Neither agree nor disagree	58	16,57 %
Disagree	45	12,86 %
Strongly disagree	20	5,71 %
Total	350	100,00 %

### Question 2:

I believe paying with my mobile phone would be more convenient than paying with credit/debit card.

Question 2		
Strongly agree	124	35,43 %
Agree	76	21,71 %
Neither agree nor disagree	61	17,43 %
Disagree	57	16,29 %
Strongly disagree	32	9,14 %
Total	350	100,00 %

### Question 3:

I would be interested in receiving advertisement on my mobile-phone specially suited to my shopping habits.

Strongly agree	75	21,43 %
Agree	92	26,29 %
Neither agree nor disagree	62	17,71 %
Disagree	62	17,71 %
Strongly disagree	59	16,86 %
Total	350	100,00 %

**Question 4:**

I would be interested in receiving various discounts sent to my mobile phone.

Strongly agree	59	16,86 %
Agree	102	29,14 %
Neither agree nor disagree	80	22,86 %
Disagree	62	17,71 %
Strongly disagree	47	13,43 %
Total	350	100,00 %

**Question 5:**

I would be interested in discounts based only on my previous purchases sent to my mobile phone.

Strongly agree	91	26,00 %
Agree	93	26,57 %
Neither agree nor disagree	71	20,29 %
Disagree	53	15,14 %
Strongly disagree	42	12,00 %
Total	350	100,00 %

**Question 6:**

I would be interested in receiving mobile advertisements at anytime from retail stores.

Strongly agree	17	4,86 %
Agree	25	7,14 %
Neither agree nor disagree	71	20,29 %
Disagree	129	36,86 %
Strongly disagree	108	30,86 %
Total	350	100,00 %

**Question 7:**

I would be interested in mobile advertisements sent only from stores which I have selected.

Strongly agree	147	42,00 %
Agree	101	28,86 %
Neither agree nor disagree	41	11,71 %
Disagree	42	12,00 %
Strongly disagree	19	5,43 %
Total	350	100,00 %

**Question 8:**

I would be interested in using my mobile phone as a 'membership card' to stores, and thus receive discounts on purchases.

Strongly agree	141	40,29 %
Agree	125	35,71 %
Neither agree nor disagree	48	13,71 %
Disagree	20	5,71 %
Strongly disagree	16	4,57 %
Total	350	100,00 %

**Question 9:**

I currently use my mobile phone to browse products and information whilst shopping.

Yes	156	44,57 %
No	194	55,43 %
Total	350	100,00 %

## **Appendix C - Interview questions**

### **Retail store**

What is your biggest market segment regarding age?

Have you notice a cutback on retail sales since you became an online store.

### **Online store**

Do you have any online campaigns to shop online and campaign from online to physical store?

Are you considering NFC with tagging clothes for more information?

Has the company considered anything with mobile NFC billboards?

### **Mobile commerce**

Are you trying to work on mobile commerce?

What's your take of the new NFC payment method?

What form of advertisement are you doing with GPS tagging? (Are you tagging through Facebook?)

Are you doing advertisements or coupons to members who have joined as a friend on Facebook?

What is your take on preferred members (the more you buy, the better discount)?