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Matti Leppäniemi

MOBILE MARKETING COMMUNICATIONS IN CONSUMER MARKETS

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OECONOMICA

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION,
DEPARTMENT OF MARKETING,
UNIVERSITY OF OULU

MATTI LEPPÄNIEMI

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Supervised by
Professor Heikki Karjaluoto
Professor Kimmo Alajoutsijärvi

Reviewed by
Professor Stuart J. Barnes
Professor Craig Standing

Cover design
Raimo Ahonen

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Faculty of Economics and Business Administration, Department of Marketing, University of Oulu, P.O.Box 4600, FI-90014 University of Oulu, Finland

Abstract

This dissertation aims to examine the theoretical and empirical foundations of the mobile marketing phenomenon. While numerous studies have yielded important insights into this topic, the existing mobile marketing literature appears to be inconsistent and somewhat fragmented. With the help of two action research projects, interviews of mobile marketing practitioners, and an online survey, this study aims to contribute to our understanding of the nature of mobile marketing communications in consumer markets.

This thesis consists of an introductory section and five papers. The first paper evaluates the current state of mobile marketing research based on a review and an analysis of extant literature that focuses on mobile (or wireless) applications aimed at marketing or advertising. Various definitions of mobile marketing are evaluated and a more technologically-agnostic definition is provided. The second paper presents a framework of the mobile marketing communications environment that delineates how mobile marketing should be integrated into a company's integrated marketing communications strategy. A comprehensive overview of divergent mobile marketing activities is provided, along with representative examples derived from popular press. In addition, a detailed description of mobile marketing campaign planning and its implementation process is provided. The third paper provides a conceptual model of the relationships between interactive integrated marketing communications and database management in a mobile context. The results from empirical research suggest that consumers are willing to participate in Short Message Service (SMS) marketing in a retailing context.

The fourth and fifth papers utilize data collected by means of an online survey (n = 4,062) and examine the factors associated with consumers' intention to receive mobile advertising messages and responses to SMS direct-response campaigns. The results suggest that consumers' intention to receive mobile advertising messages is related to the relevance of the message, permission to receive mobile advertising messages, the benefits of receiving the message and the privacy of personal data. In addition, the results suggest that women and men differ significantly in their responses to SMS call-to-action campaigns, consumers aged 36–45 years are most likely to respond to SMS call-to-action in a TV program and participate in SMS sweepstakes and other competitions, and that employment status has a substantial impact on consumers' SMS campaign activity.

Overall, this thesis provides a conceptual and theoretical foundation intended to guide research efforts focused on mobile media and to aid practitioners in their quest to achieve mobile marketing success.

Keywords: action research, Integrated Marketing Communications, mobile advertising, mobile commerce, mobile marketing, mobile marketing communications, structural equation modeling

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Oulu, May 2008   Matti Leppäniemi

Abbreviations

2G   Also known as Personal Communications Services (PCS), second generation wireless service refers to the digital mobile phone technologies that emerged and were deployed during the 1990's, delivering both voice and data transmissions. 2G technology standards include Code Division Multiple Access (CDMA), Time Division multiple Access (TDMA), and Global System for Mobile Communications (GSM).

3G   The third generation wireless service promises to provide high data speeds, always-on data access and greater voice capacity. The high data speeds enable full motion video, high-speed internet access and video-conferencing, and are measured in Mbps. 3G technology standards include UMTS, based on WCDMA technology (quite often the two terms are used interchangeably) and CDMA2000, which is the evolution of the earlier CDMA 2G technology. UMTS standard is generally preferred by countries that use GSM network. The data transmission rates range from 144 kbps to more than 2 Mbps.

CDMA   Code Division Multiple Access. Also called "spread spectrum techniques," a technique for multiplexing digital transmission of radio signals in which each voice or data cell uses the whole radio band, and is assigned a unique code.

CDMA2000
-1X   CDMA2000 1X (IS-2000) was recognized by International Telecommunications Union (ITU) in 1999. It was the first IMT-2000 technology deployed worldwide in 2000. 1X is the most spectrally efficient wide area network technology for circuit-switched voice communications and it supports packet data speeds of up to 307 kbps in a single 1.25 MHz channel.

CDMA2000
1xEV-DO   Evolution-Data Optimized or Evolution-Data only is a telecommunications standard for the wireless transmission of data through radio signals, typically for broadband Internet access. It uses multiplexing techniques including Code division multiple access (CDMA) as well as Time division multiple access (TDMA) to maximize both individual user's throughput and the overall

	system throughput. Initially, the standard was called High Data Rate (HDR), but was renamed to 1xEV-DO after it was ratified by the International Telecommunication Union (ITU).
EDGE	Enhanced Data rates for GSM Evolution. The final stage of the GSM standard. Although technically a 3G network technology, it is generally classified as the unofficial standard 2.75G, due to its lower network speed. EDGE uses a new modulation schema to enable theoretical data speeds of up to 384kbit/s within the existing GSM spectrum.
EMS	Enhanced Messaging Service. An application-level extension to Short Message Service (SMS) for cellular phones available in GSM, TDMA and CDMA networks. An EMS enabled mobile phone can send and receive messages that have special formatting (such as bold or italic), animations, pictures, icons, sound effects and special ring tones.
Flash	Flash is a set of multimedia technologies developed and distributed by Adobe Systems since December 2005, when Adobe Systems acquired Macromedia. Flash is commonly used to create animation, advertisements, various web page components, to integrate video into web pages, and more recently, to develop rich Internet applications.
GSM	Global System for Mobile communications. The most popular digital mobile cellular standard in the world.
GPRS	General Packet Radio Service. A packet-switching technology that enables high-speed data transmission of up to 115kbps. An enhancement for GSM, often described as 2.5G.
iDEN	Integrated Digital Enhanced Network. A wireless technology developed by Motorola, which combines the capabilities of a digital cellular telephone, two-way radio, alpha-numeric pager, and data/fax modem into a single network. iDEN operates in the 800 MHz, 900MHz, and 1500MHz frequency bands, and is based on TDMA and GSM architecture it places more users in a given spectral space, compared to analog cellular systems. iDEN networks are used by various carriers all over the world, and by Nextel and Southern LINC in the USA.
HTTP	Hypertext Transfer Protocol is a communications protocol for the transfer of information on intranets and the World Wide Web. Its

original purpose was to provide a way to publish and retrieve hypertext pages over the Internet.

IEEE 802.11 A set of standards for wireless local area network (WLAN) computer communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802) in the 5 GHz and 2.4 GHz public spectrum bands.

IMT-2000 International Mobile Telecommunications-2000. The global standard for third generation (3G) wireless communications, defined by a set of interdependent International Telecommunication Union (ITU) recommendations.

IS-95 Interim Standard 95. A 2G Mobile Telecommunications Standard that uses CDMA, a multiple access scheme for digital radio, to send voice, data and signaling data (such as a dialed telephone number) between mobile telephones and cell phones.

IVR Interactive voice response. A phone technology that allows a computer to detect voice and touch tones using a normal phone call.

JAVA An object-oriented programming language developed by Sun Microsystems. Programs authored in Java do not rely on an operating system, as long as a Java Virtual Machine (JVM) is installed on the destination device on which they are running.

J2ME Java 2 Platform, Micro Edition. A technology that allows programmers to use the Java programming language and related tools to develop programs for mobile handsets. J2ME consists of programming specifications and a special virtual machine (Java Virtual Machine, or JVM) that allows a J2ME-encoded program to run in the handset.

MIDP Mobile information Device Profile. A specification published for the use of Java on embedded devices such as mobile phones and PDAs.

LBS Location Based Services. A range of services that are provided to mobile subscribers based on the geographical location of their handsets within their cellular network. Handsets have to be equipped with a position-location technology such Global Position System (GPS) to enable the geographical-trigger of service(s) being provided. LBS include driving directions, information about certain resources or destinations within current vicinity, such as restaurants, movie theaters, etc. LBS may also be used to track the movements

	and locations of people, as is being done via parent/child monitoring services and mobile devices that target the family market.
MMCmobile	MultiMediaCard Mobile. A flash memory card that provides storage for mobile phones, PDAs and other handheld devices.
MMS	Multimedia Messaging Service. Standard for telephony messaging systems that enable the sending of messages that include multimedia objects (images, audio, video, rich text). May or may not include normal text.
MMSC	Multimedia Message Service Center. It serves to receive, store and send multimedia messages.
MMS GW	Multimedia Message Service Gateway. A service proving an interface between SMS messages and other protocols. Enables two-way MMS traffic into and out of the operator's Multimedia Message Service Centre (MMSC)
P2P	Peer-to-peer. A computer network that uses diverse connectivity between participants in a network and the cumulative bandwidth of network participants rather than conventional centralized resources where a relatively low number of servers provide the core value to a service or application.
PAN	Personal area network. A computer network used for communication among computer devices (including telephones and personal digital assistants) close to one person. The reach of PAN is typically a few meters.
PIM	Personal information manager. A type of application software that functions as a personal organizer. As an information management tool, a PIM's purpose is to facilitate the recording, tracking, and management of certain types of personal information.
PDA	Personal digital assistant. A handheld computer, but has become much more versatile over the years.
Push-to-talk	A method of conversing on half-duplex communication lines, including two-way radio, using a momentary button to switch from voice reception mode to transmit mode.
Ringtone	A ringtone or ring tone is the sound made by a telephone to indicate an incoming call. The term, however, is most often used to refer to the customizable sounds available on mobile phones
SIP	The Session Initiation Protocol. An application-layer control (signaling) protocol for creating, modifying, and terminating

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	sessions with one or more participants. It can be used to create two-party, multiparty, or multicast sessions that include Internet telephone calls, multimedia distribution, and multimedia conferences.
SMS	Short Message Service. A standard for telephony messaging systems that allow sending messages between mobile devices that consist of short messages, normally text only content. 160 characters is a maximum length of short messages.
SMSC	A short Message Service Center is a network element in the cellular network which delivers SMS messages.
SMS GW	Short Message Service Gateway. A service proving an interface between SMS messages and other protocols. Enables two-way SMS traffic into and out of the operator's Short Message Service Centre (SMSC)
SMTP	Simple Mail Transfer Protocol. The de facto standard for e-mail transmissions across the Internet.
Symbian	An advanced open standard operating system for data enabled handsets.
Streaming	An internet derived expression for the one-way transmission of video and audio content.
TDMA	Time Division Multiple Access. A technique for multiplexing multiple users onto a single channel on a single carrier. This digital cellular technology divides calls into time slots, each lasting only a fraction of a second, and allocating them on an as-needed basis.
UMTS	Universal Mobile Telecommunications System. The European term for one of the third generation wireless services.
USB2.0	Universal Serial Bus. A serial bus standard to interface devices. At present, USB specification is at version 2.0 (with revisions). The USB 2.0 specification was released in 2000 and was standardized by USB-IF at the end of 2001.
VoIP	Voice over Internet Protocol is a protocol optimized for the transmission of voice through the Internet of other packet switched networks.
WAP	Wireless Application Protocol. An open international standard for applications that use wireless communication. Its principal application is to enable access to the internet from a mobile phone or PDA. Can be used to deliver content to mobile devices.

WAP GW   Wireless Application Protocol gateway act as a bridge between mobile devices using the WAP protocol and World Wide Web, passing pages from one to the other much like a proxy.

WCDMA   Wideband Code Division Multiple Access. A high speed 3G mobile wireless technology with the capacity to offer higher data speeds than CDMA and therefore can transmit and receive information faster and more efficiently.

WiFi   Also known as Wi-Fi. A wireless-technology brand owned by the Wi-Fi Alliance, promotes standards with the aim of improving the interoperability of wireless local area network products based on the IEEE 802.11 standards. Common applications for Wi-Fi include Internet and VoIP phone access, gaming, and network connectivity for consumer electronics such as televisions, DVD players, and digital cameras.

WLAN   A wireless local area network which is the linking of two of more computers without using wires. WLAN utilizes spread-spectrum or OFDM modulation technology based on radio waves to enable communication between devices in a limited area, also known as the basic service set. This gives users the mobility to move around within a broad coverage area and still be connected to the network.

XML   Extensible Markup Language. A general-purpose markup language primarily used to facilitate the sharing of data across different information systems, particularly via the Internet.

XHTML   Extensible HyperText Markup Language. A markup language. It is a reformulated, upgraded version of HyperText Markup Language (HTML), but still conforms to the Extensible Markup Language (XML)

Source: Based on Mobile Marketing Industry Glossary 2007, Wikipedia 2008, CDMA Development Group (www.cdg.org) 2008, Okazaki and Taylor 2008.

List of original papers

The thesis is based on the introductory chapters and the following papers:

I   Leppäniemi M, Sinisalo J & Karjaluoto H (2006) A Review of Mobile Marketing Research. International Journal of Mobile Marketing 1(1): 30–40.
II   Leppäniemi M & Karjaluoto H (2008) Mobile Marketing: From Marketing Strategy to Mobile Marketing Implementation. International Journal of Mobile Marketing (in press).
III Leppäniemi M, Karjaluoto H, Sinisalo J & Salo J (2006) In: Diehl S & Terlutter R (eds) International Advertising and Communication - Current Insights and Empirical Findings. Wiesbaden, Deutscher Universitäts-Verlag: 397–415.
IV   Leppäniemi M (2008) Determinants of Intentions to Receive Mobile Advertising Messages: A Theoretical Framework and Empirical Study. Manuscript.
V   Leppäniemi M & Karjaluoto H (2008) Exploring the Effects of Gender, Age, Income and Employment Status on Consumers' Responses to Mobile Advertising Campaign. Manuscript.

Contents

1   Introduction

"It's all about communication and trust relationships."

> – Vesku Paananen, the father of the ringtone business, 2000

1.1   The background of the study

The marketing communications environment has changed rapidly during the last few years. Specifically, mass markets have been broken down into fragmented markets (Dalgic & Leeuw 1994), and therefore, marketers are now shifting away from mass marketing (Kotler *el al.* 2005). Marketers are developing targeted marketing communications to build and maintain relationships with customers in more narrowly defined niche markets. Furthermore, the substantial development in information (e.g. Nowak & Phelps 1997, Ryals & Knox 2001, Schultz 1993, Shaw *et al.* 2001) and communications technology (Peltier *et al.* 2003, Hoffman & Novak 1996, Lichtenthal & Eliaz 2003) accelerate the movement towards personalized marketing communications. Consequently, companies' interactions with customers are increasingly managed by technologies that enable the firms to personalize communications in real time across multiple media platforms and channels. Thus, marketing communications is nowadays increasingly interactive by nature (e.g. Bezjian-Avery *et al.* 1998).

Interactive media changes marketing communications from a one-way process to a two-way process with the interaction of the consumer and marketer at the core (Stewart & Pavlou 2002). Duncan and Moriarty (1998: 8) have stated that "*interactivity is a hallmark of the paradigm shift in both marketing and communication.*" Shankar and Malthouse (2006: 3) defined interactive marketing as "*an integrated exchange process by which an organization uses the understanding of customer behavior, technology and other resources to create and manage customer value and collaborative relationships and enhance shareholder value through relevant brands, products/service offerings, ideas and messages communicated and delivered to the right customers through appropriate channels and contact points at appropriate times.*"

This view of interactive marketing is obviously motivated by Integrated Marketing Communications (IMC) (see e.g. Peltier *et al.* 2003, Shultz *et al.* 1993, Kitchen *et al.* 2004). During the past decade, IMC has generated an increasing interest among academics and practitioners. From an interactive marketing

viewpoint, IMC not only defines and assigns the integrated role of diverse communication media but also addresses how the combination of different media enhances the overall effectiveness of a firm's customer relationships (Zahay *et al.* 2004). Thus, IMC profoundly impacts the way in which marketers communicate with customers. Furthermore, the extension of IMC into an "interactive" marketing domain has added value to bringing together multiple customer touch points, media and messages (Peltier *et al.* 2003). Therefore, the traditional nature of marketing communications, mass communication, is no longer a sufficient way to develop durable customer relationships in today's data-driven and customer-oriented world of marketing (Peltier *et al.* 2004).

Given this new communications environment, marketers are increasingly using new, interactive and highly targeted media (e.g. Barwise & Farley 2005). Besides the Internet, mobile media presents interesting opportunities for marketers by providing new possibilities for interacting with existing and potential customers. Indeed, mobile marketing, where mobile (wireless) media is used as a content delivery and direct response channel in integrated campaigns along with traditional media such as a TV, radio, and print, or as a standalone medium, is fast becoming an important advertising and direct marketing tool (e.g. Trappey III & Woodside 2005). While evidence of the effects of mobile advertising campaigns on firms' marketing performance is still scarce, marketers around the globe are spending increasing amounts of money in advertising activities on mobile media. In fact, global brands such as Coca-Cola, Volvo, Nike, Disney, Adidas, MTV, Pepsi, Visa, Mazda, and McDonald's have successfully exploited mobile advertising for several years (e.g. Sultan & Rohm 2005, Mobile Marketing Association 2008). Specifically, mobile advertising revenue totaled US$2 773 million in 2007 and is predicted to increase by 79 percent to US$4 957 million in 2008 (eMarketer 2007). In addition, the same industry projection suggests that within the next 3 to 4 years, yearly global expenditures on mobile advertising are likely to exceed US$16 billion.

Previous studies have shown that mobile advertising, especially SMS advertising is effective both in stimulating consumer response and as a brand vehicle (Barwise & Strong 2002, Rettie *et al.* 2005, Scharl *et al.* 2005). According to many authors (e.g. Barnes 2002a, Muk 2007) the attractiveness of mobile marketing lies in its potential to target consumers in a specific context. In this regard, Sultan and Rohm (2005) suggest that mobile devices allow marketers to deliver personalized, context- and location-based messages to a specific target audience. For this reason, prior research has mainly focused on permission-based

(i.e. push-based) mobile advertising. Permission-based mobile advertising can be defined as a message (e.g. SMS and MMS) that has been requested by the consumer as part of an opt-in scheme (e.g. a consumer fills in their mobile phone number on a regular customer registration form and agrees to receive commercial messages and information of interest). Permission-based advertising messages are powerful because by signing up to an opt-in list, the consumer is requesting the messages from the advertiser rather than simply being exposed to it. Therefore, as suggested by Martin *et al.* (2003), advertisers can gain better value for their money as the message recipients have already indicated a level of interest in the messages.

Besides the permission-based mobile advertising, marketers are increasingly engaging in call-to-action / direct-response (pull-based) mobile advertising. That is, a customer sending an SMS in response to a call-to-action, for instance, from TV, radio, on-pack or press (e.g. Trappey III & Woodside 2005). In Europe, one of the most used forms of direct-response mobile advertising is the Text 'n' Win (also called Text 2 Win) promotion which is one usually advertised on a package of something, like crisps, a candy bar or a drink, and the customer is invited to send a text message into a shortcode for a chance to win a prize (Keegan 2005). For instance, Pepsi recently partnered with Enpocket to drive sales of Pepsi, and leverage Pepsi's Team England association in the run up to the finals by distributing approximately 95 million units of Pepsi Max, Pepsi Max Twist, Pepsi Regular and Diet Pepsi that each contained a unique code. The campaign was supported through the line with TV advertising and with a major presence at point of sale across a range of retail outlets. With a draw every 90 minutes consumers simply had to text their unique code from the packaging to shortcode 60360. In all, more than a quarter of a million people participated in the campaign (Enpocket 2008).

Despite the marketing potential, academic research in mobile marketing is still in its early stages (e.g. Barnes & Scornavacca 2004, Muk 2007, Carroll *et al.* 2007). A strong need for empirical research is articulated by practitioners and academics. This study responds to calls for more research and theoretical development on mobile marketing. The aim of this study is to contribute our understanding of the nature of mobile marketing communications in consumers markets.

1.2 Scope and objectives of the study

Mobile marketing communications is an emerging research stream within the marketing discipline. Prompted by numerous reports in the popular press that emphasized the huge potential of mobile marketing (e.g. Carat Interactive 2002, Ovum 2002) and highlighted the success stories of pioneering mobile marketing campaigns (e.g. Enpocket 2002, 2003), academic research on mobile marketing communications has begun to grow. However, despite the increasing number of research papers, the growing body of literature on mobile marketing communications appears to be inconsistent and fairly fragmented. This is due, in large part, to the fact that a common conceptualization of the phenomenon is still missing.

In fact, numerous definitions of the phenomenon called mobile marketing have been proposed by marketing practitioners and scholars alike. While some of the conceptualizations are similar, there is evidently a deficiency of consensus as to the most appropriate way in which this emerging phenomenon should be defined. In an attempt to develop a conceptualization that captures the true meaning of marketing communications through the mobile media, an extensive review and analysis of the extant mobile marketing literature will be conducted in this study.

A cursory review of the mobile marketing literature is likely to reveal that marketing communications through the mobile channel has, implicitly or explicitly, been conceptualized as (1) mobile marketing (e.g. Kalakota & Robinson 2002, MMA 2005, Scharl *et al.* 2005, Facchetti *et al.* 2005, Dickinger *et al.* 2004, Bauer *et al.* 2005), (2) mobile advertising (e.g. Leppäniemi *et al.* 2004, Tähtinen & Salo 2004, Haghirian & Madlberger 2005, De Reyck & Degraeve 2003), (3) wireless marketing (e.g. Tsang *et al.* 2004, Brassington & Pettitt 2003) and/or (4) wireless advertising (Petty 2003, Yunos *et al.* 2003) (see more details in chapter 4.1).

This dilemma is clearly articulated by Tähtinen (2005: 160): "*On one hand, mobile advertising is widely applied, but its content does not bring forward the distinctive features that the mobile devices bring in. Therefore, the use of mobile advertising does not really cover the whole phenomenon. On the other hand, marketing is a wider concept than advertising, but when it is used to describe the focal phenomenon, it actually covers more than it should.*" We acknowledge this dilemma; one concept is too narrow and the other one is too broad, and therefore we built our research on the following definition provided by Dickinger *et al.*

(2004): "*Using interactive wireless media to provide customers with time and location sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders.*"

At present, academic research in mobile marketing is still embryonic. Thus, little is known about "*the level of integration of the mobile marketing value chain, about the relevance of traditional players in the take-off of the market, their actions within the value chain as well as the critical success factors*" (Facchetti *et al.* 2005: 66). However, mobile marketing value chain and/or network have gained increasing attention among researchers. For instance, Bragge *et al.* (2005), Leppäniemi *et al.* (2004) and Facchetti *et al.* (2005), among others, have attempted to identify the structure of mobile marketing value chain and/or network by analyzing the actors and activities of the mobile marketing environment. In addition, business models in the emerging context of mobile advertising are studied in some detail (see e.g. Komulainen *et al.* 2005, Gopal & Tripathi 2006). However, prior research has provided a partial description of the mobile marketing environment. Therefore, deficiencies persist in our understanding of issues related to the functions and roles of different players in the mobile marketing scene. Therefore, this study aims at contributing to our understanding on how to integrate mobile marketing into a company's marketing communications strategy and how to plan and implement a mobile marketing campaign.

A substantial number of the mobile marketing publications have considered different aspects of consumer behavior. Several studies have examined consumers' attitudes toward mobile marketing (e.g. Haghirian & Madlberger 2005, Leung & Cheung 2004, Tsang *et al.* 2004), acceptance of mobile marketing (e.g. Bauer *et al.* 2005, Barnes & Scornavacca 2004) and perceptions of mobile advertising (e.g. Okazaki 2004, Haghirian *et al.* 2005). In addition, the effectiveness and responsiveness of mobile marketing have gained increasing interest in literature (e.g. Barwise & Strong 2002, Rettie *et al.* 2005, Trappey III & Woodside 2005, Heinonen & Strandvik 2003). However, "*despite the promise of cost-effective and targeted communications offered by the medium, there is still surprisingly little research and empirical evidence on how mobile advertising actually works*" (Merisavo *et al.* 2006: 120). It has been suggested that mobile marketing, especially SMS advertising, is currently the best way to reach young people between 15 and 24 years of age (see e.g. Rettie *et al.* 2005, Barnes & Scornavacca 2004, McManus & Scornavacca 2005). But younger consumers are not the only ones to embrace mobile technology. In fact, the reach of mobile

devices is perhaps better understood by segmenting people on the basis of a wide variety of background variables, which can be more representative of actual behavior. Therefore, this study also aims at contributing to our understanding of mobile marketing communications by examining factors associated with the intention of consumers to receive mobile advertising messages and the effects of age, gender, income, and employment status on consumers' responses on mobile advertising campaigns.

As the preceding paragraphs illustrate, mobile marketing communication is an emerging phenomenon that involves an ocean of unsolved research questions. The purpose of this study is not to resolve all the open questions. Instead, this study aims to contribute to our understanding of central theoretical and pragmatic issues related to the application of the mobile marketing communications in consumer markets. More specifically, the main research problem is to determine:

What is the nature of mobile marketing communications in consumer markets?

The main aim of this study can be divided into five more specific research questions:

1. What is the current state of mobile marketing research?
2. How to integrate mobile marketing into a company's marketing communications strategy?
3. How to plan and implement a mobile marketing campaign?
4. Which factors are associated with the consumers' intention to receive mobile advertising messages?
5. How do gender, age, income, and employment status affect consumers' responses to mobile advertising campaigns?

In sum, the research questions were chosen in order to contribute to research endeavors on mobile marketing communication by exploring the theoretical and empirical foundations of the mobile marketing phenomenon. Thus, as a point of departure, research on mobile marketing is reviewed and analyzed (RQ1). Then, mobile marketing is examined from the company's or marketer's point of view (RQ2 and RQ3). Finally, mobile marketing is examined from the consumers' perspective. Specifically, factors affecting consumers' intention to receive mobile advertising messages and the effects of gender, age, income, and employment status on consumers' responses to mobile advertising campaigns are examined

(RQ4 and RQ5). Figure 1 illustrates how these research questions are related to each other and how they relate to the aim of this study.
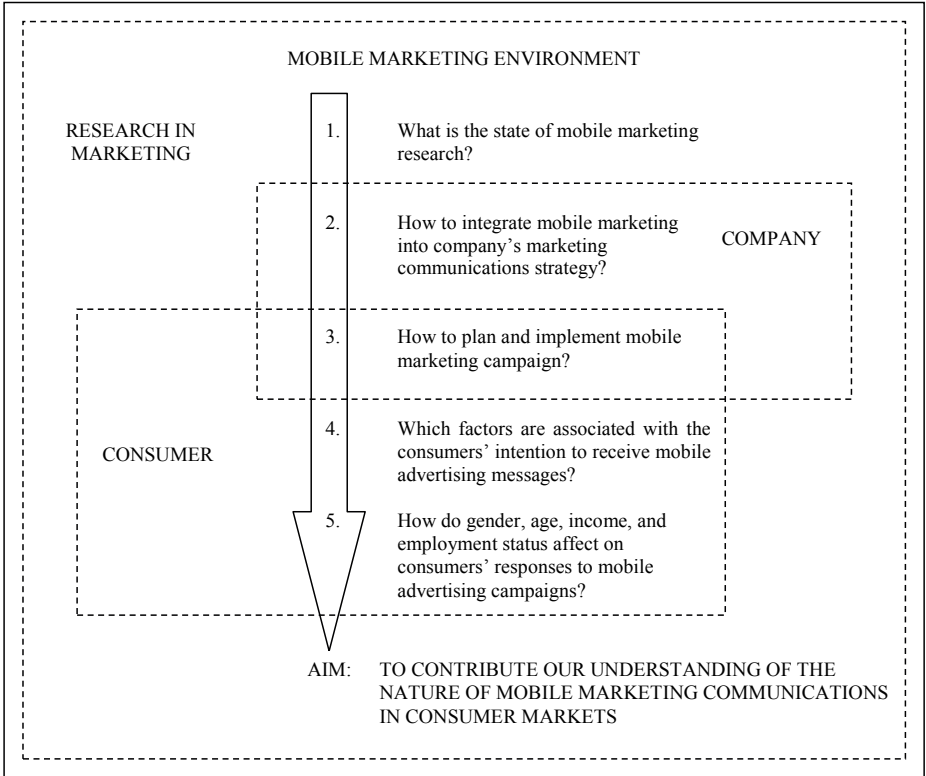
Fig. 1. Research framework.

The research questions are answered in the five research papers. Table 1 shows the research papers and their relation to the research questions. Each paper provides a partial solution to the main research problem. Thus, this dissertation combines the contributions of each paper in order to contribute to our understanding of the nature of mobile marketing communications in consumer markets.

Table 1. Overview of research papers.

#	Title	Authors	Paper	Research question
I	A Review of Mobile Marketing Research	Leppäniemi M, Sinisalo J & Karjaluoto H.	International Journal of Mobile Marketing, 2006, 1(1): 30-40.	RQ1
II	Mobile Marketing: From Marketing Strategy to Mobile Marketing Campaign Implementation	Leppäniemi M & Karjaluoto H.	International Journal of Mobile Marketing (in press).	RQ2 RQ3
III	Integrated Marketing Communications in Mobile Context	Leppäniemi M, Karjaluoto H, Sinisalo J & Salo J.	In: Diehl S & Terlutter R (eds) International Advertising and Communication - Current Insights and Empirical Findings, 2006, Wiesbaden, Deutscher Universitäts-Verlag: 397–415.	RQ2
IV	Determinants of Intentions to Receive Mobile Advertising Messages: A Theoretical Framework and Empirical Study	Leppäniemi M.	Manuscript	RQ4
V	Exploring the Effects of Gender, Age, Income and Employment Status on Consumers' Responses to Mobile Advertising Campaign	Leppäniemi M & Karjaluoto H.	Manuscript	RQ5

The contribution of the author of this dissertation to the papers from 1 to 5 is as follows:

– Paper 1: The author of this dissertation is responsible for initiating the paper and had the main responsibility in writing the paper. The data was collected in cooperation with the co-authors. 80 percent of the paper has written by the author.

– Paper 2: The author of this dissertation is responsible for initiating the paper and had the main responsibility in writing the paper. The co-author provided valuable comments on the manuscript of the paper. 90 percent of the paper has written by the author.

- Paper 3: The author of this dissertation is responsible for initiating the paper and had the main responsibility in writing the paper. The data was collected in cooperation with the co-authors. 80 percent of the paper has written by the author.
- Paper 4: The author of this dissertation had a full responsibility of writing the paper.
- Paper 5: The author of this dissertation is responsible for initiating this paper and had the main responsibility in writing the paper. The data was collected in cooperation with the co-author. 90 percent of the paper has written by the author.

The nature of research on mobile marketing is difficult to confine to any specific discipline, and therefore the relevant materials are scattered across various journals. Marketing, Business and Management and Information Systems are the most common academic disciplines for research on mobile marketing. This has resulted in a situation in which the existing mobile marketing literature appears to be somewhat inconsistent and fairly fragmented. Therefore, to increase the knowledge on this topic, this study aims to develop a conceptualization and description of the domain of mobile marketing that adequately captures the true nature of the phenomenon.

It has been suggested that mobile media is interactive by nature (e.g. Sultan & Rohm 2005) and that mobile marketing should be used "*as an integrated content delivery and direct-response vehicle within a cross-media marketing communications program*" (MMA 2006: 20). In other words, "*mobile communication should never be a stand-alone channel or an aggressive promotional tactic. It should be used to extend the presence of a company or product into an additional channel. The key is integration*" (Steinbock 2005: 200). In addition, it has been argued that mobile marketing is a subset of mobile commerce (e.g. Barnes & Scornavacca 2004, Varshney & Vetter 2002, Venkatesh *et al.* 2003). Therefore, it was decided to build this study on the Integrated Marketing Communications approach (e.g. Shultz *et al.* 1994, Kitchen *et al.* 2004, Kitchen & Schultz 1999, Eagle & Kitchen 2000, Duncan & Everett 1993) as well as previous studies on interactivity and/or interactive marketing (e.g. Duncan & Moriarty 1998, Yadav & Varadarajan 2005, Stewart & Pavlou 2002, Bezjian-Avery *et al.* 1998, Peltier *et al.* 2003, Trappey III & Woodside 2005) and mobile commerce including mobile marketing (e.g. Jarvenpaa *et al.* 2003, Dholakia & Dholakia 2004, Barnes 2002a, 2002b, Barnes & Huff 2003, Balasubramanian *et*

al. 2002, Anckar & D'Incau 2002, Varshney & Vetter 2002, Kumar 2004, Okazaki 2005, Sultan & Rohm 2005).

1.3 Research approach and methodology

It is difficult to separate theory and method, and if a researcher accepts a set of assumptions about the world shared by a group of researchers, then that researcher, to a large extent, also accepts the criteria for what the appropriate tools (methodologies, instruments, and types and forms of data collection) for examining that world should be (Deshpande 1983). In other words, "*the selection of a particular methodology is profoundly theoretical… Research methods represent different means of acting upon the environment*" (Rist 1977: 43).

In the domain of social sciences, all researchers approach their research subjects via explicit or implicit assumptions about the nature of the social world and the way in which the world may be explored (Burrell & Morgan 1979). Thus, discussions concerning research methods in the social sciences are linked directly to assumptions (similar to orientation by Easton 1995) about ontology, epistemology and human nature (Morgan & Smircich 1980). If one agrees that a subjectivist approach to social science combines nominalist ontology with anti-positivist epistemology, is voluntarist on human nature and ideographic on methodology (see Burrell & Morgan 1979, Easton 1995), this study is likely to be situated toward the subjectivist end of the continuum. However, it is important to emphasize that this study is not a complete opposite to an objectivist approach. Especially since survey method and statistical analyses are employed in the study. Therefore, in a more realistic vein, this study can be situated in some intermediate position between the extreme ends.

With regard to the choice of research approach, a researcher has to decide upon how to build the understanding of the phenomenon under investigation. The central approaches in Western research traditions have been deductive theory testing and inductive theory building (see e.g. Kovács & Spens 2005). However, over a century ago Charles S. Peirce argued that, besides deduction and induction, there is a third mode of inference, which he called abduction (see e.g. Niiniluoto 1999, Bergman & Paavola 2003, Paavola 2005). According to Coffey and Atkinson (1996: 156–162), abduction involves *"a repeated interaction among existing ideas, former findings and observations, new observations and new ideas.*" Therefore, "*abductive inferences lead us from specific cases or findings toward generic levels that allow us to move conceptually across… social*

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contexts" (Ibid.). In a recent study, the abductive approach has been successfully applied in the context of mobile advertising (Komulainen *et al.* 2007). This study also represents an abductive approach in which interaction between existing theory and empirical data is continuous (e.g. Kovács & Spens 2005, Komulainen *et al.* 2007). Thus, in this study both extant theories and the empirical data had an equal and constant role in the knowledge building process.

There has been a long debate between qualitative and quantitative paradigms that can be traced back to the late 20th century and the development of an interpretive approach to social inquiry, which was a reaction to positivism (Smith 1983, Smith & Heshusius 1986). Though the debate is still continuing (see e.g. Saunders 1999), the advantages of combining the quantitative and qualitative approaches have been widely recognized: "*a merger of the best of both worlds – rather than a one-sided acquisition – will add substantial synergy to research in marketing*" (Gummesson 2005: 310). In this study, both the qualitative and quantitative methods were employed in order to provide more profound insights into the phenomenon under investigation.

An action research approach was chosen as the most viable qualitative method for the purposes of this study. In general, action research can be seen as a variant of case research, but whereas a case researcher is an independent observer (Westbrook 1995), "*…the action researcher is not an independent observer, but becomes a participant, and the process of change becomes the subject of research*" Benbasat el al. (1987: 371). The reason to select an action research approach for this study was two-fold: action research is particularly strong in providing important insights into a complex and under-researched phenomenon in its contemporary context and the author is deeply involved in the research process. Specifically, two different companies decided to participate in a university-led research project. The companies wanted to integrate mobile marketing into their marketing communications mix and mobile media into their media mix. Since the companies did not have any previous experience of mobile marketing, it was decided to organize two action research projects with the help of the research project.

Thus, the qualitative empirical data was collected from two action research projects conducted during a research project called Personalized Mobile Advertising Services (PEAR). The project was funded by the Finnish Funding Agency for Technology and Innovation (Tekes) and seven industrial partners. The PEAR –project aimed at developing a multi-channel mobile marketing service system for planning, implementing and analyzing mobile marketing that utilizes

value-added features such as personalization, user grouping, presence, profile, and location information. The service system was tested and developed with end users in real-life settings. In the project, mobile marketing was defined as marketing communications sent to and received on smart phones, mobile phones or Personal Digital Assistants (PDA). The time span of the project was from 1.8.2004 to 31.10.2006.

The author was involved as an active participant in the planning and implementation of the action research projects. Thus, the main qualitative data was collected through participant observation. In this study, participant observation is defined "*as a process in which the observer's presence in a social situation is maintained for the purpose of scientific investigation. ...the observer is part of the context being observed, and he both modifies and is influenced by this context*" (Schwartz & Schwartz 1955: 344).

In order to validate the findings obtained from the action research projects and to gain new valuable insights into the phenomenon under investigation, eight interviews were conducted with the company involved in the action research and with four other companies that were familiar with mobile marketing activities in general. Generally speaking, qualitative interviews are divided into three categories: structured interviews, unstructured interviews and semi-structured interviews (e.g. Rogers & Bouey 1996). A semi-structured interview combines a highly structured agenda with the flexibility to ask subsequent questions. In this study, semi-structured interviews were used.

Although the action research projects provided useful insights into mobile marketing, our understanding of consumers' use of and engagement in mobile marketing and / or advertising activities remained deficient. Therefore, in an attempt to provide the reader with a more thorough understanding of mobile marketing from the consumer's point of view, an online survey was organized in cooperation with four industrial partners of the PEAR-project. The survey was promoted on four different websites in Finland. Those websites displayed a banner ad that contained a brief description of the survey and a link to a website questionnaire. The survey took place between September 22 and December 15, 2005. A total of 4,062 consumers responded to this survey.

1.4   Outline of the study

This dissertation consists of two parts. The first part is an overview of the dissertation, and the second part consists of five papers. This dissertation begins

with an introductory chapter that presents the background, scope and objectives, research approach and methodology, and the outline of the study. Then, the theoretical foundation of the study is presented along with the methodology and an overview of the papers. The first part concludes with a discussion that covers a review of the results, the validity and reliability of the study, the theoretical and managerial contributions of the study, the limitations of the study and suggestions for future research. The second part consists of five papers which address the research questions presented in chapter 1.2. The structure of this dissertation is illustrated in Figure 2.
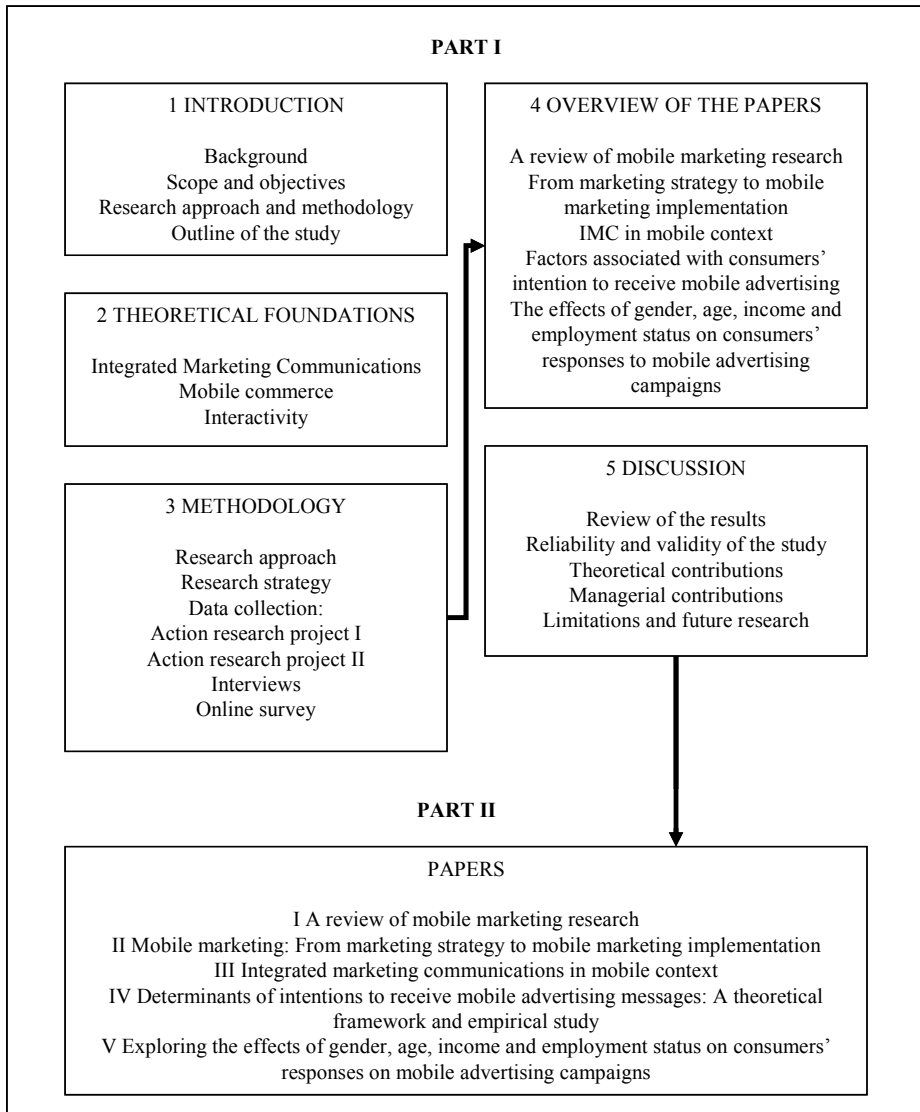
PART I

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┌─────────────────────────────┐        ┌──────────────────────────────────┐
│      1 INTRODUCTION          │        │    4 OVERVIEW OF THE PAPERS       │
│                             │        │                                  │
│        Background            │        │ A review of mobile marketing     │
│      Scope and objectives    │        │ research                         │
│ Research approach and        │        │ From marketing strategy to mobile│
│ methodology                  │        │ marketing implementation         │
│     Outline of the study     │        │ IMC in mobile context            │
└─────────────────────────────┘        │ Factors associated with          │
                                        │ consumers' intention to receive  │
┌─────────────────────────────┐        │ mobile advertising               │
│  2 THEORETICAL FOUNDATIONS   │        │ The effects of gender, age,      │
│                             │        │ income and employment status on  │
│ Integrated Marketing         │        │ consumers' responses to mobile   │
│ Communications               │        │ advertising campaigns            │
│     Mobile commerce          │        └──────────────────────────────────┘
│      Interactivity           │
└─────────────────────────────┘        ┌──────────────────────────────────┐
                                        │        5 DISCUSSION               │
┌─────────────────────────────┐        │                                  │
│      3 METHODOLOGY           │        │   Review of the results          │
│                             │        │ Reliability and validity of the  │
│   Research approach          │        │ study                            │
│    Research strategy         │        │  Theoretical contributions       │
│    Data collection:          │        │  Managerial contributions        │
│ Action research project I    │        │ Limitations and future research  │
│ Action research project II   │        └──────────────────────────────────┘
│      Interviews              │
│      Online survey           │
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PART II

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┌──────────────────────────────────────────────────────────────────────────┐
│                                PAPERS                                      │
│                                                                            │
│          I A review of mobile marketing research                           │
│  II Mobile marketing: From marketing strategy to mobile marketing          │
│  implementation                                                            │
│  III Integrated marketing communications in mobile context                 │
│  IV Determinants of intentions to receive mobile advertising messages:     │
│  A theoretical framework and empirical study                               │
│  V Exploring the effects of gender, age, income and employment status on   │
│  consumers' responses on mobile advertising campaigns                      │
└──────────────────────────────────────────────────────────────────────────┘
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Fig. 2. The structure of this report.

2 Theoretical foundation

This chapter provides a loose theoretical framework (see Miles & Huberman 1994) for this study. Specifically, this study builds on the Integrated Marketing Communications (IMC) approach as well as prior research on interactivity and/or interactive marketing and mobile commerce including mobile marketing.

The increasing importance of mobile media for marketing activities is widely recognized (e.g. Balasubramanian *et al.* 2002, Watson *et al.* 2002). Thus, mobile marketing has contributed to the emergence of a new research stream, building on research in areas such as marketing, electronic business, computer science and business strategy. During the last few years, the number of papers focusing on mobile marketing communications has increased in existing journals and conferences. In addition, special issues of journals that focus on mobile marketing, mobile marketing conference tracks as well as entire journals and books devoted to aspects of mobile marketing have appeared. The growing interest and importance of mobile marketing can be traced to a number of interrelated factors. It is the result of the natural evolution from the use of mass-market advertising to more targeted message strategies (see Peppers *et al.* 1999). In the early 1990s, Peppers and Rogers (1993) began to develop a new frame of reference for marketing; a paradigm that was not based on mass marketing, but on one-to-one marketing: "*The old paradigm, a system of mass production, mass media and mass marketing is being replaced by a totally new paradigm, a one-to-one economic system. ...the goal of most business competition will be share of customer - one customer at a time*" (Peppers & Rogers 1993: 5). This view was enhanced by the advocates of integrated marketing communications (IMC): "*Mass marketing was invented to sell standardized mass-produced products to a similarly standardized, undifferentiated mass of consumers… Enter a new age of advertising: respectful, not patronizing; dialogue-seeking, not monologuic; responsive, not formula-driven. It speaks to the highest point of common interest, not the lowest common denominator*" (Schultz *et al.* 1994: 5,13).

The new paradigm is increasingly interactive by nature (e.g. Peltier *et al.* 2003). In fact, the dramatic rise of new electronic media has drastically altered marketing communications planning in general and IMC specifically (Bezjian-Avery *et al.* 1998, Hoffman & Novak 1996). While there is a long and growing list of new electronic media, those most often discussed include the interactive portion of the Internet, e-mail, interactive television, mobile devices and related systems. While some dismiss these new media as simple direct marketing tools,

most experts acknowledge the potential for these media to alter the way in which advertisers view marketing and marketing communication (e.g. Korgankor 1999, Lavidge 1999, Glazer 1999), especially as they pertain to IMC (Low 2000). The challenge of the new electronic media for marketers is to find ways to use these new tools in order to become more effective and efficient marketing communicators (Peltier *et al.* 2003). Due to these reasons, the foundations of IMC, the concept of interactivity and interactive advertising and marketing are discussed in this chapter.

Moreover, it is virtually impossible to discuss the theoretical foundation of mobile marketing without a discussion about the relationship between mobile commerce and mobile marketing. It has been argued that mobile marketing is a subset of mobile commerce (e.g. Barnes & Scornavacca 2004, Varshney & Vetter 2002, Venkatesh *et al.* 2003). In addition, it has been suggested that the increasing use of mobile marketing is indirectly associated with developments in mobile technologies and the fast adoption of mobile devices. In fact, mobile devices have been the fastest-adopted consumer products of all time (e.g. Kalakota & Robinson 2002, Yuan & Zhang 2003). However, a substantial volume of mobile marketing should not be seen as an obvious outcome of the high penetration rates of mobile phones. The high global penetration of mobile communication devices is only one indicator of the high potential of mobile marketing (e.g. Bauer *et al.* 2005). In addition, the specific characteristics of the mobile phone allow for marketing communications measures that are not available for other media. The attributes inherent to mobile marketing – i.e. personalization, ubiquity, interactivity and localization – generate significant potential for this innovative form of marketing communications (see e.g. Barnes 2002a, Barwise & Strong 2002, Barnes & Scornavacca 2004, Bauer *et al.* 2005, Facchetti *et al.* 2005, Dickinger *et al.* 2004, Haghirian *et al.* 2005). Therefore, mobile commerce and the peculiarities of mobile marketing are also discussed in this chapter.

2.1   Integrated Marketing Communications (IMC)

"*...IMC is the major communications development of the last decade of the 20th century*" (Kitchen & Schultz 1999: 34).

Integrated Marketing Communications (IMC) is gaining increasing interest among academics and practitioners. According to Kitchen *et al.* (2004), IMC has grown in recognition and importance for effective marketing. This is due, in large

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part, to the fact that marketers are increasingly allocating budgets away from mass media due to the increased media fragmentation (Kotler *et al.* 2005) and increasing segmentation of consumer needs and preferences (Durkin & Lawlor 2001, Eagle & Kitchen 2000, Schwartz 2001), easier access to consumer databases and data mining developments (Kitchen & Shultz 1999, McGoon 1999, Reich 1998), the significance of customer loyalty via relationship marketing (Gonring 1994, Schultz 2002) and the importance of building and increasing a brand's image-based equity (McLaughlin 1997, Schultz 1999, Wood 1997).

Despite the divergent perspectives on IMC, the initiative has been accepted by mainstream marketing theorists and writers (cf. Kitchen *et al.* 2004). Its popularity in educational and applied textbooks written by recognized marketing theorists and writers (e.g. Kotler *et al.* 2005, Fill 2002, Smith & Taylor 2002, Pickton & Broderick 2001, Bech & Bech 2001) points to the fact that the acceptance of the IMC framework is increasing rapidly.

Aside from IMC theory diffusion among academics, the concept has been widely implemented by many advertising agencies and firms around the globe (see Gould *et al.* 1999, Gronstedt & Thorson 1996, Kallmeyer & Abratt, 2000, Low 2000, McArthur & Griffin 1997, Prensky 1996, Kitchen & Schultz 1999, Kitchen & Li 2005). Thus, for practitioners, IMC has become widely accepted, has pervaded various levels within the firm and has become an integral part of the brand strategy that requires extensive brand development activities within the firm before beginning any external brand communications efforts (Madhavaram *et al.* 2005).

2.1.1 Definition of IMC

The first formal conceptualization of IMC was introduced in Northwestern University in 1989 (Kliatchko 2005). According to Shultz and Shultz (1998), this definition was used in a survey conducted in 1991 by Northwestern University in cooperation with the American Association of Advertising Agencies (4As) and the Association of National Advertisers in the United States. The very first definition suggested that IMC is "*a concept of marketing communications planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communications disciplines, e.g. general advertising, direct response, sales promotion and public relations – and combines these disciplines to provide clarity, consistency and maximum communications impact*" (Duncan & Caywood 1996: 16).

In 1992, Tom Duncan, one of the IMC pioneers, defined IMC as *"the strategic coordination of all messages and media used by an organization to collectively influence its perceived brand value"* (Duncan & Caywood 1996 cited in Kliatchko 2005: 17). Ten years later, he suggested that IMC is defined as "*a cross-functional process creating and nourishing profitable relationships with customers and other stakeholders by strategically controlling or influencing all messages sent to these groups and encouraging data-driven, purposeful dialogue with them*" (Duncan 2002: 8).

Schultz and Schultz (1998) proposed a conceptualization and description of IMC, which, in their opinion, adequately captures the true nature of the phenomenon. This conceptualization is based on the preceding IMC studies as well as on the experiences of organizations that have implemented the IMC approach. Schultz and Schultz (1998) defined IMC as "*a strategic business process used to plan, develop, execute and evaluate coordinated, measurable and persuasive brand communication programs over time with consumers, customers, prospects and other targeted relevant external and internal audiences.*"

Schultz and Kitchen (2000a: 5) comment on this definition by saying: *"This definition first focuses on strategy – a strategy of communication that is clearly related to corporate mission, values and needs but relates equally to brand mission, values and needs. At both levels executives will need to develop resonance and consonance in terms of brand identity."* This view is very much advocated by Kliatchko (2005: 23), who suggests that "*IMC is the concept and process of strategically managing audience-focused, channel-centred and result-driven brand communication programmes over time.*"

This definition is based on four basic elements: (1) IMC is both a concept and a process; (2) IMC requires the knowledge and skills of strategic thinking and business management; (3) IMC is hinged on and distinguished by three essential elements or pillars – audience-focused, channel-centered and result-driven; (4) IMC involves an expanded view of brand communications (Kliatchko 2005: 24). These elements are in line with the five facets of IMC summarized by Shimp (2000): IMC (1) aims at affecting behavior, (2) starts with customers or prospects, (3) uses any and all forms of contacts, (4) achieves synergy and (5) builds relationships.

As can be seen from above definitions, the IMC perspective concerns meaningful integrative or holistic thinking (Kitchen & Schultz 1999), looking at marketing communications in a new way, by which different marketing communications tools are strategically deployed in a complementary manner after

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a careful analysis of customers' needs and a review of the market situation. Consequently, focusing more on the strategic role of communication at both a corporate and marketing level, and relating equally to both corporate and brand missions, another definition of IMC for the 21st century was suggested by Schultz and Kitchen (2000a): "*IMC is a strategic business process used to plan, develop, execute and evaluate coordinated, measurable and persuasive brand communication programs over time with consumers, customers, prospects and other targeted relevant external and internal audiences.*"

According to Kitchen and Li (2005), this definition forecasts the trend of the development of IMC in the future. Combined with the previous definitions, this new definition depicts that IMC has been developed from a marketing planning process to a strategic business process. Thus, communicators with an IMC approach will consider all forms of communication, all message delivery channels, customers and prospects, and all brand contact points, while they plan and implement marketing and marketing communications strategies (Kitchen *et al.* 2004). The current state of IMC is well illustrated by the following list of IMC principles and practices that were created by a group of IMC academics and professionals, originally appearing in a White Paper on the Status, Scope and Future of IMC, coedited by Tom Duncan and Frank Mulhern (2004) (cited in Laczniak *et al.* 2005: 5):

Principles of IMC

– All customer touch points impact the brand and brand equity, not just advertising and promotional messages.
– Interactive, two-way communication is just as important as one-way mass media messages are.
– Transactions are "relationship" building blocks – each transaction strengthens or weakens a customer–brand relationship.
– Retaining and improving customer relationships is just as important, if not more so, than acquiring customers.
– IMC is an ongoing, interactive process.

Normative guidelines for IMC implementation

– Communications and strategies are customer-focused (based on "outside-in" thinking).

– There is cross-functional planning and monitoring of all brand messages.
– Customer expectations, not customers, are managed.
– All marketing communication (MC) messages have strategic consistency.
– Brand positioning is integrated into all brand messages.
– MC planning is based on prioritized SWOTs (strengths, weaknesses, opportunities, threats).
– Segmenting and targeting are database-driven.
– Relationship metrics and other financial measurements are used to evaluate MC programs.

2.1.2 The concept of synergy

Marketers and communicators frequently use multiple communication tools and/or channels within a single campaign. This is due, in a large part, to the fact that using multiple communication tools can be mutually reinforcing, or "synergistic" (e.g. Carlson *et al.* 1996, Cook 1996, Duncan & Everett 1993, Eagle *et al.* 1999, Hutton 1996, Naik & Raman 2003, Nowak & Phelps 1994, Pickton & Hartley 1998, Reid 2003, Schultz 1996, Schultz & Kichen 1997, Stewart 1996). Thus, the ultimate goal of employing multiple communication vehicles is to have them synergize in order to create the greatest persuasion effect (Caywood *et al.* 1991).

Synergy is the fundamental concept of IMC (Chang & Thorson 2004). Synergy is defined as "*the interaction of two or more agents of forces so that their combined effect is greater than the sum of their individual effect*" (American Heritage College Dictionary 1997). To quote Shultz (2005: 7), "*synergy today means how various marketing and communication activities interact with each other in the marketplace and how the various brand 'touchpoints' come together to impact and influence consumers, customers, employees, channels, the financial community and the host of other stakeholders that are involved in today's marketplace success.*"

Synergy is a concept that many marketing communications professionals believe in, but demonstrating the effects of synergy in the laboratory or in the field in order to identify how synergy operates has proved difficult (Chang & Thorson 2004). Prior research has examined synergies resulting from the use of multiple media in a campaign (e.g. Bhargava & Donthu 1999, Chang & Thorson 2004, Naik & Raman 2003, Edell & Keller 1989, Confer 1992, Confer & McGlathery 1991, Sheehan & Doherty 2001), but hardly any studies have

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empirically examined the interplay of advertising, sales promotion, publicity, direct marketing and personal selling to see whether using multiple promotional tools results in synergy – a positive response to a campaign that is greater than the sum of separate expected responses based on the use of each communication tool (e.g. Jin 2004, Stammerjohan *et al.* 2005, Fitzpatrick 2005, Smith & Taylor 2002). Overall, a number of studies have directly and indirectly suggested that people would be more motivated to pay attention to and process multiple-source messages than repetitive messages (Brock *et al.* 1970, Edell & Keller 1999, Grass & Wallace 1969, Harkins & Petty 1981, 1987, McCullough & Ostrom 1974).

Finally, it should be mentioned that when new communication technology emerges, researchers have always been interested in studying the effects of media displacement (Kayany & Yelsma 2000). For instance, when radio was a new medium, the concern was that radio would one day replace newspapers as the dominant medium. Later, television was examined under a similar spotlight due its potential to replace radio as the most popular broadcast medium. Based on the past history of these media, it could be assumed that new media might have the potential to affect the use of other mass media because of their interactive and diverse features (Tsao & Sibley 2004).

2.1.3 Why use IMC?

It has been argued that the marketing communications environment is changing radically. More specifically, the practices and ways of thinking about marketing and communications common in the era of mass marketing and mass communication have given way to the new realities affecting the marketplace and communications scene of the 21st century (e.g. Schultz 1996, 2003a, 2003b, Kliatchko 2005, Kotler *et al.* 2005, Shultz & Kitchen 2000a). In addition, Schultz and Kitchen (2000a) suggested that "*the marketing and communication manager of the 21st century must recognize that there are multiple markets, multiple marketplaces, multiple customers, multiple channels and multiple media.*" Media proliferation, audience fragmentation, the advances in information and communication technology, the emergence of global consumers, consumer empowerment, increased advertising clutter, shifts in channel power, desire for more accountability (Semenik 2002, Kotler *et al.* 2005) and many other issues constitute the driving forces behind the emergence and growth of IMC (Kitchen & Li 2005).

A number of researchers have argued that by practicing IMC, organizations can best respond to these trends (cf. Low 2000). IMC is heralded as the best way to take advantage of new technology to communicate more directly with individual consumers and customers (Zinkhan & Watson 1996). In addition, Shultz (1996) claimed that IMC is inevitable because of technology and, whether or not organizations embrace IMC, consumers already integrate messages.

Nonetheless, achieving a positive return on a marketing communication investment is becoming harder as the dynamics of markets change. A number of issues that affect how customers respond to marketing offers and how marketing communication is managed have been identified (Duncan & Mulhern 2004, Schultz & Schultz 1998, Shimp 1999). These include (Reid 2005: 41):

1. reduced faith in mass marketing as marketing communication channels fragment and consumer brand and media loyalties diminish or dilute;
2. increasing reliance on more highly targeted marketing communication methods to reflect a growing "relationship-marketing" orientation in many organizations;
3. increased turnover of brand-management personnel and a subsequent loss of learning and knowledge regarding consistent promotional strategy and market experience;
4. greater demand placed on marketing communication agencies to become brand custodians or guardians rather than simply transaction-based suppliers of marketing communication services; and
5. increased efforts to measure and improve marketing communications return on investment (ROI), reflecting greater demands by both agencies and clients for accountability and measurement of alternative customer acquisition and relationship activities.

In sum, the initial conceptualizations of IMC were somewhat blurred and led to the adoption of different approaches to creating messages (Carlson *et al.* 2003). Even after a decade of research in the IMC domain, a common conceptualization of the phenomenon is still lacking. For instance, Cornelissen & Lock (2000) view IMC as simple rhetoric and, from their point of view, IMC is a management fashion, apparent in its lack of definition and transient influence. In reply, Schultz and Kitchen (2000b) argued that Cornelissen and Lock's citation is selected and incomplete, and that IMC is an emerging paradigm whose progression as a concept and discipline is entirely appropriate and in accordance with scientific theory. Their views were supported by Gould (2000, 2004), who argued that

although IMC remains a controversial theoretical concept, it could be a powerful tool when viewed from a poststructural paradigmatic perspective on theory. Thus, IMC as a theoretical concept is on the right path in terms of attracting and generating an informed, intellectual discourse from various concerned researchers (Madhavaram *et al.* 2005).

Conceptually, IMC provides a useful theoretical framework for studying mobile marketing communications. We acknowledge that IMC is still a young academic discipline, and as Duncan and Mulhern (2004) have noted, there is an obvious need for further theoretical grounding and proof of performance, including more case histories. Thus, to help advance a cohesive body of knowledge on IMC and, more importantly, to contribute our understanding on mobile marketing, two action research projects were conducted during this study.

2.2   Mobile commerce (m-commerce)

Generally speaking, the emergent m-commerce space is distinct from the established e-commerce space (see e.g. Dholakia & Dholakia 2004). In essence, m-commerce provides opportunities for reaching customers at multiple locations, for personalizing offerings and services in fresh ways and for making possible new types of services and shopping experiences (Samuelsson & Dholakia 2003). However, one of the most critical factors affecting the success of m-commerce strategies is how well the m-commerce providers understand the variety of the roles that people play in the busy lifestyles and work styles of the day (Dholakia & Dholakia 2004). The complex combinations that result from a person's location (work, home, other), a person's prescribed or self-ascribed role (professional and on-duty or private and off-duty) and stance (in terms of time commitment and busyness) is depicted in Table 2.

Table 2. Complex combinations of an individual's location, stance and role (modified from Dholakia & Dholakia 2004).

Location	Stance	Role	
		Private (off-duty)	Professional (on-duty)
Home	Busy	Convenience	
	Open diversion	Entertainment	
Work	Busy	Productivity	
	Time on hand, Waiting	Productivity or Entertainment	Entertainment or Productivity
Other	Busy	Efficiency	
	Time on hand, Waiting	Efficiency or Entertainment	Entertainment or Convenience or Efficiency

Research in m-commerce is evolving. Until now, major e-commerce journals and some business journals have published special issues on this topic (cf. Okazaki 2005, Scornavacca *et al.* 2006). The focus of these issues has varied from technological to managerial topics, and they have provided many useful insights into the multifaceted nature of the m-commerce phenomenon. In general, a series of papers written by Barnes (2002a, 2002b, 2003) were among the pioneering efforts in the field of mobile commerce research. Aside from proving conceptualizations and descriptions of the m-commerce domain, Barnes (2002b) proposed the basic model for value-creation in m-commerce (see Figure 3).
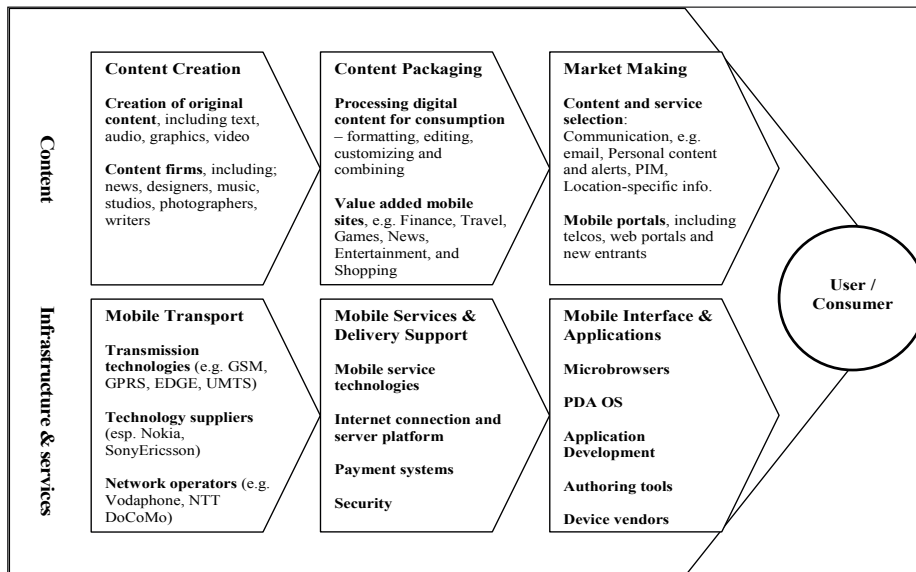
Fig. 3. Mobile commerce value chain (modified from Barnes 2002b: 93).

The basic model shows how value is added in the stream of activities involved in providing m-commerce to the consumers. In addition, it identifies the key players and technologies that form a part of the m-commerce value chain. Specifically, the model comprises six core processes in two main areas (Barnes 2002b): (a) *content*; and (b) *infrastructure and services*. Content includes (a) *content creation* that focuses on creating digital material such as audio and video; (b) *content packaging* that refers to the formatting, editing, customizing and the use of software to combine and package content; (c) *marketing making* is devoted to the mobile portals. This includes programme development, service delivery and customer care. In contrast, infrastructure and services includes (a) *mobile transport* that refers to the basic networks that enables mobile communications including transmission and switching for voice and data; (b) *mobile services and delivery support* involves, for instance, the infrastructure in accessing the Internet, security, the server platform and payment systems; (c) *mobile interface and applications* focuses on integrating the infrastructure and systems with users, i.e. hardware, software and communications. Overall, the model provides a useful foundation for those researchers who subsequently undertook empirical as well as conceptual studies in the mobile commerce domain.

2.2.1 Defining m-commerce

Numerous definitions of mobile commerce have been proposed by academics and practitioners. Therefore, it would be useful to briefly review the most common conceptualizations of mobile commerce and also define the most commonly used concepts associated with this topic. These concepts are e-commerce, e-business and m-business. "*The e-commerce is simply the buying and selling of products and services over the Web. The larger concept – e-business – represents all the technological applications and business processes that enable a company to service an e-commerce transaction*" (Kalakota & Robinson 2002: 8). Thus, e-business is the overall strategy for maximizing customer value and profit with the help of technology. However, this paradigm of fixed or stationary Internet users with wired infrastructure is evolving with the emergence and adoption of mobile communications technologies into m-commerce. Simply put, "*m-commerce is defined as any transaction with a monetary value – either direct or indirect – that is conducted over a wireless telecommunication network*" (Barnes 2002b: 92). This view is advocated by Yang (2005: 258), who defines mobile commerce as any "*direct or indirect transaction conducted and facilitated through a wireless telecommunication network.*" Thus, mobile commerce refers to "*business transactions conducted while on the move*" (Kalakota & Robinson 2002:8).

Similarly, Durlacher Research (1999: 7) defines mobile commerce as "*any transaction with a monetary value that is conducted via a mobile telecommunications network.*" According to this definition, m-commerce represents a subset of all e-commerce transactions, both in the business-to-consumer and the business-to-business area. Thus, regular SMS messages from one person to another are not included in the definition of mobile commerce, while SMS messages from a mobile service provider that are charged at a premium rate do represent mobile commerce according to Durlacher's definition. Thus, the definitions mentioned above do uncover critical elements of mobile commerce, and therefore we build our study on the conceptualizations provided by Durlacher (1999) and Barnes (2002b).

Finally, it should be mentioned that the aspect of 'wireless vs. mobile' needs clarification because it seems that there has been some confusion around these concepts recently. Wireless is not necessarily mobile (see e.g. Balasubramanian *et al.* 2002, Anckar & D'Incau 2002, Varshney & Vetter 2002, Kumar 2004). For instance, a consumer's communications with a Web site from a desktop computer at home, with signals carried over a wireless local area network (WLAN) or over

a satellite network, would qualify as wireless but not mobile communications. We acknowledge that there are applications of wireless advertising such as those based on short-range wireless 'hotspots' and used, for instance, in shopping malls and street cafes for delivering marketing communications to the customers' mobile devices. Undoubtedly, these applications can be used for marketing and advertising purposes. However, due to their limited transmission range, i.e. wireless services enabled by WLAN technologies can only reach customers located within a close physical proximity of the wireless service provider (e.g. Kurkovsky & Harihar 2006), and therefore, we argue that true mobility can only be achieved by an underlying mobile network, which implements the mobility across the whole area covered (Balasubramanian *et al.* 2002). For these reasons, we suggest that the mobile as a concept provides the best conceptual foundation for the phenomenon, particularly because of its inclusive nature and representation of the space in which the value of mobile marketing communications evolves (Leppäniemi *et al.* 2006). Finally, it should be mentioned that in this study, we refer to mobile commerce as m-commerce, mobile electronic commerce or wireless electronic commerce and use these terms interchangeably.

2.2.2 M-commerce technology

The roots of mobile communications can be traced back to the 1940s when commercial mobile telephony began or even as early as in the beginning of 1910s when radio transmission was tested for the first time (Kumar 2004). The key technological milestones of the mobile communications industry are illustrated in Table 3.

Table 3. Key technological milestones in the mobile communication industry (adapted from Kumar 2004: 69).

Year	Technology milestone
1901	Guglielmo Marconi's first wireless telegraphy sent signals across the Atlantic ocean
1910	The first car-telephone by Ericsson
1946	The first commercial American radio-telephone service by AT&T and Southwestern Bell
1969	The first commercial cellular radio system by Bell System
1973	The first handheld cell phone by Motorola
1978	First generation of analogue cellular systems by Bahrain Telephone Company
1982	The inception of GSM in western Europe
1990	North American set IS-54B standard up for digital cellular systems using TDMA technique

Over the past few years, mobile handsets have developed rapidly, as shown in Figure 4. In addition, there are a great number of different protocols and standards for mobile communications that have been developed over the past two decades. It was only at the beginning of the 1980s when mobile communications technology started to be deployed commercially. The Motorola DynaTAC 8000X was the first hand-held mobile phone that was commercially available. It received approval in 1983. Mobile phones began to proliferate through the 1980s with the introduction of "cellular" phones based on cellular networks with multiple base stations and protocols for the automated roaming between two cells when a phone moved from one cell to the other. At this time analog transmission was in use in all systems. (Wikipedia 2007.)

2000	2001	2002	2003	2004	2005	2006	2007
Text, ringtones	Color bitmaps		MMS		Mobile	USB2.0	
Simple bitmaps	Simple animations		xHTML		video/audio	VoIP	
SMS Push/Pull	EMS		Smart phones		Location	Push-to-talk	
Simple Web	SMS Push/Pull		GPRS		Integration	SIP	
Clipping	WAP pull		P2P		Voice recognition	WCDMA 3G	
Legacy phones	Smart phones		M-Commerce		Wireless Networks	UMTS	
	PDAs		3G trials		PDAs	(3G)+GPRS+WiFi	
	GPRS trials		Micro movies		Broadband	MMCmobile	
	J2ME, MIDP				access	Flash	
	Simple location-				3G networks	Battery life	
	based service				Hybrid WLAN/3G	Tv-out	
					PAN		

Fig. 4. Development of mobile handsets (modified from Karjaluoto *et al.* 2006).

In the 1990s, second generation (2G) mobile phone systems such as GSM, IS-136 (TDMA), iDEN and IS-95 (CDMA) were introduced. The first digital cellular phone call was made in the United States in 1990. In Europe the first GSM network opened in 1991. Not long after the introduction of 2G networks, the development of third generation systems (3G) was started in several projects.

Inevitably, there were many different standards with different competitors pushing their own technologies. Very much unlike 2G systems, however, the meaning of 3G has been standardized in the IMT-2000 standardization processing. This process did not standardize on a technology, rather it standardizes a set of requirements (2 Mbit/s maximum data rate indoors, 384 kbit/s outdoors, for instance). At that point, the vision of a single unified worldwide standard went to pieces and several different standards have been introduced. (Wikipedia 2007.)

During the development of 3G systems, 2.5G systems such as CDMA2000 1x and GPRS were developed as extensions to existing 2G networks. 2.5G systems provide some of the 3G features without supplying the promised high data rates or the full range of multimedia services. CDMA2000-1X delivers theoretical maximum data speeds of up to 307 kbit/s. Just beyond these is the EDGE system which in theory fulfils the requirements for a 3G system, but with such a small margin that any practical application would be sure to fall short. At the moment, 3G mobile phone systems such as UMTS and CDMA2000 1xEV-DO have started to become publicly available. (Wikipedia 2007.)

Moreover, it is important to emphasize that the divergent content types are a great challenge for mobile commerce providers, including mobile marketers. The most typical content types are listed in Table 4. In essence, it is almost impossible to execute mobile marketing communications (SMS excluded) or provide services that work well in every single mobile phone. Therefore, it is of decisive importance to be aware of the latest developments in mobile handsets and, more importantly, the capabilities of customers' mobile phones.

Table 4. Different content types in mobile media in December 2006 (Sinisalo 2007).

Type	Description	Content	Presentation	Capability Needed
vCARD (Business Card)	Electronic business card	Name and contact details	User can store details to device after receiving them	vCARD / SMS support
vCAL (Calendar Entry)	Open source calendar standard	Start and end times, and message	Different mobile devices handle content differently	vCAL / SMS support
Picture Message (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Pictures	Can be displayed on the screen of device	Nokia Smart messaging / SMS support
Operator logo (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Monochrome picture	Appears continuously on the status screen of a device	Nokia Smart messaging / SMS support
Caller Group Graphics (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Monochrome picture	Displayed on the device whilst calls from a predefined group of numbers are active	Nokia Smart messaging / SMS support
Mobile Postcard (Nokia Smart Messaging)	Picture message and text message sent together in three SMS packets	Picture and text (maximum length of text 120 characters)	Can be displayed on the screen of device	Nokia Smart messaging / SMS support
Ringtones (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Ringtones	Played to alert for incoming calls	Nokia Smart messaging / SMS support
SI Message / WAP push (Service Indication Message)	Used to send WAP or URL links to users	Informative text, link and signal parameter	Active links through which user can browse WAP or WWW pages	WAP / XHTML support
Text Message / SMS (short message service)	Short text messages	Text (maximum length 160 characters)	Typically static	SMS support
Extended SMS	Comprised of several text messages that are clustered together	Text	Different mobile devices handle content differently	SMS support

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Type	Description	Content	Presentation	Capability Needed
USSD (Unstructured Supplementary Services Data)	Short text messages	Text (maximum length 160 characters)	Unlike SMS, there is no store-and-forward capability	USSD support
Flash Text Message	Short text messages	Text	First few words can be read from the screen of device without pressing any buttons when the message arrives	SMS support
EMS iMelody (Enhanced messaging service)	Comprised of several text messages that are clustered together	Ringtones, sounds, alerts	single object of audio data	EMS / SMS support
EMS Picture (Enhanced messaging service)	Comprised of several text messages that are clustered together	logos, screen savers	single object of image data	EMS / SMS support
Ringback tones	Personalized ringback tones	sounds, music, audio	Person calling can hear it when waiting in the line instead of general ringback tone	SMS support
MMS (multi-media messaging service)	Messaging application transmitting multimedia over wireless networks	text, formatted text, graphics, pictures, video and sound clips	contains one or more slides that are displayed in a sequence	GPRS or similar / MMS support
Java Applications	Applications created using Java programming language,	games, utilities, calendars, maps	The users have their own choice of software to be used with their device	GPRS or similar / Java support
Symbian Applications	Applications created using Symbian programming language	games, utilities, calendars, maps	The users have their own choice of software to be used with their device	GPRS or similar / Symbian support
Voice Call / IVR (Interactive Voice Response)	A system to automatically manage incoming calls	Voice services, competitions, lotteries	Can link callers (voice and/or touchtone) with a computer database. It can accept a question, access the company's database and provide a caller with the information they are seeking	-

Finally, it is important to highlight that information technology does play a substantial role in mobile commerce efforts. For instance, enabling technology for mobile commerce, including mobile content services and mobile marketing, is needed. As depicted in Figure 5, a server or platform enables companies to create and implement mobile marketing campaigns, mobile customer relationship programs, mobile entertainment services and mobile commerce applications. More specifically, the overall success of mobile commerce operations is contingent upon a platforms' ability to support divergent mobile networks (e.g. GSM, GPRS, TDMA, CDMA and 3G) and content types (e.g. SMS, MMS, WAP, XHTML, E-Mail, IVR, Java (J2ME), Symbian, streaming video) and to integrate into the external databases and systems.
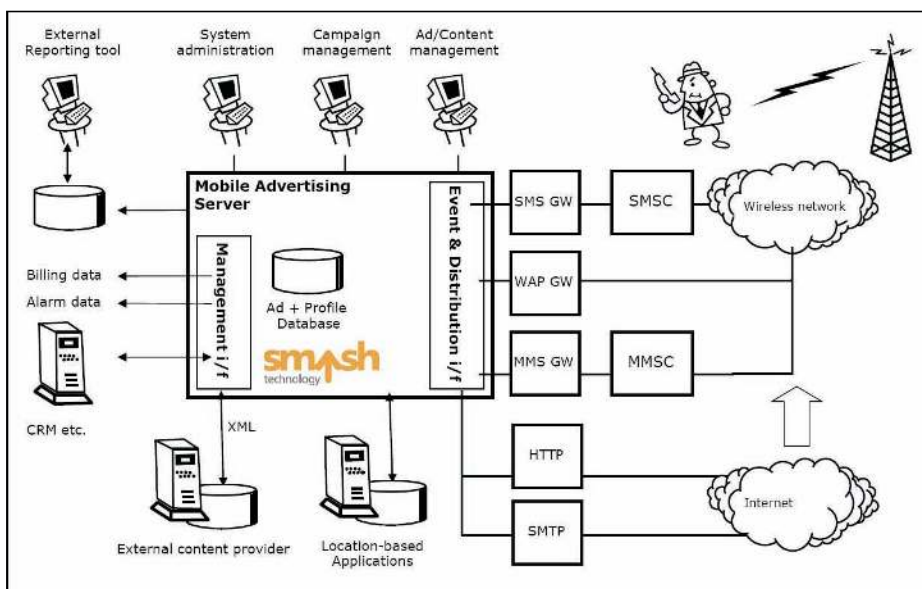
Fig. 5. Mobile marketing platform (Paananen 2003).

2.2.3 A short overview of mobile marketing communications

It has been suggested by academics and practitioners that mobile marketing is a subset of mobile commerce (e.g. Barnes & Scornavacca 2004, Varshney & Vetter 2002, Venkatesh *et al.* 2003). In the same way that mobile commerce is an evolving field of research, mobile marketing is still in its infancy. However, over

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the last four years mobile marketing has generated increasing interest among academics and practitioners. Not only have special issues of journals focusing on mobile marketing appeared, but also many mobile marketing articles have been published in high quality marketing and advertising journals. In addition, well-known global consumer brands already exploiting mobile marketing concepts include McDonald's, Coca-Cola, Pepsi, MTV, Volvo, Sony Pictures, Nike, Disney and Adidas (e.g. Sultan & Rohm 2005, Mobile Marketing Association 2007). Broadly speaking, mobile advertising revenue totaled US$2 773 million in 2007 and is predicted to increase by 79 percent to US$4 957 million in 2008 (eMarketer 2007). In addition, it has been suggested that within the next 3 to 4 years, yearly global expenditures on mobile advertising are likely to exceed US$16 billion.

However, despite the increasing number of academic research papers, the growing body of literature on mobile marketing appears to be inconsistent and fairly fragmented. This is due, in part, to the fact that a common conceptualization of the phenomenon is still missing. Furthermore, the overall development of theory in mobile marketing communications is certainly needed. However, that is not to say that the studies do not provide important insights into the mobile marketing domain. Instead, great work has been done, and the existing literature contributes substantially to our understanding of this complex, multidimensional phenomenon.

A cursory review of the mobile marketing literature is likely to reveal that practitioners and academics have proposed numerous definitions of mobile marketing, i.e. marketing through the mobile channel. For instance, the Mobile Marketing Association (2005) has suggested that "*mobile marketing is any form of marketing, advertising or sales promotion activity aimed at consumers and conducted over a mobile channel.*" Since one may argue that the definition is tautological in nature we built our research on a more academic definition presented by Dickinger *et al.* (2004): "*Using interactive wireless media to provide customers with time and location sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders.*"

In addition to the lack of common conceptualization, there is deficient understanding about the actors and activities related to mobile marketing (Bragge *et al.* 2005, Facchetti *et al.* 2005). Thus, it would be extremely challenging to provide an exhaustive listing of all of the possible ways of doing mobile marketing. However, it has been suggested that communication through the

mobile medium can be divided into three categories: (1) pull-based, (2) push-based and (3) interactive communication as illustrated in Figure 6 (Sinisalo & Karjaluoto 2006).
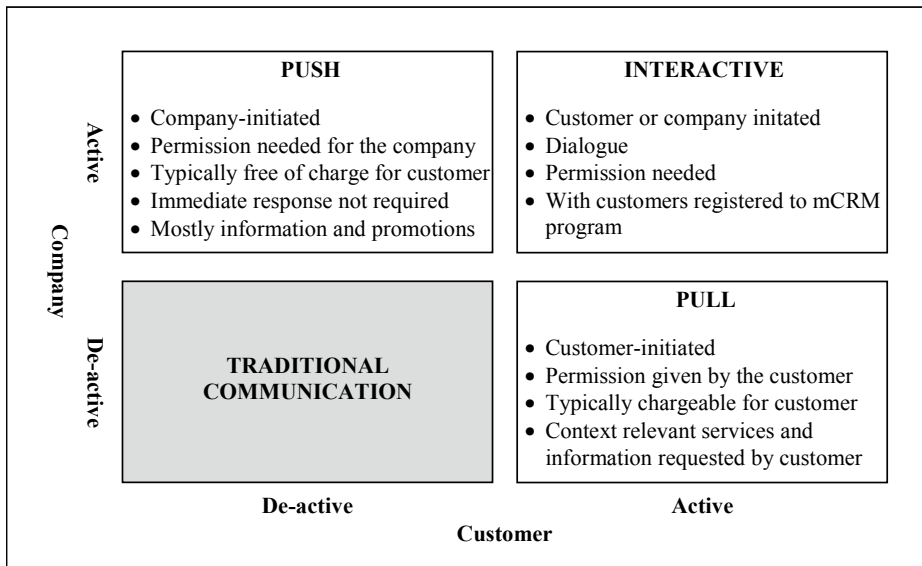

Fig. 6. Communication modes in a mobile context (modified from Sinisalo & Karjaluoto 2006).

Push-based mobile marketing refers to any content sent by or on behalf of advertisers and marketers to a mobile device at a time other than when the subscriber requests it. Push-based mobile marketing includes, for instance, audio, short message service (SMS) messages, e-mail, multimedia messaging, cell broadcast, picture messages, surveys, or any other pushed advertising or content (MMA 2006). Pull-based mobile marketing is defined as any content sent to the mobile subscriber upon request or shortly thereafter on a one-time basis (MMA 2006). For instance, when a customer requests a mobile coupon or whenever the content of the response, including any related marketing communication, is pull-based mobile marketing.

Although pull-based mobile marketing is close to interactive communication, an ongoing interactivity and customer-marketer dialogue can only be achieved if interactions are maintained within the context of shared meaning. In other words, the messages have to be understood by the receiver, the messages have to

generate interactivity (responding should serve the receiver's purposes), and the receivers must respond to the messages immediately (Sinisalo & Karjaluoto 2006). Nonetheless, it is important to emphasize that interactivity is one of the main characteristics that make the mobile medium unique (Barwise & Strong 2002, Barnes & Scornavacca 2004, Bauer *et al.* 2005). Therefore, interactivity is discussed in detail in the following chapter.

2.3   Interactivity

Over the past 20 years, interactivity has been widely discussed in fields such as advertising, marketing, communication, information science, computer science and education (cf. McMillan & Hwang 2002). In his discussion of technological developments facilitating communication, Rogers (1986) identified increasing interactivity as a key development and emphasized the need for research that would contribute to our understanding of computer-mediated interactivity. While studying the meaning of interactivity in the context of computer-mediated communication, Rafaeli (1988) perceived that interactivity "*is a widely used term with an intuitive appeal, but it is an underdefined concept.*" In a more recent commentary, Downes and McMillan (2000: 158) argued that "*much of the literature, both popular and scholarly, uses the term 'interactivity' with few or no attempts to define it.*" This notion is bolstered by Yadav and Varadarajan (2005: 585), who claimed that "*the concept of interactivity lies at the core of a growing body of interdisciplinary research examining the marketplace implications of the Internet and related technological developments. However, our understanding of this important concept remains deficient.*"

2.3.1 Divergent conceptualizations of interactivity

A great number of definitions of interactivity have been proposed. McMillan and Hwang (2002) identified approximately 40 distinct definitions of interactivity. Various definitions of interactivity are briefly summarized in Table 5.

Table 5. Literature review of definitions about interactivity (partial list).

Author(s)	Interactivity
Rafaeli (1988: 111)	"…is a variable characteristic of communication settings. Formally stated, interactivity is an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions."
Pavlik (1998: 137)	"…means two-way communication between source and receiver, or, more broadly, multidirectional communication between any number of sources and receivers."
Cho and Leckenby (1999: 163)	"The degree to which a person actively engages in advertising processing by interacting with advertising messages and advertisers."
Ha and James (1998: 461)	"…the extent to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs."
Jensen (1998: 201)	"…a measure of a media's potential ability to let the user exert an influence the form and/or content of the mediated communication."
Rogers (1986: 34)	"…the capability of new communication systems (usually containing a computer as one component) to 'talk back' to the user, almost like an individual participating in a conversation"
Lombard and Snyder-Dutch (2001: 3)	"…a characteristic of a medium in which the user can influence the form and/or content of the mediated presentation or experience."
Steuer (1992: 84)	"…is defined as the extent to which users can participate in modifying the format and content of a mediated environment in real time."
Liu and Shrum (2002: 54)	"The degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized."
Haeckel (1998: 64)	"… a person-to-person or person-to-technology exchange designed to effect a change in the knowledge or behavior of at least one person."
Bezjian-Avery *et al.* (1998: 23)	"… the immediately iterative process by which customer needs and desires are uncovered, met, modified, and satisfied by the providing firm."
Fortin and Dholakia (2005: 388)	"…the degree to which a communication system can allow one or more users to communicate alternatively as senders or receivers with one or many other users or communication devices, either in real time (as in video teleconferencing) or on a store-and-forward basis (as with electronic mail), or to seek and gain access to information on an on-demand basis where the content, timing and sequence of the communication is under control of the end user, as opposed to a broadcast basis."

An analysis of the identified conceptualizations is likely to reveal that, collectively, the definitions advance three major perspectives on interactivity. Specifically, it was found that interactivity has, implicitly or explicitly, been conceptualized (see McMillan & Hwang 2002) as (1) a communication process (e.g. Pavlik 1998, Cho & Leckenby 1999, Rafaeli 1988, Ha & James 1998), (2) characteristics or features (e.g. Carey 1989, Lombard & Snyder-Dutch 2001, McMillan 2000) and (3) perception (Wu 1999, Day 1998). Although individual definitions tended to support a specific perspective, it was not uncommon to find conceptualizations that simultaneously stressed multiple perspectives at a time (e.g. Coyle & Thorson 2001, Heeter 1989, McMillan 2002). For the purpose of this research, we adapt the following definition of interactivity proposed by Yadav and Varadarajan (2005: 593): *interactivity in the electronic marketplace is the degree to which computer-mediated communication is perceived by each of the communicating entities to be (a) bidirectional, (b) timely, (c) mutually controllable and (d) responsive*.

2.3.2 Characteristics of interactivity

Although the extant literature on interactivity appears to be inconsistent, most of the prevailing views on computer-mediated interactivity can be categorized into two broad perspectives – medium (device-centric) and message-centric perspectives (Yadav and Varadarajan 2005). Specifically, medium perspectives provide insights into computer-mediated-communication (CMC) tools, and message-centric perspectives focus on studying communication patterns facilitated by these communication tools. The work of Steuer (1992) is representative of research in medium-centric areas. He argued that a medium facilitates communication by creating a mediated environment that users of the medium can share and manipulate. Therefore, communication media can be classified in terms of interactivity: "*Interactivity is defined as the extent to which users can participate in modifying the format and content of a mediated environment in real time*" (Steuer 1992: 84). Interactivity in this sense is a stimulus-driven variable and is determined by the technological structure of the medium. In other words, medium-centric perspectives focus on technologies and system features that facilitate computer-mediated interactivity (e.g. Downes & McMillan 2000, Heeter 1989, 2000, Lombard & Ditton 1997, Rogers 1986).

The discussion of interactivity is often related to the richness of media. In this regard, media richness theory is a prominent theory of communication media

preferences and usage in organizational settings (Daft & Lengel 1984, 1986, Daft *et al.* 1987). Media richness theory is focused on determining the most appropriate communication medium for dealing with uncertainty and equivocality (Daft & Lengel 1986, Huber & Daft 1987). The issue here is the ability of the medium to process rich information (Daft & Lengel 1986). That is, communication media are varying in their capacity to process rich information along a one-dimensional continuum that includes, in order of decreasing richness, face-to-face discussion, phone calls, written addressed communication and written unaddressed communications (Lengel & Daft 1984). This richness continuum is a function of four factors: feedback capability, cues, personalization and language variety. The greater the medium's ability to provide timely feedback, the richer it is. Oral media can convey cues such as voice tone and inflection, and are thus considered richer than written media. Thus, rich media (face-to-face and telephone) are proposed to be suitable for resolving equivocal situations while lean media (written documents) are proposed to be more suitable for reducing uncertainty (El-Shinnawy & Markus 1997).

However, it is important to emphasize that different media can display different levels of interactivity and therefore the construct cannot be simply categorized as dichotomous (e.g. Fortin & Dholakia 2005). According to Heeter (1989), a single medium can exhibit more than one function and within that, some functions might be at different levels of interactivity. In other words, the interactivity of mediums can vary in degree (from not interactive to highly interactive) as well as type (different aspects of the form and/or content that can be influenced by the user) (Lombard & Snyder-Duch 2001). This view was also articulated by Rogers (1986: 211), who noted that "*interactivity is a variable; some communication technologies are relatively low in their degree of interactivity (for example, network television), while others (such as computer bulletin boards) are more highly interactive.*" Inspired by this notion, he created a scale that lists "degrees of interactivity" for selected communication technologies on a continuum from low to high as illustrated in Figure 7.
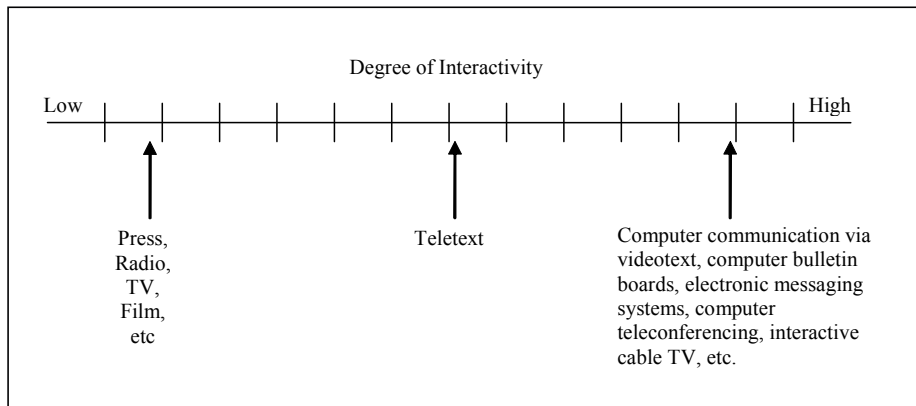
Fig. 7. Selected communication technologies on an interactivity continuum (modified from Rogers 1986: 34).

Steuer (1992, 1995) transformed the one-dimensional concept of interactivity into a two-dimensional concept. The concept is based on a parameter vividness that refers to "*the representational richness of a mediated environment as defined by its formal features, that is, the way in which the environment presents information to the senses*" and interactivity that refers to "*the extent to which users can participate in modifying the form and content of a mediated environment in real time.*" Although both concepts have their weaknesses (e.g. they fail to deliver explicit criteria for placement on the continuum), they clearly point out that media can display different levels of interactivity.

In contrast to medium-centric perspectives, message-centric perspectives (e.g. Burgoon *et al.* 1999, Haeckel 1998, Rafaeli 1988, Rafaeli & Sudweeks 1997) are based on the premise that insights about interactivity can be obtained by examining the structure of relationships within a set of messages exchanged, independent of the devices or technologies that may have been employed to generate those messages (Yadav & Varadarajan 2005). Conceptually, these perspectives are very similar with Shannon and Weaver's (1949) classic communication model that includes the important notion of feedback in the communication process (i.e. message sender receives input from message recipient) (see also Duncan & Moriarty 1998). The message-centric perspective is probably best illustrated by Rafaeli's (1998) early conceptualization and subsequent empirical study (Rafaeli & Sudweeks 1997). According to Rafaeli (1988: 111), "*interactivity is an expression of the extent that in a given series of*

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communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions." Thus, the medium-centric view focuses on inferring interactivity not from device characteristics but from the structure of relationships that exists in the output of the communication process (specifically, the interconnectedness inherent in a set of messages) (Yadav & Varadarajan 2005).

2.3.3 Interactive marketing and advertising

It is often mentioned in the literature that control over the mediated environment is a key characteristic of interactivity (e.g. Rogers 1986, Steuer 1992, Heeter 1989, Lombard & Ditton 1997, Rodgers & Thorson 2000). For instance, research on the effectiveness of interactive advertising (e.g. Pavlou & Stewart 2000, Ghose & Dou 1998) focuses on the issue of user control over advertising in an online environment. According to Rodgers and Thorson (2000), probably one of the most basic ways to think about how individuals process advertisements in an interactive environment is to distinguish between aspects of the Internet that are consumer-controlled and those that are advertiser-controlled. This distinction was clearly demonstrated and argued in their integrative model of Internet advertising, namely Interactive Advertising Model (IAM). The model is illustrated in Figure 8.
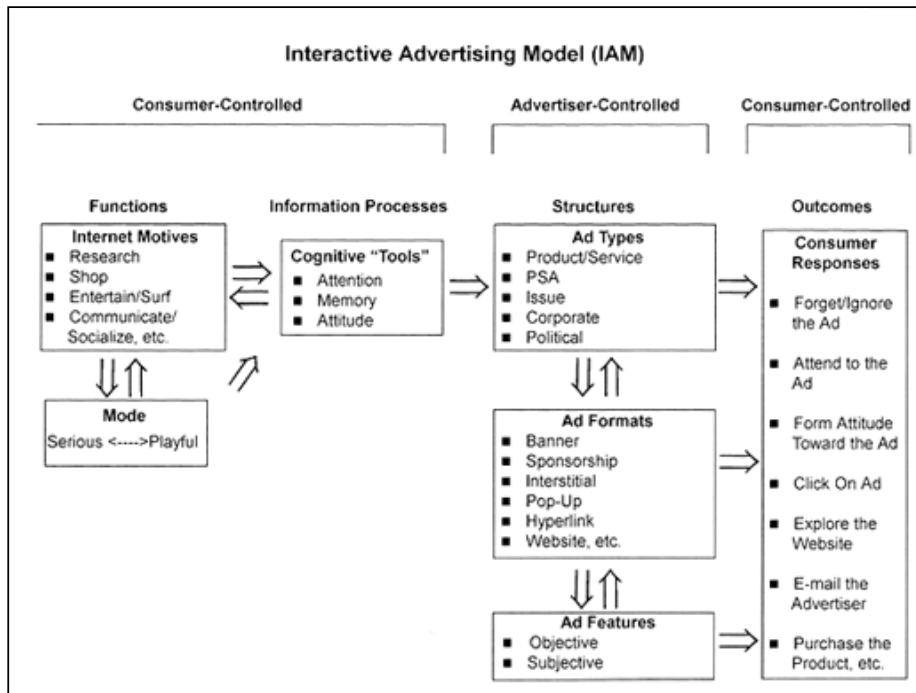
Fig. 8. Interactive Advertising Model (Rogers & Thorson 2000: 30).

Pavlov and Stewart (2000) draw a similar distinction in the following terms: (1) Process control and (2) outcome control. Process control refers to the parts of the communication process through the internet which are largely under the control of the user or consumer of the message. The authors defined the concept as follows: "*Control process measures focus on when and with what consequences consumers and marketers choose to use particular interactive advertising media and advertising content. The focus of such measurement in an interactive advertising context is consumers' use of various media and desire for particular kinds of information toward the end of determining the appropriateness of various interactive media for different types of advertising under various other conditions.*" In contrast to process measures, outcome measures focus on the consequences of the use of interactive media on advertisement effectiveness (Pavlov & Stewart 2000). Nonetheless, the mobile is an interactive media and, therefore, it entails many of the characteristics of other interactive media (e.g. the

Internet). Due to this reason, the work of Pavlov and Stewart (2000) and IAM can be utilized in the mobile marketing context.

2.4   Summary of theoretical discussion

In this chapter the theoretical foundations of mobile marketing communications have been discussed. The starting point for this discussion was the idea that mobile media is interactive by nature (e.g. Sultan & Rohm 2005) and mobile marketing should be used "*as an integrated content delivery and direct-response vehicle within a cross-media marketing communications program* (MMA 2006)." This view is advocated by Steinbock (2005: 200): "*Mobile communication should never be a stand-alone channel or an aggressive promotional tactic. It should be used to extend the presence of a company or product into an additional channel. The key is integration.*" Thus, the extant literature on interactivity and integrated marketing communications was carefully reviewed and discussed in this chapter. Generally speaking, it was found that IMC provides a useful theoretical framework for studying mobile marketing communications. In this study, IMC refers to "*the concept and process of strategically managing audience-focused, channel-centred and result-driven brand communication programmes over time*" (Kliatchko 2005: 23). In addition, for the purposes of this research, it was decided to adapt the definition of interactivity proposed by Yadav and Varadarajan (2005: 593): "*interactivity in the electronic marketplace is the degree to which computer-mediated communication is perceived by each of the communicating entities to be (a) bidirectional, (b) timely, (c) mutually controllable and (d) responsive.*" Although this definition is developed for computer-mediated communication, it is also sufficiently appropriate for mobile-device-mediated communication that makes interactive communications between customers and marketers possible.

Moreover, the link between mobile commerce and mobile marketing was illustrated, and technological issues related to mobile marketing were discussed. The characteristics of mobile marketing were described in some detail. However, just as was the case for electronic or e-marketing in the early years when its unique characteristics were not well understood, so mobile marketing is in its early stages of development now, and little is known about "*the concerns regarding the level of integration of the mobile marketing value chain, about the relevance of traditional players in the take-off of the market, their action within the value chain as well as the critical success factors*" (Facchetti *et al.* 2005: 66). Therefore, it is of decisive importance for the future of mobile marketing research

that the actors and activities of the mobile marketing environment are identified and described in detail (e.g. Bragge *et al.* 2005). In addition, it is also important to find out how mobile marketing should be integrated into companies' marketing communications strategies and planning processes in order to harness the full potential of this emerging marketing communications phenomenon. This information would also aid marketers in their quest to achieve mobile marketing success.

3   Methodology

The main purpose of this chapter is to situate this dissertation in the domain of social sciences and to introduce the research approach and strategy of the dissertation.

In the social sciences' domain, all researchers approach their research subject via explicit or implicit assumptions about the nature of the social world and the way in which the world may be explored (Burrell & Morgan 1979). Thus, discussions concerning research methods in the social sciences are linked directly to assumptions (similar to orientation by Easton 1995) about ontology, epistemology and human nature (Morgan & Smircich 1980). Figure 9 provides a general overview of the relationships between ontology, epistemology and human nature in contemporary social science.

	The subjective-objective dimension	
The subjectivist approach to social science		The objectivist approach to social science
Nominalism	⟵ ontology ⟶	Realism
Anti-positivism	⟵ epistemology ⟶	Positivism
Voluntarism	⟵ human nature ⟶	Determinism
Ideographic	⟵ methodology ⟶	Nomothetic
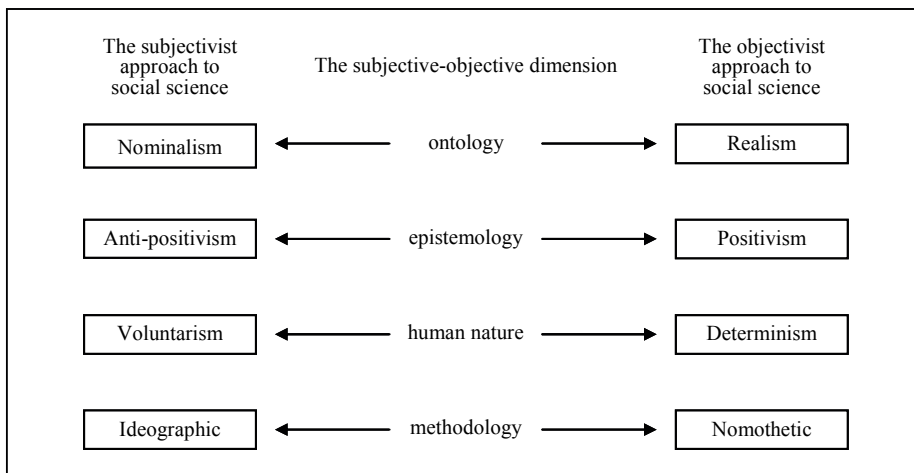
Fig. 9. A scheme for analyzing assumptions about the nature of social science (adapted from Burrell & Morgan 1979: 3).

The ontological assumptions concern the actual meaning of the phenomenon under investigation. Thus, ontology is the answer one would give to the question: What kinds of things are there in the world (Benton & Craib 2001)? The second set of assumptions concerns human nature and, in particular, the relationship between human beings and their environment (Burrell & Morgan 1979). The different assumptions concerning ontology and human nature incur interesting problems of epistemology (i.e. theory of knowledge). Specifically, different world

views reflect different grounds for knowledge about the social world (Morgan and Smircich 1980). In other words, there are assumptions about how one might begin to understand the world and communicate this as knowledge to colleague human beings (Burrell & Morgan 1979). Thus, as illustrated in Table 6, the nature of what constitutes adequate knowledge changes as we pass from assumption to assumption along the subjective-objective continuum.

Table 6. Network of basic assumptions characterizing the subjective-objective debate within social science (modified from Morgan & Smircich 1980: 492).

	Subjectivist Approaches to Social Science					Objectivist Approaches to Social Science
Core Ontological Assumptions	Reality as a projection of human imagination	Reality as a social construction	Reality as a realm of symbolic discourse	Reality as a contextual field of information	Reality as a concrete process	Reality as a concrete structure
Assumptions about Human Nature	man as pure spirit, consciousness, being	Man as a social constructor, the symbol creator	Man as an actor, the symbol user	Man as an information processor	Man as an adaptor	Man as a responder
Basic Epistemological Stance	To obtain phenomenological insight, revelation	To understand how social reality is created	To understand patters of symbolic discourse	To map contexts	To study systems, process, change	To construct a positivist science
Some Favored Metaphors	Transcendental	Language game, accomplishment, text	Theater, culture	Cybernetic	Organism	Machine
Research Methods	Exploration of pure subjectivity	Hermeneutics	Symbolic analysis	Contextual analysis of Gestalten	Historical analysis	Lab experiments, surveys

Finally, it is important to highlight that the three sets of assumptions outlined above have direct implications of a methodological nature. Each has considerable consequences for the way in which one attempts to investigate and obtain knowledge about the social world (Burrell & Morgan 1979). Thus, it is difficult to separate theory and method, and if a researcher accepts a set of assumptions about the world shared by a group of researchers, then that researcher to a large extent

also accepts the criteria for what the appropriate tools are (methodologies, instruments, and types and forms of data collection) for scrutinizing that world (Deshpande 1983). In other words, "*the selection of a particular methodology is profoundly theoretical…Research methods represent different means of acting upon the environment*" (Rist 1977: 43).

The four dimensions mentioned above – ontology, epistemology, human nature and methodology – are used to characterize the assumptions or orientations of this study. If one agrees that the subjectivist approach to social science combines nominalist ontology with anti-positivist epistemology, is voluntarist on human nature and is ideographic on methodology (see Burrell & Morgan 1979, Easton 1995), this study is likely to move toward the subjectivist end of the continuum. However, it is important to emphasize that this study is not a completely opposite to the objectivist approach. Instead, in a more realistic vein, this study can be situated in some intermediate position between the extreme ends. Especially since this study also uses quantitative data that was collected by means of an online survey and analyzed using statistical techniques such as binary logistic regression and structural equation modeling, this study also represents an objectivist approach. Thus, we suggest that this study represents a mixed method approach (Johnson & Onwuegbuzie 2003) or pluralist methodology (Mingers 2001).

3.1 Research approach

In this study, the concept of research approach concerns issues related, for instance, to the generation of research questions and to the selection of appropriate method(s) to conduct a particular study. Regarding the selection of the research approach, a researcher has to decide upon the research logic, i.e. how to build understanding of the phenomenon under investigation. The central approaches in Western research traditions have been deductive theory testing and inductive theory building (see e.g. Kovács & Spens 2005). Specifically, deductive research follows a conscious path from a general law to a specific case (e.g. Taylor *et al.* 2002). In contrast, the inductive approach infers through from facts to theory, i.e. from a specific case or collection of observations to a general law (e.g. Danermark 2001, Kovács & Spens 2005). However, over a century ago Charles S. Peirce argued that, besides deduction and induction, there is a third mode of inference which he called abduction (see e.g. Niiniluoto 1999, Bergman & Paavola 2003, Paavola 2005). The term abduction implies examining a set of

data in order to propose a theory that represents the most likely description of a phenomenon (Kovács & Spens 2005).

According to Coffey and Atkinson (1996: 155), both inductive and deductive approaches can prove "*sterile*", and that abductive reasoning is "*one useful way to think about the process of generating ideas.*" The point is that abductive reasoning "*seems to capture more productively how researchers … actually think and work. It allows for a more central role for empirical research in the generation of ideas as well as a more dynamic interaction between data and theory.*" (Coffey & Atkinson 1996: 156) Moreover, abduction involves "*a repeated interaction among existing ideas, former findings and observations, new observations, and new ideas*" (Ibid.). Therefore, "*abductive inferences lead us from specific cases or findings toward generic levels that allow us to move conceptually across… social contexts*" (Ibid: 162).

The abductive approach can be seen as a modification to what Dubois and Gadde (2002) call systematic combining. This approach is based on the notion that the researcher, by constantly going 'back and forth' from one type of research activity to another and between empirical observations and theory, is able to expand his understanding of both theory and empirical phenomena. Thus, the main characteristic of systematic combining is a continuous movement between an empirical world and a model world. More specifically, systematic combining is a process where a theoretical framework, an empirical framework and case analysis evolve simultaneously, and it is particularly useful for the development of new theories (Dubois & Gadde 2002).

This study represents an abductive approach in which interaction between existing theory and empirical data is continuous (e.g. Kovács & Spens 2005, Komulainen *et al.* 2007). Thus, in this study both extant theories and the empirical data obtained from two action research projects, interviews of mobile marketing practitioners and online survey had an equivalent and constant role in the knowledge-building process. More specifically, a loose theoretical framework (see Miles & Huberman 1994) based on existing literature on integrated marketing communications, mobile commerce, and interactivity guided the participant observation during the action research project as well as survey construct building and hypothesis development during survey research. The analyses of the observations were a continuous process, and therefore, the empirical data guided the author constantly back into the theoretical domain and vice versa. In the end, the results of the research contributed to existing theory and provided managerial improvements into the case companies' marketing

communications activities. In addition, the analysis of survey data provided interesting findings of factors associated with a consumers' intention to receive mobile marketing and the effects of certain socio-demographic factors on consumers' responses to mobile advertising.

3.2 Research strategy – combining qualitative and qualitative research methods

John Mingers (2001: 240) suggests that "*rather than advocating a single paradigm, be it interpretive or positivist, or even a plurality of paradigms within the discipline as a whole, it suggests that research results will be richer and more reliable if different research methods, preferably from different (existing) paradigms, are routinely combined together.*" Besides the desire for richer and reliable results, the rationale for using both qualitative and quantitative data in this study was the under-researched nature of the phenomenon under investigation. Therefore, the abductive approach was employed and the study started with the building of loose theoretical framework, following real-life observations. Then, the study continued with an attempt to find a matching framework and to extend the existing theories to the observation based on empirical findings (Dubois & Gadde 2002, Kovács & Spens 2005). Indeed, exploratory research was needed in this study in order to examine mobile marketing management and ultimately create hypotheses and support measurement item creation in the mobile marketing field where the first empirical research papers begun to emerge only after the research projects of this study were already conducted.

Qualitative research in this study builds on the action research approach. The term "*action research*" was introduced by social scientist Kurt Levin (1946). Since then, it has been both commended and criticized (cf. Perry & Gummesson 2004). The main reasons for dispute are that the concept of action research is relatively broad, is often left undefined, or it used in different ways (Coghlan & Brannick 2001). For instance, Gummesson (2000) identifies four types of action research for management: (1) management action science (where the purpose is to understand markets, organizations and customers better, usually in order to make an operation more efficient), (2) real-time action science (working in a research project planned for action research), (3) societal action science (the traditional type where researchers help disadvantaged groups to solve problems) and (4) retrospective action science (letting past experience and action through

subsequent scholarly reflection become data in a research project). In addition, although the literature on action research offers a vast array of useful definitions and although the majority of the definitions are concerned with the dual aim of practical problem solving and generation of new knowledge (Hult & Lennung 1980), none of the definitions seems to have gained pre-eminence in the field (cf. Altrichter *et al.* 2002). However, several broad characteristics define action research (see e.g. Argyris *et al.* 1985, Greenwood & Levin 1998, Arguinis 1993, McDonagh & Coghlan 2001) that are synthesized by Coughlan and Coghlan (2002: 222) who suggested that action research is best conceptualized as:

1. research *in* action, rather than research *about* action;
2. participative;
3. concurrent with action
4. a sequence of events and an approach to problem solving.

The action research literature has stressed the hermeneutic nature of action research (see e.g. Pihlanto 1994, Gummesson 2000). Especially, the hermeneutic circle (see e.g. Benton & Craib 2001) is often associated with action research. This is due, in a large part, to the cyclical nature of action research (e.g. Carson *et al.* 2001, Zuber-Skerritt 2001, Perry & Gummesson 2004, Coughlan & Coghlan 2002). According to Cady and Caster (2000), action research models involve the following steps: diagnose, intervene, evaluate and transfer knowledge. However, the labels, the number of the steps and levels of detail vary considerably across action research models. For instance, Argyris (1989) identified the following steps: collecting data, control, formulating and implementing strategy, intervention, implementation, continued learning, implementation, and follow-up. Nonetheless, Perry and Gummesson (2004) suggest that traditional action research contains a group of people who use spiraling cycles of activities that involve planning, acting, observing and reflecting upon what had happened. This is shown diagrammatically in Figure 10.
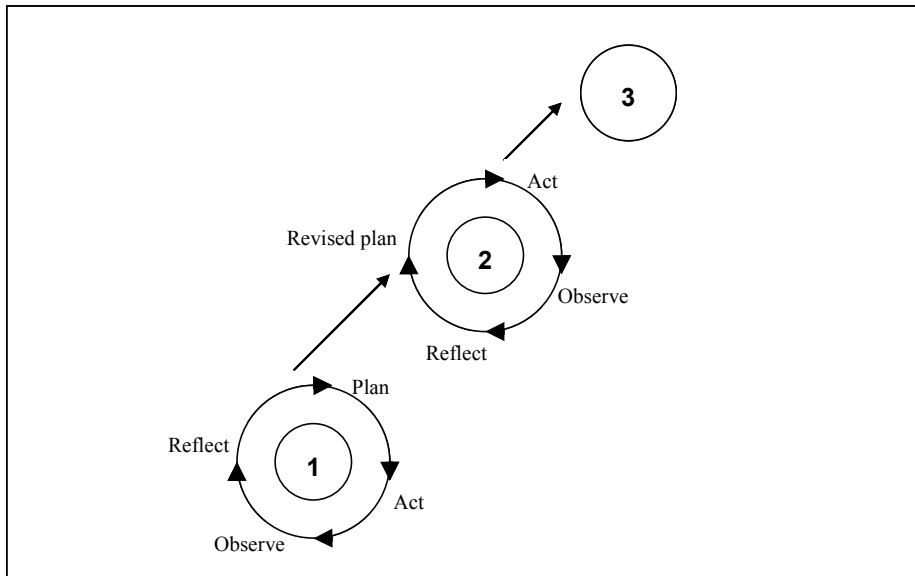
Fig. 10. An action research spiral (modified from Zuber-Skerritt 2001: 15).

Hermeneutics, according to Gummesson (2000), represents a reaction against the hard rigidity of positivism in relation to certain types of problems in the social field. Instead of trying to explicate causal relations by means of objective facts and statistical analysis, hermeneutics uses a more personal interpretative process to understand reality. Table 7 illustrates major differences between what might be approximately termed positivistic and hermeneutic paradigms.

Table 7. Comparison between the Positivistic and Hermeneutic Paradigms (Gummesson, 2001: 178).

Positivistic paradigm	Hermeneutic paradigm
Research concentrates on description and explanation.	Research concentrates on understanding and interpretation.
Well-defined, narrow studies.	Narrow as well as total studies (holistic view).
The vantage point is primarily deductive; thought is governed by explicitly stated theories and hypotheses.	The vantage point is primarily inductive; researchers' attention is less focused and is allowed to "float" more widely.
Research concentrates on generalization and abstraction.	Research concentrates on the specific and concrete ("local theory") but also attempts generalizations.
Researchers seek to maintain a clear distinction between facts and value judgments; search for objectivity.	Distinction between facts and value judgments is less clear; recognition of subjectivity.
Researchers strive to use a consistently rational, verbal and logical approach to their object of research.	Preunderstanding that often cannot be articulated in words or is not entirely conscious – tacit knowledge – takes on an important role.
Statistical and mathematical techniques for quantitative processing of data are central.	Data are primarily nonquantitative.
Researchers are detached – i.e., they maintain a distance between themselves and the object of research; take on the role of external observer.	Both distance and involvement; researchers are actors who also want to experience what they are studying from the inside.
Distinction between science and personal experience.	Researchers accept influence from both science and personal experience; they use their personality as an instrument.
Researchers try to be emotionally neutral and make a clear distinction between reason and feeling.	Researchers allow both feelings and reason to govern their actions.
Researchers discover an object of research external to themselves rather than "creating" the actual object of study	Researchers partially create what they study, for example, the meaning of a process of a document.

As preceding paragraphs and Table 7 clearly illustrate, the two scientific paradigms create different starting points for research. Thus, the quality assessment of research also depends on these different points of departure. According to Gummesson (2000: 184), the most significant piece of advice to quality examiners is: "*Do not assess hermeneutic research from the vantage point of positivistic paradigm.*" In other words, action research does not have to justify itself in relation to alternative epistemologies and research approaches (Susman & Evered 1978, Aguinis 1993). Rather, it can be justified within its own terms, especially those which argue that the reflection and data generation and the

developing theories cannot be captured readily by alternative approaches (Schein 1987, Eden & Huxham 1996). Furthermore, Coughlan and Coghlan (2002: 236–237) state that "*while there are no more threats to validity in action research than any other type of research, at the same time there are threats of validity which must be recognized and confronted.*" Thus, in order to maintain validity, action researchers must consciously and deliberately perform the action research cycles, testing their assumptions and subjecting their assumptions to public testing (Argyris *et al.* 1985). This enables the consumer of the research to find answers to four key questions (Gummesson 2000: 184–185):

1. "If the investigation had been carried out by someone other than the author, using his methods, would the same results have been obtained?" This is the problem of replication usually referred to as *reliability*.
2. "Does the evidence really reflect the reality under examination?" This is the *validity* problem.
3. "What relevance do the results have beyond the actual research?" This is the degree to which the results can be *generalized*.
4. "Is there sufficient detail in the way the evidence was produced for the credibility of the research to be assessed?" If we follow the researcher's journey – from questions to methods of data gathering, interpretation and answers – do we believe him or not? This is the problem of *credibility*.

The term "triangulation" is also closely associated with quality conversations of qualitative research. More specifically, the purpose of triangulation is to enhance the quality and credibility of qualitative research (Patton 1999). Triangulation is defined as "*the combination of methodologies in the study of the same phenomenon*" Denzin (1978: 291). According to Patton (1999: 1193, see also Denzin 1984), four kinds of triangulation contribute to the verification and validation of qualitative analysis:

1. methods triangulation
2. triangulation of sources
3. analyst / investigator triangulation
4. theory / perspective triangulation

Methods triangulation refers to data collection methods or research designs (Lincoln & Guba 1985). It often involves comparing data collected through qualitative methods with data collected through quantitative methods (e.g.

Lincoln & Guba 2000). This is seldom straightforward enough to put into practice. Thus, it is important to emphasize that qualitative data can be fruitfully combined when they elucidate complementary aspects of the same phenomenon (Patton 1999).

According to Patton (1999: 1195), data sources triangulation means comparing and cross-checking the consistency of information derived at different times and by different means within qualitative methods, i.e. *"(1) comparing observational data with interview data; (2) comparing what people say in public with what they say in private; (3) checking for the consistency of what people say about the same thing over time; and (4) comparing the perspectives of people from different points of view…"*

The third kind of triangulation is analyst / investigator triangulation that involves using more than one observer, interviewer or data analyst in the study (Patton 1999). The purpose of using multiple investigators or analyst is to decrease the potential of bias in gathering, reporting, coding or analyzing the data (Denzin 1978) and to contribute to internal validity (Boyd 2000). Having more than one investigator on the team has the potential for keeping the team honest, therefore increasing the credibility of findings (Lincoln and Guba 1985).

Theory triangulation is a process whereby emergent findings are examined in relation to different perspectives (Lincoln & Guba 1985, Denzin 1978). The main point of theory triangulation is to understand how findings are affected by different assumptions and fundamental premises (Patton 1999). Thus, one of the key benefits of theoretical triangulation is that it provides a broader, deeper analysis of findings.

This study represents an action research strategy. The reason to select an action research strategy was two-fold: action research is particularly strong in providing a multidimensional view of a phenomenon in its contemporary context as well as providing new insights into an under-researched phenomenon. Although we acknowledged the problems related to action research, especially the fact that an action researcher is not an independent observer, it was found that action research was a very reasonable alternative for approaching this complex, unexplored phenomenon. Since the companies involved in this study did not have any previous experience on mobile marketing, it was decided to organize two action research projects in which the companies integrated mobile media into their marketing communications mix and media mix with the help of the university-led research project. Overall, this initial stage provided important insights into mobile marketing strategy development and resulted in a pre-

understanding of consumers' intention to receive mobile advertising messages. Therefore it also helped to build measurement items for those factors that did not have validated scales in previous literature.

3.3 Data collection

As mentioned above, the main qualitative data was gathered from two action research projects in which two companies utilized mobile media for the first time as a part of their marketing campaigns. Because the companies did not have any previous experience on mobile media, the research project provided the needed mobile marketing communications expertise for the companies. The author was involved as an active participant in the planning and implementation of the marketing campaigns.

One of the main data collection methods was *participant observation.* In order to validate the findings obtained from the action research projects as well as to provide fresh insights into mobile marketing communications from consumers' point of view, eight *interviews* were conducted with the company involved in the action research and four other informants from the companies that were familiar with mobile marketing activities in general. Finally, an *online survey* was organized with four industrial partners of the research project. The rationale behind the survey was the fact that although the action research projects provided useful insights into mobile marketing management, our understanding of consumers' use and engagement in mobile marketing and/or advertising activities remained deficient. Therefore, the purpose of the survey was to figure out whether or not gender, age, income and employment status have an impact on consumers' engagement in mobile marketing. Next, the action research projects are discussed in detail.

3.3.1 Action research project I

The first action research project was done in cooperation with a retail organization. The company was continuously improving its marketing communications. As part of these efforts management decided to assign some of their resources for improvement project to mobile marketing communications. Especially the integration of various mobile marketing activities into a company's overall marketing communications and Customer Relationship Management (CRM) strategy was required. At that time, the company was one of the largest

privately owned retailers in Finland. It had two non-food department stores in two different cities. They provided a wide range of items, and the total number of products was around 50 000. Its turnover was somewhat €70 million. The number of employees was slightly over 200 (in 2004). It was agreed with the organization that the names of the informants and the company would remain confidential. Thus, from now on, the company is called company X.

In general, the case company formed a solid base for the purposes of this study, i.e. contributing to our understanding of an emerging phenomenon under research. Specifically, the company did not have previous knowledge or experience of mobile marketing. Second, the company did not have a permission-based, opt-in mobile marketing database or list. Third, the company was aiming to integrate the mobile media with its overall marketing communications strategy. Fourth, the case company did not have the technology, i.e. a server or platform, to conduct mobile marketing campaigns. Taking these factors into account, an effort was made to cover as comprehensively as possible the whole complexity of starting and maintaining a dialogue with customers in mobile media.

Initiation of mobile marketing

The research process started with a careful analysis of the current state of the company's marketing communications, i.e. communications mix and media mix. Based on the analysis and especially the fact that the company did not employ customer relationship management (CRM), it was decided to establish a loyalty program for regular customers, including a permission-based, opt-in list for future mobile marketing purposes. Along with this action research, the company invested heavily in CRM technology and developed its CRM practices with the help of external consultants. However, in this study we focus on issues related to the initiation and implementation of mobile marketing communications.

Broadly speaking, the key challenge in every initiation of mobile marketing is to find marketing communications means to attract customers' attention and obtain their permission to start a dialogue with them on a mobile media. This refers to the permission-based mobile marketing that is defined as a mobile marketing message that has been requested by the consumer as part of opt-in system (e.g. a consumer fills in their mobile phone number on a regular customer registration form and agrees to receive commercial messages and information of interest). In effect, the permission to market to the consumer is received by the marketer. Permission-based marketing messages are powerful because by signing

up to an opt-in mobile marketing list, the consumer is requesting the information from the marketer than simply being exposed to it (e.g. Martin *et al.* 2003).

Due to these reasons, the company X decided to establish a loyalty program for regular customers. In order to recruit customers to this program and encourage them to give their permission to receive mobile marketing messages, a marketing campaign was organized. The planning of the campaign started on September 8th, 2004. The meetings related to this stage of the project and the main issues discussed during the meetings are presented in Table 8. Since the company X did not have any previous experience on mobile marketing, the project was performed in a close cooperation between the company and the research project. Besides the meetings, around 250 email messages were sent between the project organization and the company's personnel.

From the mobile marketing viewpoint, the campaign planning included several technological and marketing communications issues, as shown in Figure 11. More specifically, on the technological level, five critical issues were identified and resolved. These issues revolve around the sourcing and implementation of mobile marketing technology. First, the company had to acquire a mobile marketing server (i.e. platform) that is capable of handling, i.e. sending, receiving and storing, an unprecedented number of SMS and MMS messages. After careful consideration, it was decided to implement the campaign with a hosted mobile marketing platform provided by the leading technology company in the mobile marketing and mobile CRM applications market.

Table 8. Overview of the meetings.

Company	Participants	Issues	Date, and duration of meeting
Company X	CEO, Marketing Manager, Electronic Commerce Manager, author and 2 researchers	An analysis of the current state of company's marketing communications activities, aims of the action research project / campaign, technological issues including short number, operator connections, overall campaign planning, mobile marketing technology	September 8, 2004, 2h 30 min
Company X	CEO, Marketing Manager, Electronic Commerce Manager, Technology Advisor, author and 1 researcher	Short number, operator connections, campaign planning, campaign logic, mobile marketing technology, legal issues, evaluation of potential partners for technical implementation	October 8, 2004, 2h 50 min
Company X	Marketing Manager, Electronic Commerce Manager, Technology Advisor, author and 1 researcher	Short number, operator connections, campaign planning, message pricing issues, campaign logic, mobile marketing technology, legal issues, evaluation of potential partners for technical implementation	October 18, 2004, 4h
Company X	Marketing Manager, Electronic Commerce Manager, Technology Advisor, author and 1 researcher	Short number, operator connections, campaign logic, mobile marketing technology, legal issues, advertising schedule and ad format planning	November 5, 2004, 3h 20 min

Second, it was necessary to decide whether to apply for or rent a short message service number (the number which directs SMS messages from mobile phones to the mobile marketing server and vice versa). In Finland, a short message service number (five-digit number) has to be applied for from the Finnish Communications Regulatory Authority (FICORA). To avoid this application procedure, a marketer can rent a short message service number from mobile marketing service providers. In this case, the company applied for its own number. However, due to the extremely high expenses (approximately 4 000 euros) and the time-consuming procedure of integrating the short message service number with operators' gateways (up to four weeks), the company decided to use a rented number.
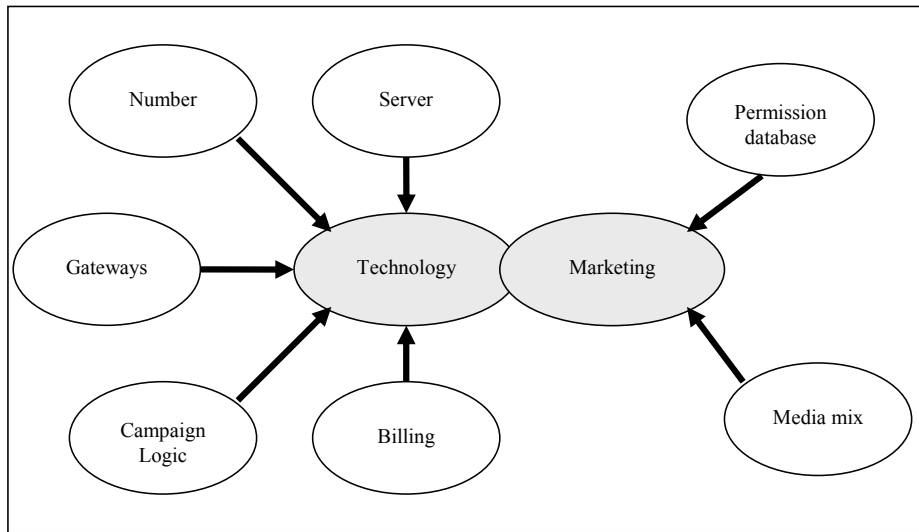
Fig. 11. Issues underlying the initiation of mobile marketing (modified from Sinisalo *et al.* 2006).

Third, it was necessary to decide the total number of service operators needed to reach the target audience, i.e. the number of gateway connections established with mobile networks. In essence, every mobile marketing campaign involves mobile subscribers from all the networks in a given country. At the time, there were approximately 17 service operators in Finland. However, seven major operators covered over 90 percent of subscribers. For this reason, it was decided to connect 'only' the major service operators with the mobile marketing platform, and therefore almost all mobile subscribers were able to start mobile dialogue with the company. The rest of the operators were excluded mainly for technical reasons, since they did not provide any kind of service to connect to their messaging network.

The fourth technological issue to consider was that an application including the campaign logic had to be built into the mobile marketing platform. The campaign logic refers to actions that the platform is supposed to do during the campaign. Generally speaking, the campaign logic application enables the server to receive, store and reply to the messages sent by the customers. In addition, it is almost impossible to turn the received customer data into customer knowledge without the application. A well-designed application includes, at a minimum, commands to approve or reject the received message based on a keyword at the

beginning of the message, to store and stamp the received messages and to send the return message to a customer. In addition, it is important to emphasize that the campaign generates a wide variety of data, such as traffic data that is valuable only when stored and analyzed properly. To ensure that relevant information was to be stored in the database, accurate plans were made. Then, all the campaign logic issues were solved and the application was carefully tested before the company launched the marketing campaign.

Finally, it was necessary to decide the cost of the incoming messages. There were three options for setting up the price per message sent by the service user. The first one was a normal SMS price, which is typically around 0.08€ in Finland. The second option was a free SMS message which refers to the message that, being free for the customer, the company discharges according to the pricelist of operator in question. The last option is a premium-rate SMS message, which refers to the price collected from the customer determined on the basis of the fixed premium rate price category. In this case, no profit was collected. The normal SMS price (cost per message for the customer was from 2 to 14 cents) was charged from the customers by their own mobile operator.

Along with the technical planning and build-up, an intensive marketing campaign planning was done. As stated earlier, the key challenge in every initiation of mobile marketing is to attract customers' attention and get them to start communicating through the mobile channel. In this case, the marketing activities were planned in a close cooperation with the company and the research project.

Building permission-based, opt-in mobile marketing list

The marketing campaign took palace between November 16th 2004 and December 31st 2004. The campaign began with a full-page advertisement in a free delivery newspaper. This full-page advertisement and eight additional advertisements appeared two weeks later in the same newspaper. Two more full-page advertisements appeared in the coming newspapers (14.12.2004 and 27.12.2004) before the campaign expired on December 31st, 2004. In total, the campaign was advertised four times with 12 different advertisements in the newspaper. An example of a published advertisement is shown in Figure 12. The circulation of the paper was around 262 000 households in 88 different cities. The paper was published in every second week. At the same time, the campaign was advertised with posters in the department stores and on the website of the company.

Fig. 12. A full-page advertisement (published in the free delivery paper 17.11.2004).

The advertisement contained instructions on how to sign up for the case company's loyalty program by SMS. Those who did not want to use their mobile phone in signing up were able to send the registration information by mail or fill in the registration form in department stores. The advertisement also contained the information that by signing up for the loyalty program, consumers also opted in the company's permission-based mobile marketing database. Basic consumer data was collected by SMS message. The information included name, address, age, gender, family size, their interest in 12 different categories of products (e.g. sports, clothing and furnishing) and the frequency of their visits in the department store(s). These variables were used to target subsequent mobile marketing messages (see next chapter for details). All the collected information and the customer's mobile phone number were stored in a mobile marketing platform. The incentive to sign up for the loyalty program was a possibility to receive loyalty program benefits and win a brand new car (Volkswagen Golf) in a lucky draw. Those customers who did not want to receive any kind of mobile marketing communications from the case company were able to send an opt-out message to the mobile marketing platform. Those who used a paper version were able to choose the opt-out option on the registration form. The price of a sent SMS message varied from 2 to 14 cents.

The campaign generated 26 462 SMS messages between from November 16th 2004 and December 31st 2004. Since duplications were excluded, the total number of individual participants was 20 921. The majority of the customers (18 335 persons, 87.6 percent) participated by using SMS. The company received 2 586 (12.4%) paper versions of the participation form. The campaign generated a huge amount of customer data. Next, the issues related to customer knowledge building and push-based mobile advertising campaigns conducted during the project will be discussed.

From customer data to push-campaigns

The marketing campaign expired on December 31st 2004. The results of the campaign were analyzed and documented in detail. Based on the analysis, the mobile marketing practices of the company were developed in conjunction with the research project. The development process included the following steps:

1. Building customer profiles. It took approximately 5 days to get the campaign data from the mobile marketing service provider. After the data was received,

extensive data processing was executed. Four project researchers coded, analyzed and built preliminary customer profiles for future mobile marketing campaigns. This three-week-long data processing period ended 26.1.2005.

2. Mobile marketing strategy building. Two weeks later, on February 7th 2005, the company decided to utilize the collected opt-in database by executing mobile advertising campaigns during the next 13 months. In total, three campaigns were conducted. The details of the campaigns are shown in Table 9. The main purpose of the campaigns was to increase the company's knowledge of push-based mobile marketing as well as test and develop the newly collected permission-based opt-in database. The company's marketing was based mainly on mass marketing activities, and therefore marketing communications plans were updated. During this process the mobile medium, the new direct marketing channel, was integrated into overall marketing communications activities. The author and three other project researchers were actively engaged in this process.

Table 9. SMS push-campaign data.

Date	Time	SMS push-advertisement / Customer service message (CSM) and Opt-out reminder	Number of messages
25.5.2005	13:00:43–13:01:01	Ad: "Special price for Svenson Pinto RC Trainer Kit with 5–7.5cc engine 58€ (83€). Price valid until 31.5.2004. Call and order 040xxxxxxx. Best regards, X Ltd."	52
25.5.2005	13:01:01–13:01:17	Opt-out reminder: "Dear customer, by answering "STOP" to this message you will not receive mobile marketing from our company in the future. Best regards, X Ltd."	52
25.5.2005	15:00:09–15:00:19	Ad: "Retaining net for I-Sport 4.6m trampoline. Special price 159€ (home-delivered)! Order by answering to this message: "ORDER 267342". Best regards, X Ltd.	62
25.5.2005	15:00:20–15:00:36	Opt-out reminder: "Dear customer, by answering "STOP" to this message you will not receive mobile marketing from our company in the future. Best regards, X Ltd."	62
16.8.2005	16:37:24–16:39:28	Ad: "Anar gun locker 47 for 4–7 rifles. Special price 210€ (home-delivered)! Order by answering to this message: "ORDER 199888". Price valid until 30.8.2006. Best regards, X Ltd.	379
16.8.2005	16:39:29–16:41:32	Opt-out reminder: "Dear customer, by answering "STOP" to this message you will not receive mobile marketing from our company in the future. Best regards, X Ltd."	379
14.3.2006	14:02:00–14:05:00	CSM: "Harry Potter and the Half-Blood Prince is waiting for you at info desk in X on 16.3. at 9:00. There is also a HP poster for free! Best regards, X Ltd.	168
14.3.2006	14:02:00–14:05:00	CSM: "Harry Potter and the Half-Blood Prince is waiting for you at info desk in Y on 16.3. at 9:00. There is also a HP poster for free! Best regards, X Ltd."	154

3. Technical planning and implementation. The mobile marketing platform that was used in the campaign was not available for the coming mobile marketing campaigns. Therefore, the company decided on February 28, 2005 to utilize the platform that was provided by the research project. The platform was owned by one of the biggest mobile operators in Finland. Because the operator was an industrial partner of the research project, it provided the platform for the research project. The platform was initially designed for the purposes of the operator business, and therefore it was not ready for the purposes of the coming campaigns and some development work was needed. The biggest problems were that the platform was tested in one network only, and it was not designed for two-way mobile marketing campaigns. Research engineers started the development work on February 29th, 2005, and the platform was ready for use on May 3rd, 2005. Along with the development work, we had to resolve all the same technological issues as we did during the "win-a-car" campaign. First, a short message number was rented from a service provider (the agreement was signed on May 4th, 2005). The short number was integrated to one network only, and therefore we had to negotiate and make agreements with all the major service operators. Finally, the short message number was integrated to the gateways of the major operators, and therefore almost all mobile subscribers were able to communicate with the platform. At the same time, we also activated several keywords and tariff categories (i.e. premium rates) for incoming messages. The platform was tested and ready for use on 23rd of May.

4. Campaign planning and implementation. All the campaigns, except the last one, were planned and implemented with an intimate cooperation between the PEAR project and the case company. During the technological development work, a detailed mobile marketing plan was made. Although it never fully materialized, it guided our activities relating to the mobile marketing campaigns. The guiding principle was that the mobile medium was to be used as a direct marketing tool and the messages were to be personalized according to the preferences expressed in the "win-a-car" mobile marketing campaign. The push-campaigns were executed based on these prerequisites. After careful planning, the first campaign was executed on May 25th, 2005. For this campaign, the information from the company's customer relationship management (CRM) system was also utilized. The second campaign was executed on August 16th, 2005. The campaign was based strictly on the information collected during the "win-a-car" campaign

and the customer profiles built on that information. Unfortunately, it was not possible to measure the success of the campaigns. The last campaign was executed on March 14th, 2006. The messages were sent mainly for the purpose of customer service, and therefore they were planned and provided by the company. Messages were sent on behalf of the research project.

This was the end of the action research project. The company was satisfied with the results of the project, and it was able to continue mobile marketing activities without the external help. Thus, it could be said that one major action research spiral (see e.g. Zuber-Skerritt 2001) including several smaller spirals were gone through during the research process. However, it should be highlighted that the main purpose of this action research process was to integrate mobile marketing communications into the company's marketing communications activities. Thus, this study focused on marketing communications activities. Especially since the needed technologies, i.e. platforms were provided by the leading mobile marketing technology provider (Add2phone Ltd; see the Figure 5) and the one of the biggest mobile operators in Finland, technical development work was almost totally excluded from the project. Overall, it could be said that the company's mobile marketing activities were clearly improved during the action research project. For instance, the company gained valuable insights into mobile marketing planning and implementation process. The company also built an opt-in mobile marketing list. In addition, the company obtained valuable data from its customers and built profiles of customers based on the data. The action research project was also a very important source of information for the research project and this dissertation. The second and the third papers of this study are built mainly on the observations made during this action research project and the second action research project that is next discussed in detail.

3.3.2 Action research project II

The purpose of this action research project was the same as in the first action research project. The company wanted to integrate mobile media into its media mix and use the mobile media as a direct marketing vehicle in the future. The company did not have any previous experience of mobile marketing, and therefore it did not have an opt-in mobile marketing database. Due to these reasons, the company decided to cooperate with the research project.

The second action research project was done in collaboration with an online store. In addition to the online store, the case company owned a hardware store. It was agreed with the organization that the names of the informants and the company would remain confidential. Thus, from now on, the company is called company Y. At that time, the online store was one of the largest privately owned online stores in Finland. It provided a wide range of non-food items for private persons and organizational buyers as well. The turnover of the online store was slightly over €1 million.

The action research project started on September 17th, 2004 with a kick-off meeting and the closing date of the action research was January 11th, 2005. As illustrated in Table 10, several activities were done during the action research process. The author was in charge of the planning and implementation of the action research project.

Table 10. Activities and issues related to the action research project II.

Date	Type of contact	Issue	People involved
17.9.2004	Meeting	Kick-off meeting: analyses of the current state of the firm's marketing communications activities and a goal setting for the research and marketing campaign.	CEO, marketing manager, author, researcher
1.10.2004 and 2.10.2004	Email and phone calls	Proposal of the campaign plan (done by the author, project director and project researchers) was introduced.	CEO, marketing manager, project director, author, 4 researchers
4.10.2004	Email and phone calls	Modified campaign plan: campaign logic, time-span, evaluation of modifications needed on online store; evaluation of mobile technologies needed in the campaign, introduction of the potential mobile marketing service provider (done by the author, project director and 2 researchers) was presented.	CEO, marketing manager, project director, author, 2 researchers
8.11.2004	Email and phone calls	Draft of the newspaper advertisement was introduced. Some improvements were suggested.	CEO, marketing manager, project director, author, 2 researchers
9.11.2004	Email and phone calls	Contact with mobile marketing service provider about the possibilities to use mobile marketing platform in the campaign. The service was available, and it was decided to utilize the platform in the campaign.	Author, service provider
12.11.2004	Meeting	Specification of online store development work, distribution of the work. Project engineers and ADP-designer started immediately the development work.	ADP-designer of the company, project director, author, 3 project engineers
12.11.2004	Email and phone calls	First tests with the mobile marketing platform. Some improvements were deemed necessary.	Author, service provider, 2 researchers
15.11.2004	Email	Second tests with the platform. Now, a short message number, keywords, gateways and message price were supposed to be ready. Codes of the campaign were also delivered by service provider.	Author, service provider
19.11.2004	Email	Formal tender of using the platform in the campaign was delivered by service provider.	CEO of service provider, marketing manager of the case company

Date	Type of contact	Issue	People involved
20.11.2004	Email	The tender was approved by the company Y.	CEO of service provider, marketing manager of the case company
20.11.2004	Phone calls	The online store was ready for test. A few bugs were found.	ADP-designer of the case company, author, 2 project engineers
22.11.2004	Email and phone calls	Final tests with the mobile marketing platform were started. Still some problems with one operator's gateway.	Author, 3 researchers, service provider
22.11.2004	Email and phone calls	The newspaper advertisement was ready.	Author, project director, ad designer of the case company
22.11.2004	Email and phone calls	Online store was ready and retested for the campaign.	ADP-designer of the case company, author, 2 project engineers
23.11.2004	Email and phone calls	The platform was ok. The problem with the gateway was repaired.	Service provider
23.11.2004	Email	The ad was delivered to the newspaper.	Ad designer of the case company
24.11.2004		The campaign began with an advertisement on local newspaper.	
24.11.–31.1.2004		The campaign was advertised on online store and in the hardware store.	
31.12.2004		The campaign expired.	
3.1.2005	Email	The campaign data arrived from service provider.	Service provider
4.1.–10.1.2005		Campaign data was analyzed and documented by the PEAR project.	Project director, 3 researchers
11.1.2005	Email and phone call	Results and analyses of the campaign as well as recommendations for the future activities were presented to the case company.	CEO, marketing manager, project director, author

During the kick-off meeting, it was clearly articulated by company Y that the main goal of the action research project was to learn how to utilize mobile media in their marketing communications. In practical terms, it was also agreed that the sub-goals of the project were to find out ways to get more visitors to the company's online store and, in particular, to get the visitors to provide their contact information for future mobile marketing purposes. With these purposes in mind, the marketing communications activities and customer database of the company were analyzed. Based on the analysis, a proposal of a campaign plan was prepared by the research project personnel. The proposal was introduced to company Y on October 1st, 2004. Some modifications needed to be done. After several emails and phone calls, the campaign plan was approved by company Y on October 4th, 2004. The campaign plan included the following issues:

A) The main goal was to integrate mobile media into the company's media mix with the two sub-goals: to generate more visitors to online store and to get them to provide contact information for future mobile marketing purposes.
B) The time-span for the campaign was 24.11.2004–31.12.2004.
C) The campaign logic was built on the combination of the mobile medium and the company's online store.
D) An evaluation of the development work was needed on the online store front page.
E) An assessment of the mobile technologies was needed in the campaign.
F) A potential mobile marketing service provider was introduced (same as with the case of company X in action research project I).
G) The use of a newspaper advertisement at the beginning of the campaign was suggested.

The draft of the newspaper advertisement was introduced to company Y by the research project on November 8th, 2004. The draft was accepted by company Y, but minor modifications were introduced. Two weeks later, on November 22nd, 2004 the advertisement was ready for the publication. The mobile marketing service provider was contacted on November 9th, 2004. The service provider agreed to provide a mobile marketing platform for the campaign at a very reasonable price. Thus, it was decided to rent the platform for the campaign. The platform was tested on November 12th, 2004. It worked very well, but due to practical reasons some modifications were needed. First, the short number was changed (mainly for reasons concerning message price). Second, two more operators' gateways were opened. Third, a new key word was activated. Three

days later all the modifications were done, and the platform was supposed to be ready for the campaign. To be sure that everything was functioning well, final tests were done on November 22nd, 2004. There were still problems with one operator's gateway. The platform could not receive messages from the operator's network. The next day the problem was repaired, and the platform was ready for the campaign.

In order to conduct the planned campaign, some development work was needed to be done on the online store. Thus, a meeting was arranged on November 12th, 2004. During the meeting, a specification of the development work as well as an allocation of the workload was done. Project engineers and an ADP-designer of company Y started immediately the development work. Eight days later the online store was tested for the first time. A few bugs were found. Finally, on November 22nd, 2004 the online store was retested and it was ready for the campaign. Thus, all the technical issues were solved on November 23rd, 2004.

The marketing campaign began on November 24th, 2004 with an advertisement in a local newspaper (circulation approximately 80 000). The size of the advertisement was 113x92mm, and it was situated in the upper right corner of a full-page advertisement. The full-page advertisement advertised products provided in the online store. The advertisement was paid by the case company. As illustrated in Figure 13 (in Finnish), the advertisement contained instructions to participate in a lucky draw that offered a chance to win a digital video camera (worth 199€). The instructions were as follows:

1. Send a free text message XXXX to the number 16206
2. You will receive a lucky number in a return message (e.g. 12345)
3. Visit our website at xxx, enter the code into the field on the front page, fill in the questionnaire and you will be on the lucky draw.

Fig. 13. The call-to-action advertisement in the newspaper on November 24th, 2004.

The campaign expired on December 31st, 2004. In total, 345 "lucky numbers", i.e. five-digit codes, were requested via SMS. The number of requested codes per day is illustrated in Figure 14. The effect of the newspaper advertisement is fairly obvious. After the newspaper advertisement, the campaign was advertised only on the online store and via posters in the hardware store. Therefore, the number of daily requested codes decreased very fast. During the first day 42.9% (148) of the codes were requested. During the second day 21 (6.1%) codes were requested, and during the third day 19 (5.5%) codes were requested. After the first three days the mean of requested codes was 4.4 per day.

Altogether 276 customers took part in the lucky draw. Thus a drop-out was 69. This means that 69 of those customers who requested the code did not fill in the questionnaire on the online store. Among the lucky draw participants, there were 218 (79%) males and 58 (21%) females. The mean age was 37 years (s.d. 15.2)
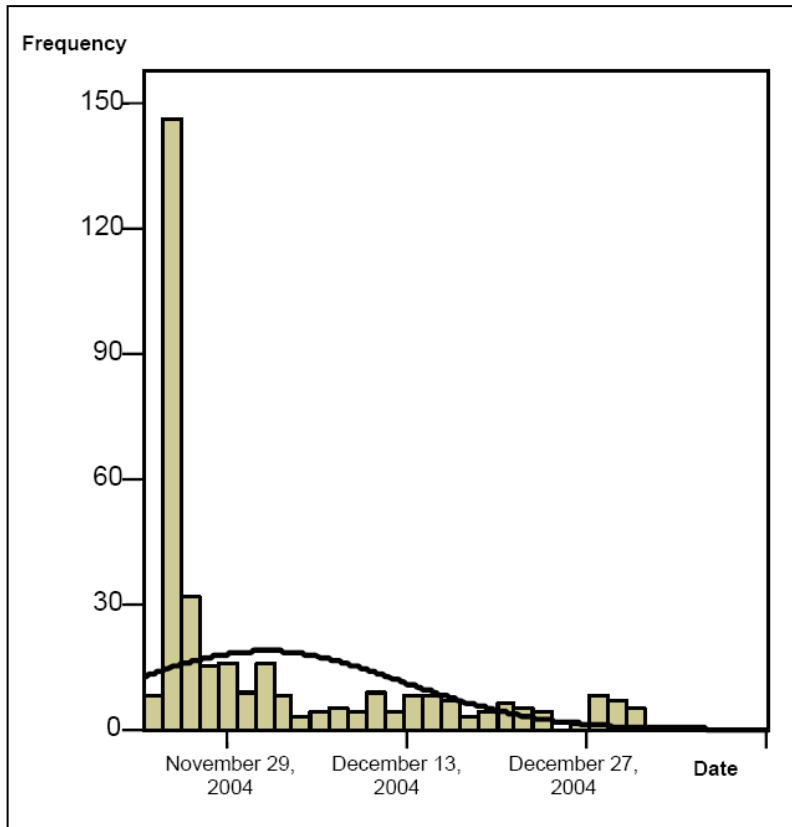
Fig. 14. Frequency of requested "lucky numbers" (total 276) after the call-to-action advertisement in newspaper.

The campaign was running without problems. It expired on December 31st, 2004. The mobile data from the campaign arrived from the service provider on January 3rd, 2005. The online store data arrived on the same day. The coding and analyzing of the data started on January 4th, 2005, and the results of the analyses along with the recommendations for future activities were delivered to company Y on January 11th, 2005. From the research project's perspective, that was the end of the action research project. Further development of the marketing communications was done by the company.

One may argue that the action research cycle (e.g. Zuber-Skerritt 2001) never happened during the second action research project. Basically, this is true because the final stage of action research project, namely reflecting upon what had

happened never actually occurred. However, we argue that three out of four stages of action research project: planning, acting, observing (Perry & Gummesson 2004) truly happened, and during those stages a considerable amount of valuable observations were made and important information was collected. In addition, we argue that theoretically the second action research is a duplication of the first action research, and therefore it further validates the findings presented in the research papers. Due to these reasons, the second action research project was included in this dissertation.

3.3.3 Interviews

It has been suggested that one way to increase the validity, strength and interpretative potential of a study, decrease investigator biases and provide multiple perspectives is to use methods involving triangulation (Denzin, 1970). In this study, in order to achieve better confidence in the results and a better understanding of divergent findings, data source triangulation was used.

Specifically, three researchers interviewed four key informants from company X, one informant from the mobile marketing service provider and three informants from organizations other than the companies involved in action research projects. The interviewees were the CEO, a marketing manager, an electronic commerce manager and a technology advisor of company X. In addition, the chief technology officer of the mobile marketing technology provider, the project manager of the advertising agency, a business manager of the mobile carrier / operator and a development manager of the mobile service provider were interviewed (see Table 11).

Table 11. Interview data

Company	Position	Type of contact	Date and duration of interview
Company X	CEO	Interview and e-mail correspondence	September 8th, 2004, 1h 40min
Company X	Marketing Manager	Interview and e-mail correspondence	September 8th, 2004, 1h 40min
Company X	Electronic Commerce Manager	Interview, telephone calls and e-mail correspondence	November 5th, 2004, 60 min
Company X	Technology Advisor	Interview, telephone calls and e-mail correspondence	October 18th, 2004, 1h, 45 min
Technology Provider	Chief Technology Officer	Interview, telephone calls and e-mail correspondence	February 25th, 2005, 30 min
Advertising Agency	Project manager	Interview and e-mail correspondence	February 26th, 2005, 1h 30 min
Operator	Business Manager	Interview, telephone calls and e-mail correspondence	February 25th, 2005, 1h 50 min
Service Provider	Development Manager	Telephone interview and e-mail correspondence	January 28th, 2005 30 min

Semi-structured interviews were used. This is due to the reason that semi-structured interviews allow researchers to generate their own questions that are connected to predefined themes. More specifically, the interview consisted of four themes (see Appendix): 1) their current marketing activities, i.e. marketing communications mix and media mix, 2) their experiences of mobile marketing / advertising in general, 3) their experiences of mobile marketing technologies and campaign planning and implementation, 4) their opinion about the future of mobile marketing / advertising including consumer behavior related to mobile advertising campaigns. In addition, the background information of the company and the interviewee(s) were asked. All the interviews were audio-taped and transcribed verbatim. The content of the transcripts was then analyzed according to the themes mentioned above. The findings from data analyses supported the observations made in action research projects and analyses presented in individual research papers. In addition, the insights derived from the interview data were useful in the development of a measurement instrument for online survey.

3.3.4 Online survey

Although the action research projects provided useful insights into mobile marketing, our understanding of factors affecting consumers' intention to receive

mobile advertising and consumers' responses to mobile marketing and/or advertising activities remained deficient. Due to these reasons, it was decided to organize an online survey in cooperation with four industrial partners of the research project. A convenience sampling method was used to obtain the survey participants. The survey was promoted on four different websites in Finland. Those websites displayed a banner ad that contained a brief description of the survey and a link to a website questionnaire. The survey took place between September 22nd and December 15th, 2005. The incentive to participate was a prize draw for a mobile phone priced at 199€. A total of 4,062 consumers responded to this survey.

The survey instrument was pre-tested with 90 students at the University of Oulu in Finland. Since the number of previous studies on mobile marketing was limited, the pre-test was designed to refine the measures for our purpose. The final result was an instrument that could be said to be appropriate for measuring perceptions of mobile advertising.

The survey comprised of a wide variety of questions with respect to mobile marketing and advertising experience, acceptability and actions taken by consumers. In addition, the survey contained questions covering potential factors that may influence consumers in engaging in the interactive SMS advertising campaign and receiving mobile advertising. In this study, we were interested in consumers' engagement in mobile marketing. It has been argued that Finland is a country gradually developing in mobile marketing (Virtanen & Raulas 2004), and therefore, we were interested in finding out whether or not gender, age, income and employment status have an impact on consumers' engagement in mobile marketing. In addition, we were interested in exploring factors affecting consumers' intention to receive mobile marketing messages.

The following measures were in line with a previous study of Trappey III and Woodside (2005) in which the authors were profiling consumer acceptors of SMS direct advertising texts and SMS direct marketing prompts to watch TV programs. First, the consumer's *familiarity with receiving permission-based mobile marketing messages* was measured by the item: "I have received mobile marketing during the last month." (Yes, No). Likewise, *buying behavior upon receipt of the advertising message* was measured by the item: "Have you bought a product or a service of any kind upon receipt of the SMS advertising message?" (Yes, No). The consumer's *engagement in interactive SMS advertising* was also measured by a Yes/No item. The respondent's *activity with regard to SMS call-to-action advertising* was measured by the item: "Have you sent an SMS to a

number shown in an advertisement of any kind during the last 6 months?" (Yes, No). Similarly, the respondent's *engagement in SMS TV behavior* was measured by the item: "Have you sent an SMS to a TV show during the last 6 months?" (Yes, No). SMS competitions (i.e. Text 'n' Win) were supposed to be the most popular SMS marketing activity, and therefore the respondent's *engagement in SMS competitions* was measured by the item: "Have you sent an SMS to a prize draw or other competitions during the last 6 months?" (Yes, No).

Then, we included questions that corresponded to the five constructs: control, relevance (context), privacy, benefits, word-of-mouth / viral marketing. All constructs were measured by a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) with a "do not know" option. The online questionnaire was designed in a way that it could not be submitted without answering to every question. Therefore, missing values did not exist in the data. However, "do not know" answers were recoded as missing values. Since problems of missing data are often magnified in structural equation modeling (SEM), an adequate missing-data computation is of particular importance (Ullman & Bentler 2004). Thus, the multiple imputation option with Expected Maximization (EM) algorithm included in SPSS Missing Value Analysis was used for imputation of missing values.

Finally, demographic information about gender, age, education, income, and employment status was collected. Five separate native Finnish speakers who were fluent in English agreed upon the following translations.

4 Overview of the papers

The main aim of this study was to contribute to our understanding on central theoretical and pragmatic issues related to the application of mobile marketing communications in consumer markets. Specifically, the main research problem was to determine

What is the nature of mobile marketing communications in consumer markets?

In addition, the main aim of this study was divided into five more specific research questions:

1. What is the current state of mobile marketing research?
2. How to integrate mobile marketing into a company's marketing communications strategy?
3. How to plan and implement a mobile marketing campaign?
4. Which factors are associated with the consumers' intention to receive mobile advertising messages?
5. How do gender, age, income, and employment status affect on consumers' responses to mobile advertising campaigns?

The research questions were answered with the help of five research papers. Each paper provided a partial solution to the main research question. The relationship between the research questions and the research papers is illustrated in the Table 12.

Table 12. The relationship between research questions and the research papers.

	Paper 1	Paper 2	Paper 3	Paper 4	Paper 5
Research questions	RQ1: What is the current state of mobile marketing research?	RQ2: How to integrate mobile marketing into a company's marketing communications strategy? RQ3: How to plan and implement a mobile marketing campaign?	RQ2: How to integrate mobile marketing into a company's marketing communications strategy?	RQ4: Which factors are associated with the consumers' intention to receive mobile advertising messages?	RQ5: How do gender, age, income, and employment status affect on consumers' responses to mobile advertising campaigns?
Main Results	This paper provides a detailed review and analysis of studies that focus on mobile (or wireless) applications aimed at marketing and those that fall within the domains of marketing, business and management or information systems. The paper also evaluates the various definitions of "mobile marketing" and recommends a new conceptualization.	This paper represents a framework of mobile marketing environment that outlines how mobile marketing should be integrated into a firm's overall marketing communications strategy. An overview of divergent mobile marketing activities is also provided along with representative examples derived from popular press.	This paper provides a conceptual model of the relationship between interactive Integrated Marketing Communications (IMC) and database management in the mobile context. The results from the empirical study suggest that consumers are willing to receive SMS marketing in a retailing context.	The results suggest that consumers' intention to receive mobile advertising messages is related to the four factors: (1) the relevance of the message; (2) permission to receive mobile advertising messages; (3) the benefits of receiving the message; (4) the privacy of personal data.	The findings indicate that women respond more actively than men to SMS call-to-action campaigns. The results also suggest that consumers at age group 36–45 were most likely to send SMS to a TV program and participate in SMS competitions.

AIM: TO UNDERSTAND THE NATURE OF MOBILE MARKETING COMMUNICATIONS IN CONSUMER MARKETS

4.1 A Review of Mobile Marketing Research (Paper #1)

The paper #1 identifies and evaluates prior research conducted in the field of mobile marketing communications. Since research in this area is relatively recent in nature, the scope of this examination was limited to the time frame January 2000 to February 2006. After reviewing literature from academic as well as industrial sources, it was decided to assess only those studies that focus on mobile (or wireless) applications aimed at marketing and those that fall within the domains of marketing, business and management or information systems. In total, fifty publications were selected from a bulk of conference papers and journal articles for detailed analysis. They were categorized as conceptual or empirical as well as quantitative or qualitative, based on the used research method.

The review and analysis revealed that a substantial number of studies have focused on consumer behavior and attitudes towards mobile marketing. In addition, consumers' responsiveness and the effectiveness of mobile marketing are increasingly gaining interest among researchers. It was also found that fewer studies are focusing on the role of mobile marketing in branding, the mobile marketing value chain and mobile marketing business models.

This paper also reviewed and analyzed various definitions of mobile marketing communications found in academic and popular literature. Based on the review and analysis, a more technology-agnostic definition was suggested: "*Mobile marketing is the use of the mobile medium as a means of marketing communication.*" In addition, it was suggested that the study in the area of mobile marketing research is important as both a reference guide as well as an assessment of areas meriting further study, as discussed in the conclusions and recommendations of the paper. This study is also meaningful because it uncovers the need to separate the role and importance of mobile marketing from the underlying technologies involved in supporting it.

4.2 Mobile Marketing: From Marketing Strategy to Mobile Marketing Campaign Implementation (Paper #2)

The paper #2 examines mobile marketing communications strategy development and aims at addressing key issues in mobile marketing campaign planning and implementation. While building on integrated marketing communications and mobile commerce literature, the purpose of this paper is two-fold: to develop a framework that is suited for facilitating research efforts in marketing focusing on

mobile media, as well as for aiding practitioners in their quest to achieve mobile marketing success in consumer markets. The framework builds on insights derived from in-dept interviews of mobile marketing practitioners and a participant observation in a research project that developed, implemented, and evaluated mobile marketing campaigns in a real-life context as well as the existing literature from mobile commerce and integrated marketing communications (IMC) domains.

The framework enhances our understanding of mobile marketing in several ways. It provides not only a broad delineation as to how mobile marketing should be integrated into the firm's overall marketing communications strategy, but also outlines the mobile marketing from marketing communications mix (i.e. promotion mix) perspective. As a part of the framework, a comprehensive overview of divergent mobile marketing activities is provided along with representative examples derived from popular press. The paper concludes with a detailed description of mobile marketing campaign planning and its implementation process. With the help of clarifying questions and examples, the key issues of the process were identified and described.

4.3 Integrated Marketing Communications in Mobile Context (Paper #3)

The paper #3 conceptualizes a model that links the utilization of mobile media and database information with the development of interactive integrated marketing communications strategies. As a part of the model, the paper discusses the foundations of integrated marketing communications, and it briefly describes key issues in the mobile marketing domain. In addition, the paper illustrates how the proposed model can be implemented in an organization that does not have a functioning customer database or any previous experience on interactive integrated marketing communications.

Although the paper presents the entire model, the empirical research focuses on the initiation stage of interactive integrated mobile marketing communications. In this case, the interactive element of integrated mobile marketing communications is mobile media. Thus, the paper provides a detailed description of issues needed to be taken into consideration when integrating mobile media into a company's marketing communications activities. In addition to this, the impact of age, gender, family size and interests on customers' willingness to give a permission to receive mobile marketing communications is evaluated.

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The main results from the empirical research allow us to draw some conclusions. First, with relatively small promotional activities, the case company recruited close to 8000 new customers to their permission-based, opt-in mobile marketing list. This was made possible by the use of two advertisements in a free delivery paper, online advertising on the company's Web site and posters in department stores. Moreover, the results indicate that consumers are willing to receive SMS advertising in a retailing context. In this particular case, it was supposed that customers were interested in entering mobile marketing communication with the retailer because they were familiar with SMS messaging and the case company had a good reputation, i.e. was a trusted source of mobile marketing communications.

4.4 Determinants of Intentions to Receive Mobile Advertising Messages: A Theoretical framework and Empirical Study (Paper #4)

The paper #4 examines the factors associated with the intention of consumers to receive mobile advertising messages. Based on eight in-depth interviews of mobile marketing practitioners and extant mobile marketing literature, the paper hypothesizes that five factors are involved: (1) the relevance of the message; (2) permission to receive mobile advertising messages (3) the ability to receive messages from friends, family, and colleagues, i.e. word-of-mouth; (4) the benefits of receiving the message; (5) the privacy of personal data. Data is collected by means of an online survey (n=4,062), and analyzed using structural equation modeling with LISREL.

As a result of LISREL analysis, four hypotheses were supported and one was rejected. Specifically, consumers' intention to receive mobile advertising messages was positively associated with the relevance of the received advertising message. Instead, the results suggest that there is a strong need for prior permission, and therefore a negative association exists between permission and intention to receive mobile advertising. Interestingly, it was found that that association between word-of-mouth and intention to receive mobile advertising was statistically insignificant. Unsurprisingly, it was found that benefits (monetary or other) incorporated with receiving advertising messages were positively associated with consumers' intentions to receive mobile advertising. Finally, the findings from the study indicate that privacy of personal data was

positively associated with consumers' intentions to receive mobile advertising messages.

4.5 Exploring the Effects of Gender, Age, Income and Employment Status on Consumers' Responses to Mobile Advertising Campaign (Paper #5)

The paper #5 (see chapter 9) explores the effects of gender, age, income, and employment status on consumers' responses on mobile advertising campaigns. The results from a survey of 4,062 Finnish consumers suggest that women and men differ significantly in their responses to mobile advertising campaigns. Specifically, the findings from the study suggest that females tended to more actively participate in SMS TV shows and all kind of SMS competitions. In addition, females ordered more actively mobile services by using SMS than their male counterparts. In addition, the results indicate that age affects on consumers' responses on mobile advertising campaigns. Consumers in age group of 36 to 45 years were most likely to send an SMS to a TV show or advertisement, and participate in SMS sweepstakes and other competitions. Thus, it seems that mobile advertising is not only for teenagers anymore. The results also suggest that income and employment status are associated with consumers' responses to mobile advertising. Interestingly, our findings indicate that students tend to respond at lowest rates to SMS TV call-to-action. Finally, our findings suggest that income level does not have substantial impact on consumers' participation in SMS competitions, and ordering mobile services such as ringtones, logos, and screen savers by using SMS.

5   Discussion

5.1   Review of the results

The main purpose of this study was to contribute to our understanding on central theoretical and pragmatic issues related to the application of the mobile marketing communications in consumer markets. Specifically, the main research problem was to determine *what is the nature of mobile marketing communications in consumer markets?* The main research problem was divided into five more specific research questions: (1) What is the current state of mobile marketing research? (2) How to integrate mobile marketing into a company's marketing communications strategy? (3) How to plan and implement a mobile marketing campaign? (4) Which factors are associated with the consumers' intention to receive mobile advertising messages? (5) How do gender, age, income, and employment status affect on consumers' responses to mobile advertising campaigns?

The research questions were answered with the help of five research papers. Each paper provided a partial solution to the main research question. The first research question was answered by reviewing and analyzing the extant mobile marketing literature. In total, 109 publications were reviewed and fifty publications were analyzed in detail. The results of the first paper suggest that mobile marketing research is still in its infancy. However, the last few years have witnessed a steady increase in the number of publications in existing journals and conferences. The review also revealed that academics and practitioners have proposed a great number of definitions of mobile marketing communications. While some of these conceptualizations were similar, there was a disagreement about the most appropriate way in which this emerging phenomenon should be defined. Obviously, conceptual agreement is needed to promote a shared understanding of mobile marketing, one that encourages clarity of communication and convergence in thinking. Thus, after a detailed analysis of the identified 21 different conceptualizations of mobile (or wireless) marketing communications, the following definition was presented: "*Mobile marketing is the use of the mobile medium as a means of marketing communication.*" Overall, we suggest that this paper is important as both a reference guide and an assessment of areas meriting further study. This study is also important because it uncovers the need to separate

the role and importance of mobile marketing from the underlying technologies involved in supporting it.

The second research question concerned the integration of mobile marketing into a company's overall marketing communications strategy. This question was answered in both the second and the third research papers. The second paper examined mobile marketing strategy development and defined key building blocks of mobile marketing campaign planning and implementation. Built on eight in-depth interviews of mobile marketing practitioners and a participant observation in a research project that developed, implemented, and evaluated mobile marketing campaigns in a real-life context as well as from the extant literature from mobile commerce and integrated marketing communications (IMC) domains, the paper provided a comprehensive framework intended to facilitate marketing research efforts focusing on mobile media as well as aid practitioners in their quest to achieve mobile marketing success. The proposed framework provided a broad delineation as to how mobile marketing should be integrated into a firm's overall marketing communications strategy. It also outlined mobile marketing from a communications mix perspective and provided a comprehensive overview of divergent mobile marketing activities. The third research paper also intended to answer the second research question. It provided a conceptual model of the relationship between interactive integrated marketing communications and database management in mobile context. The model was intended to contribute to our understanding on how to integrate mobile marketing into a company's marketing communications strategy.

The third research question concerned issues related to the planning and implementation of a mobile marketing campaign. This question was answered in the second research paper by analyzing specific details in the mobile marketing campaign planning and implementation process. With the help of clarifying questions and examples the key issues of the process were identified and described.

The fourth research paper examined the factors associated with the intention of consumers to receive mobile advertising messages. It hypothesizes that consumers' intention to receive mobile advertising messages are related to the perceptions of five factors: (1) the relevance of the message; (2) permission to receive mobile advertising messages (3) the ability to receive messages from friends, family, and colleagues, i.e. word-of-mouth; (4) the benefits related to receiving the message; (5) the privacy of personal data. Data was collected by means of an online survey (n=4,062). It was analyzed using structural equation

modeling with LISREL. The results supported most of the hypothesis and, in particular, confirmed the view that relevance and benefits of the received message were the key factors influencing on intention to receive mobile advertising. Results also suggest that there is a strong need for prior permission, and therefore a negative association exists between permission and intention to receive mobile advertising. In addition, the results suggest that privacy of personal data was positively associated with consumers' intentions to receive mobile advertising messages. It was found that that association between word-of-mouth and intention to receive mobile advertising was statistically insignificant.

The final research question was answered in the fifth research paper. The paper examined the impact of gender, age, income, and employment status on the consumer's responses in SMS advertising campaigns. The findings suggest that gender has substantial impact on consumers' responses to SMS advertising and mobile service usage. It appeared that females tended to more actively send SMS messages to a TV show and participate in SMS competitions. It was also found that females ordered more actively mobile services by using SMS than their male counterparts. In addition, the findings indicate that age affects on consumers' responses on mobile advertising campaigns. Specifically, it was found that consumers in age group of 36 to 45 years were most likely to send an SMS to a TV show or advertisement, and participate in all kind of SMS competitions. Finally, the results suggest that employment status is associated with consumers' responses to mobile advertising. Interestingly, our findings indicate that students tend to respond at lowest rates to SMS TV call-to-action. It was also found that unemployed participated most actively in SMS sweepstakes and other competitions. Finally, the results suggested that income level does not have substantial impact on consumers' participation in SMS competitions, and ordering mobile services such as ringtones, logos, and screen savers by using SMS.

5.2   Reliability and validity of the study

Both qualitative and quantitative methods were used in this study. As stated earlier, qualitative and quantitative methodologies are based on different scientific paradigms, and therefore they create different starting points for research. Due to this reason, the reliability and validity of qualitative and quantitative research of this study are discussed separately. First, reliability and validity of qualitative research is discussed. According to Patton (2002), validity and reliability are the factors which any qualitative researcher should be concerned about while

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designing a study, analyzing results and judging the quality of the study. The concept of validity refers to the question: "*Does the evidence really reflect the reality under examination?*" (Gummesson 2000: 185) The concept of reliability refers to the question: "*If the investigation had been carried out by someone other than the author, using his methods, would the same results have been obtained?*" (Gummesson 2000: 185). Four tests have been commonly used to establish the quality of any empirical social research (Yin 2003):

– *Construct validity:* establishing correct operational measures for the concepts being studied
– *Internal validity:* (for explanatory or causal studies only, and not for descriptive or exploratory studies): establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships
– *External validity:* establishing the domain to which a study's findings can be generalized
– *Reliability:* demonstrating that the operations of a study – such as the data collection procedures – can be repeated, with the same results.

Yin (2003) suggests that three tactics are available to increase construct validity: (1) using multiple sources of evidence (triangulation); (2) establishing a chain of evidence, which means allowing external observers to scrutinize and judge the research process from the initial research question to the final conclusions; (3) having the draft case study report reviewed by key informants.

Triangulation has been defined as the best way to elicit the various and divergent constructions of reality that exist within the context of a study to collect information about the different events and the relationships from different points of view (Lincoln & Cuba 1985). Patton (2002) supports the use of triangulation by arguing that triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, including using both quantitative and qualitative data. In total, four kinds of triangulation can be used to contribute to the validity and reliability of this research: methods triangulation, triangulation of data sources, investigator triangulation and theory / perspective triangulation (Patton 1999: 1193, see also Denzin 1984). All four kinds of triangulation were used in this study. First, multiple qualitative methods were combined with the quantitative method to elucidate complementary aspects of the phenomenon under investigation. Second, data sources triangulation was used to compare and cross-check the consistency of information derived comparing observational data

with interview data. Third, investigator triangulation – that is, using more than one observer and/or interviewer – was utilized in this study. The purpose of using multiple investigators was to decrease the potential for bias in gathering, reporting, coding or analyzing the data. Finally, theory triangulation was used. The emergent findings were examined in relation to different perspectives, namely integrated marketing communication and electronic commerce. The main point of theory triangulation was to understand how findings are affected by different assumptions and fundamental premises.

Another method to increase the construct validity of the study is to allow an external observer to follow the derivation of any evidence from initial research questions to the ultimate case-study conclusions (Yin 1994). In this study, an effort has been made to describe and document the research process in such detail that the reader can draw a clear picture about the study and also trace the process backwards from discussions to research questions. Another goal was to increase construct validity by having the key informants of the case companies review and comment on the research papers before their publication as well as the empirical research part of this study. The discussions with key informants were beneficial for both the author and the research papers. The research papers were improved after those discussions, and more importantly, those discussions make me feel more convinced of the validity of the data, the analysis and the findings.

Internal validity refers to establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships. The internal validity is an analytic issue of explanatory and causal studies, not a major issue in exploratory and descriptive studies (Ellram 1996, Yin 2003). Thus, internal validity was not intensively considered in the qualitative part of this study.

External validity (similar to transferability by Lincoln & Guba 1985) refers to establishing the domain to which a study's findings can be generalized. More specifically, generalization can take place in four ways as suggested by Lee and Baskerville (2003: 232): "*From empirical statements to other empirical statements, from empirical statements to theoretical statements, from theoretical statements to empirical statements, and from theoretical statements to other theoretical statements.*" In this regard, I would suggest that this study mainly generalizes from theory to description. That is, in action research projects the theoretical framework was regarded as tentative and it was applied and improved over successive cycles of application and reflection until the research problem(s) was adequately addressed.

Reliability demonstrates that the operations of a study can be repeated with the same results (Yin 1994). Yin (1994: 36) suggests that the objective is to be sure that, if a later investigator followed exactly the same procedures as described by an earlier investigator and conducted the same study all over again, the later investigator should arrive at the same findings and results. As stated earlier, the qualitative part of this study is exploratory by nature. Thus, it may be difficult to arrive at the same results again. However, an attempt was made to describe the data collection process and the following analyses and results in a way that would make the research process accessible for later investigators and allow for either new interpretations or even conducting the same action research again.

In the present study, considerable amount of quantitative research was also done. Specifically, the fourth research question, *which factors are associated with the consumers' intention to receive mobile advertising messages, and the fifth research question, how do gender, age, income, and employment status affect on consumers' responses to mobile advertising campaigns,* represent a positivist approach. Consequently, reliability and validity of quantitative research are discussed next.

Reliability is defined as an *"accuracy or precision of a measuring instrument"* (Kerlinger 1980: 443). Thus, reliability refers to the degree to which a measure is free of variable error. The most common way to assess reliability of measurement instrument is to evaluate the internal consistency of items in a scale. Internal consistency is the degree of homogeneity among the items that constitute a measure. That is, the degree to which the items are interrelated and measure a single trait or entity (Brown 1970). Internal consistency is determined by statistical examination of the results obtained, typically equated with Cronbach's coefficient alpha. Cronbach's alpha measures true variance over total variance. In this dissertation, Cronbach's alpha is used to determine the reliability of the scales and results. According to Nunnally (1978) the alpha of a scale should be greater than 0.70 for the items to be used together as a scale. The alpha for the total scale is also computed on the assumption that the item under examination is deleted. Nunnally (1978) gives a common guideline for the alpha standards of reliability: (a) early stage of research, alpha = 0.5–0.6, (b) basic research, alpha = 0.7–0.8, and (c) applied settings, alpha = 0.8–0.9.

Validity refers to the extent to which an instrument measures what it claim to or is intended to measure. In general, two types of validity can be identified: (a) internal validity, which refers to the extent whether there are factors other than the independent variables that could cause an observed change in the dependent

variable, and (b) external validity, which concerns the generalizability and applicability of the results to the general population (e.g. Campbell & Stanley 1966, Carmines & Zeller 1979, Lukka & Kasanen 1993). Thus, external validity refers to the extent to which the research results can be generalized to other settings, occasions, and populations. However, it should be highlighted that the internal and external validity definitions are not in themselves detailed definitions of validity. The most common classification of types of validity distinguishes three types of validity: content, criterion-related, and construct (American Psychological Association 1966). More specifically, content validity refers to the degree to which a specific set of items is a representative and appropriate sample of the content (subject matter) contained in the instructional objectives the attainment of which the test is intended to measure. The literature on content validity suggests that a measurement (scale) has a content validity when its items are a randomly chosen subset of the universe of appropriate items (see e.g. Cronbach & Meehl 1955). In the present study, increasing the content validity was attempted by carefully planning the questions and pre-testing the survey instrument.

Criterion-related validity refers to the extent to which scores on a test correspond to a certain criterion. Criterion validity is assessed by comparing scores with one or more external variables, or criteria, known or believed to measure the attribute in the study. Traditionally, criterion-related validity is called predictive validity or empirical validity, because validity is primarily evaluated statistically. For example, if the measurement scale can predict some future event, then predictive validity is established (see e.g. Kerlinger 1980, Ghiselli *et al.* 1981)

The construct validity is considered the most important form of validity from the consumer research point of view (Kerlinger 1980: 457). It refers to the degree to which a test measures the target construct, or psychological concept or variable, inferred from all of the logical arguments and empirical evidence available. Construct validity is thus directly concerned with the relationship of a variable to other variables (see e.g. Cronbach & Meehl 1955, Gage & Berliner 1991). In covariance-based structural equation modeling, construct validity is usually tested with an investigation of convergent and discriminant validity (Gefen *et al.* 2000). In general, convergent validity can be assessed via internal consistency by: 1) looking at the correlations among items which constitute a scale, and 2) looking at the strength and significance of item loadings.

In this dissertation, the model we developed was constructed using structural equation modeling with LISREL program. To assess reliability and validity of the model a confirmatory factor analysis (CFA) using LISREL8.80 was conducted. To assess model fit, a covariance matrix was created (Jöreskog & Sörbom 2001). The goodness-of-fit indices used in this study are shown in Table 13.

Table 13. Goodness of fit criteria used in this study.

Criterion	Description	Interpretation
Average Variance Extracted (AVE)	AVE estimates the amount of variance that is captured by an underlying factor in relation to the amount of variance due to measurement error (Fornell & Larcker 1981).	Fornell and Larcker (1981) suggested that it is desirable that the construct exhibit estimates of .50 or larger.
Comparative Fit Index (CFI)	The CFI evaluates model fit by comparing the hypothesized model to a more restrictive baseline model that specifies independence among indicators (items) (cf. Bollen 1990).	Improvement over the baseline model is quantified from 0 to 1 with values greater than 0.90 indicating adequate fit (Bentler 1990, 1992).
Chi-square ($\chi 2$)	The chi-square is a measure of the overall fit of the model (Jöreskog & Sörbom 1993).	p>.05 for model to be acceptable; sensitive to sample size, tendency to indicate significant probability levels with samples larger than 200.
Composite reliability	Composite reliability is analogous to the Cronbach's coefficient alpha for measuring the reliability of a multiple-item scale. Composite reliability reflects the internal consistency of the indicators measuring a given factor (Fornel & Larcker 1981).	Interpreted like a Cronbach's alpha for internal consistency reliability estimate. A composite reliability of .70 or greater is considered acceptable (Fornell & Larcker 1981).
Cronbach's alpha	Cronbach's alpha measures how well a set of items (or variables) measures a single unidimensional latent construct. (cf. Cronbach 1951).	A common guideline for the alpha standards of reliability: (a) early stage of research, alpha = 0.5–0.6, (b) basic research, alpha = 0.7–0.8, and (c) applied settings, alpha = 0.8–0.9 (Nunnally 1978).
Degrees of freedom (df)	The degrees of freedom for the chi-square serve as a standard to judge whether chi-square is large or small (Aish & Jöreskog 1990).	Roughly speaking, the fit of the model may be considered to be adequate if chi-square is of the same order of magnitude as its degrees of freedom (Aish & Jöreskog 1990).
Goodness of Fit Index (GFI)	GFI does not depend on sample size explicitly and measures how much better the model fits as compared to no model at all (Jöreskog & Sörbom 1989).	GFI should be greater than 0.90 (Hoyle 1995).

Criterion	Description	Interpretation
Incremental Fit Index (IFI)	The IFI is similar to the NFI but contains a correction in the denominator intended to decrease its sample size dependence (Bollen 1989)	Values vary between 0 and 1.0 and conventionally values of .90 and above are considered to indicate good model fit (Hoyle 1995).
Normed Fit Index (NFI)	NFI measures the fit of the proposed model against the null model (Bentler & Bonet 1980).	The NFI ranges from 0, indicating the null model, to 1, indicating a perfect fit with the data. The NFI should be greater than 0.8 (Bentler & Bonet 1980).
Root Mean Square Residual (RMR)	RMR is a measure of the average of the residual variances and covariances (Jöreskog & Sörbom 1982).	RMR should be less than the critical value of 0.06 (Bentler & Bonett 1980).
Standardized RMR	The standardized RMSR represents the average value across all standardized residuals, and ranges from 0 to 1 (Jöreskog & Sörbom 1989).	In a well-fitting model the value will be small, approximately 0.5 or less (Jöreskog & Sörbom 1989).
Root Mean Square Error of Approximation (RMSEA)	RMSEA is a measure of the discrepancy between the predicted and observed covariance matrices per degree of freedom.	Browne and Cudek (1993) suggest a value of .05 or less indicates a close fit, while values up to .05 represent reasonable errors of approximation.

The fit indices associated with the CFA showed a good fit (NFI = .99, IFI = .99, CFI = .99, RMSEA = .045, standardized RMR = .041, χ^2= 948.92, df = 104, p = .000). Although the chi-square fit statistic suggests a poor fit, we argue that this statistic is sensitive to sample size and with a large sample like this one it is often difficult to assess (e.g. Diamantopoulos & Siguaw 2000, Ullman & Bentler 2004). Next, convergent validity was evaluated for the measurement scales using three criteria suggested by Fornell and Larcker (1981). First, all indicator factor loadings should be significant and exceed 0.7. The indicators in the model loaded highly on their hypothesized constructs and were significant (loadings ranged from 0.73 to 0.95). Second, the construct reliabilities should exceed 0.8. Composite reliabilities ranged between 0.81 and 0.91 (see Table 14).

Table 14. Reliability Analysis for the Proposed Constructs.

n	4062	NFI	0.99
X^2	948.92	CFI	0.99
df	104	RMSEA	0.045
Relevance (REL 3 items)		Benefits (BEN3 items)	
Composite Reliability	0.808	Composite Reliability	0.879
Cronbach's alpha	0.78	Cronbach's alpha	0.86
Parameter Estimates Range	0.73 – 0.82	Parameter Estimates Range	0.80 – 0.88
Permission (PER 3 items)		Privacy (PRI 3 items)	
Composite Reliability	0.899	Composite Reliability	0.906
Cronbach's alpha	0.83	Cronbach's alpha	0.89
Parameter Estimates Range	0.77 – 0.95	Parameter Estimates Range	0.84 – 0.93
Word of Mouth (WOM 2 items)		Intention (INT 3 items)	
Composite Reliability	0.854	Composite Reliability	0.894
Cronbach's alpha	0.83	Cronbach's alpha	0.86
Parameter Estimates Range	0.86 – 0.87	Parameter Estimates Range	0.76 – 0.91

Third, average variance extracted (AVE) by each construct should exceed the variance due to measurement error for that construct (i.e. AVE should exceed 0.50). AVE ranged from 0.60 to 0.70 (see Table 15), which is greater that the variance due to measurement error. Thus, all three conditions for convergent validity were met. Construct validity was then further assessed by calculating Cronbach's alpha for each the scales. The alphas for the study constructs ranged from .78 to .89, which exceeds recommended thresholds (Nunnally 1978).

Table 15. Correlation matrix of the constructs and square root of the average variance extracted (on the diagonal).

	AVE	INT	REL	BEN	PRI	WOM	PER
INT	0.69	**0.83**					
REL	0.64	0.63	**0.80**				
BEN	0.68	0.62	0.60	**0.82**			
PRI	0.70	0.42	0.37	0.49	**0.84**		
WOM	0.60	0.47	0.49	0.55	0.38	**0.77**	
PER	0.69	–0.20	0.01	–0.01	0.02	–0.12	**0.83**

Finally, Fornell and Larcker (1981) have recommended a stronger test of discriminate validity: the square root of the AVE for each constructs should exceed the value of the standardized correlation with any other construct in the analysis. The logic here is that a latent construct should explain its item measures better than it explains another construct (Hair *et al.* 2006). As illustrated in Table

15, the square root of AVEs is greater than the correlation with any other construct. Hence, the test of discriminate validity was also met.

5.3   Theoretical contributions

"*The philosophy of science has always considered classificational schemata of paramount importance. Especially in the early development stages of a discipline, listing and taxonomies are used as pathways to further inquiry*" (van Waterschoot & van den Bulte 1992: 83). This has been one of the guiding principles in this study. Mobile marketing is an emerging phenomenon, and therefore, very few (if any) carefully developed frameworks which enhance our understanding on this topic of growing interest and importance can be found. Broadly speaking, research in mobile marketing communications is relatively recent in nature. The first published academic paper was published in the year 2001 by Rettie and Blum. However, research on mobile marketing is gradually evolving. Therefore, it was valuable to review and describe the current state of mobile marketing research and outline an agenda for future research focusing on issues related to mobile marketing. Consequently, the extant mobile marketing and advertising literature was reviewed and analyzed. Thus, this study would act as a reference guide for future research endeavors focusing on mobile marketing communications.

It has been argued that there is a deficiency of consensus as to the most appropriate way in which this emerging phenomenon should be defined (e.g. Tähtinen 2005). Conceptual agreement is necessary to promote a shared understanding of mobile marketing, one that encourages clarity of communication and convergence in thinking. Thus, a conceptualization that attempts to capture the true meaning of marketing communications in mobile media was proposed. Specifically, after reviewing and analyzing divergent definitions of mobile marketing, the following conceptualization was suggested: "*Mobile marketing is the use of the mobile medium as a means of marketing communications*" (Leppäniemi *et al.* 2006: 37). Thus, this study uncovers the need to separate the concept of mobile marketing from its underlying technologies to arrive at a stable conceptualization that is not subject to the volatility of short-run technological changes.

The mobile marketing value chain and/or system have gained some attention among researchers. Facchetti *et al.* (2005), Leppäniemi *et al.* (2004), and Bragge *et al.* (2005), among others, have attempted to identify the structure of the mobile

marketing value chain and/or network by analyzing the actors and activities of the mobile marketing environment. In addition, business models in the emerging context of mobile advertising are studied in some detail (see e.g. Komulainen *et al.* 2004, Gopal & Tripathi 2006). However, prior research has provided a partial description of mobile marketing environment. Therefore, deficiencies persist in our understanding of issues related to the functions and roles of different players in mobile marketing scene. Against this backdrop, this study contributes to the marketing communications literature by proving a framework that not only outlines the actors and activities of mobile marketing environment but also points out how mobile marketing should be integrated into a company's overall marketing communications strategy.

In combination, the adoption of interactive media and the advancement of information technology have created the previously elusive opportunity for marketers to move to a customer relationship marketing paradigm (e.g. Peltier *et al.* 1998, Schultz 2000). Despite the promise of using electronic media to form interactive customer relationships, few organizations exploit this capability in building IMC programs (Peltier *et al.* 2003). Instead, most companies have paid a very limited amount of attention to the idea of developing interactive communication strategies. As a result, they have failed to take advantage of the full potential of interactive marketing (Deighton & Glazer 1998). To help advance a cohesive body of knowledge on this topic of growing interest and importance, this study attempted to conceptualize a model that links the use of database information and mobile media to develop interactive and integrated marketing communication strategies. The view of interactive media that is adopted in this study includes four elements that are central to the model: a) the two-way nature of the communication system, b) the level of response control each party has in the communication process, c) the personalization of the communication relationship and d) the use and involvement of database technology (Peltier *et al.* 2003).

A substantial number of the mobile marketing publications have considered different aspects of mobile marketing from consumer behavior point of view. Several studies have examined consumers' attitudes toward mobile marketing (e.g. Haghirian & Madlberger 2004, Leung & Cheung 2004, Tsang *et al.* 2004), their acceptance of mobile marketing (e.g. Bauer *et al.* 2005, Barnes & Scornavacca 2004) and perceptions of mobile advertising (e.g. Okazaki 2004, Haghirian *et al.* 2005). In addition, the effectiveness and responsiveness of mobile marketing is gaining increasing interest in literature (e.g. Barwise & Strong 2002,

Rettie *et al.* 2005, Trappey III & Woodside 2005, Heinonen & Strandvik 2003). However, "*despite the promise of cost-effective and targeted communications offered by the medium, there is still surprisingly little research and empirical evidence on how mobile advertising actually works*" (Merisavo *et al.* 2006: 120).

Against this backdrop, this study examined the effects of gender, age, income, and employment status on consumer's responses on SMS direct-response campaigns. The results from a survey of 4,062 Finnish consumers provide useful and important implications for academics. For instance, the findings suggest that women respond more actively to SMS call-to-action campaigns. In addition, the results indicate that mobile advertising is not only for teenagers. Instead, consumers at age group 36–45 were most likely to respond SMS call-to-action in a TV program and participate in SMS sweepstakes and other competitions. In addition, it was found that employment status have a substantial impact on consumers' SMS campaign activity. Specifically, the findings indicate that students tend to respond at lowest rates to SMS TV call-to-action. Overall, the findings clearly demonstrate that basic demographics such as gender, age, income, and employment status are useful in modeling and predicting consumer behavior in relation to SMS call-to-action campaigns.

Finally, this study responded to the call for more research and theoretical development on mobile advertising. The aim was to examine the factors associated with the intention of consumers to receive mobile advertising messages. It was hypothesized that consumers' intention to receive mobile advertising messages are related to the perceptions of five factors: (1) the relevance of the message; (2) permission to receive mobile advertising messages (3) the ability to receive messages from friends, family, and colleagues, i.e. word-of-mouth; (4) the benefits related to receiving the message; (5) the privacy of personal data. Data was collected by means of an online survey (n=4,062), and analyzed using structural equation modeling with LISREL. The results supported most of the hypothesis and, in particular, confirmed the view that relevance and benefits related to the message were the key factors influencing intention to receive mobile advertising. The findings from the study also suggest that a negative association exists between permission and intention to receive mobile advertising. Interestingly, it was found that that association between word-of-mouth and intention to receive mobile advertising was statistically insignificant. Finally, the results suggest that privacy of personal data was positively associated with consumers' intentions to receive mobile advertising messages. Overall, the

results and ideas put forth herein should help enhance other research endeavors in the field of mobile marketing communications.

5.4   Managerial contributions

Generally speaking, the marketing communications environment is changing rapidly. Mass markets and media are fragmented, and therefore marketers are rethinking the roles of various media and communications mix tools and are seeking ways to receive better value for their marketing investments. Due to these reasons, in most part, the use of mobile marketing is growing at an exponential rate (Trappey III & Woodside 2005).

To aid practitioners in their quest to achieve mobile marketing success, this study identifies critical success factors of mobile marketing and provides a detailed description of the mobile marketing environment. This study also discusses the foundations of mobile marketing and interactive integrated marketing communications and conceptualizes a model that links the use of database information and mobile media with developing interactive IMC strategies. In addition, a broad delineation as to how mobile marketing should be integrated into a company's overall marketing communications strategy is provided along with a comprehensive overview of divergent mobile marketing activities, which in turn is provided along with representative examples derived from popular press. This study also presents a detailed description of mobile marketing campaign planning and its implementation process that is intended to aid marketers in developing and designing mobile marketing campaigns.

Findings from the survey data reported in the fourth and the fifth papers would also be very helpful for mobile marketing practitioners. First, our findings suggest that relevance of advertising messages is the most important factor in determining consumers' intention to receive mobile advertising. Especially since mobile advertising provides the unique opportunity to target consumers in a specific context, we suggest that under appropriate conditions (e.g. consumer gives prior permission to receive messages from the company they like or about information they need, and a suitable technology such geographic positioning system is in place) marketers should capture the full potential of mobile media to drive sales and other consumer responses.

Second, it should be highlighted that a negative association exists between permission and intention to receive mobile advertising. Therefore the meaning of prior permission for successful mobile advertising, and more importantly, for

effective customer relationship management can be never underestimated. Marketers should always receive prior permission to send mobile advertising messages to the consumers' mobile devices. Third, it was found that benefits (monetary or other) incorporated with receiving advertising messages were the second most important factor influencing consumers' intentions to receive mobile advertising. Thus, it is important to highlight the need to provide tangible incentives to create value in mobile marketing initiatives. Fourth, our findings indicate that privacy of personal data was positively associated with consumers' intentions to receive mobile advertising. Thus, it should on the top of the priority list of mobile marketing industry that there will be practically no privacy violations. In the wireless space, consumers are even more sensitive about the infringements since mobile devices are more personal and travel with the consumer.

Moreover, the findings from the survey data provided important insights into the impact of gender, age, and income and employment status on consumers' responses to SMS call-to-action campaigns. For instance, the results suggest that women and men differ significantly in their responses to SMS call-to-action campaigns. In addition, the results indicate that age and employment status has a substantial impact on consumers' SMS advertising campaign activity. Thus, the findings reported in this study should help marketers to design campaigns that focus more closely on the target audience.

Based on the findings of this study, the following guidelines are presented for the marketers contemplating mobile marketing activities:

– Integrate mobile media into traditional media. Mobile media does not work alone and it needs traditional media in order to thrive.
– Target carefully. Mobile phones are very personal devices, and therefore unsolicited and irrelevant mobile marketing will be even less welcome than e-mail spam.
– Do cooperate with an advertising agency. Place emphasis on the creative planning of a marketing / advertising campaign. The content is the key to the mobile marketing success: "Customer is King, but content is King Kong!"
– Outsource the technical implementation. Focus on essentials.
– Permission is the other key to the successful mobile marketing communications. A successful dialogue, in any situation, is based on willingness of both parties to engage in it.

–   The digital contact, i.e. your customer's mobile phone number is a long-term asset. If you decide to open the mobile channel with your customers, it is not something that can be then closed. The end of the campaign is the beginning of a long-term relationship.

5.5   Limitations of the study and future directions

This study is one step toward increasing our understanding of mobile marketing from both marketers and consumers' perspective. However, a variety of limitations should be acknowledged. As the choice of abductive approach and action research method suggests, the findings presented in this study should be viewed as the author's subjective interpretation of the phenomenon. However, every attempt was made to describe the research process very precisely. Thus, all the factors that might have influenced the subjective interpretation have been made as visible as possible. In addition, the potential bias that the researcher brings into the field experience was systematically reduced with multiple triangulation methods.

Another potential limitation relates to external validity, i.e. generalization of the results. As stated by Lee and Baskerville (2003: 240), "*a theory may never be scientifically generalized to a setting where it has not yet been empirically tested and confirmed.*" Therefore, as this study is conducted in the Finnish retailing sector, the results should be considered tentative for other lines of business and other countries. However, I assume that these limitations do not endanger the reliability and validity of the findings, yet they do not place boundaries on the conclusions and implications that can be drawn from the study. On this basis, a natural extension of this study would be the investigation of the role of the mobile media in marketing communications mix with other companies in all lines of business. By doing so we might get valuable insights into how companies internationally utilize mobile media in their marketing communications activities.

In addition, a few limitations regarding the quantitative data used in this study should be acknowledged. First, self-report survey data is the basis of the findings discussed in this study. Substantial evidence exists in the marketing and advertising literature that many respondents are inaccurate in reporting their own attitudes and past behavior (cf. Woodside & Wilson 2002). Thus, additional research relying on, for instance, SMS delivery measures (e.g. number of messages sent, number of replies, and where an identifiable offer is promoted via mobile phone, the exact purchase rates can be measured) should be executed.

Such experiments go beyond consumer reports by providing useful estimations on the impact of mobile advertising based on customer inquiry and actual behavior. True experiments are also needed to validate the findings of this study.

Second, we have to address the limitation typically discussed in association with studies using theoretical model and testing it with structural equation modeling. That is, the use of the particular constructs and the causal links obtained between them, which in fact cannot be regarded as definitive evidence of causality (e.g. Harris & Goode 2004). In addition, in explaining intention to receive mobile advertising, our framework focused on the effect of certain constructs that were not all validated in literature and were not previously tested within a mobile context. Thus, our study provides evidence of how the chosen constructs affect intention to receive mobile advertising messages, but does not look at the other possible factors that might influence behavioral intentions.

One more limitation of the study should be acknowledged. This limitation relates to the external validity, since the respondents of the survey were from only one country and a convenience sampling method was utilized. As such, the results are generalizable only for Finnish mobile phone users. However, the rationale for studying Finnish consumers relates to their widespread use of the mobile phones. Recent statistics reveal that Finland has one of the highest levels of mobile phone penetrations in the world with a penetration rate of 113.7 percent. Given the forecast of increased use of mobile advertising by advertisers, a study of Finnish mobile phone users offers intriguing insights, especially since Finland has been a forerunner in mobile services and mobile phone manufacturing.

The results from this study suggest a number of intriguing avenues for future research. For instance, we have not formally examined brand trust in our framework. Since prior research suggest that in the context of mobile advertising, trust plays a crucial role in obtaining desired consumer responses (Okazaki *et al.* 2007), future research may attempt to more rigorously examine the relationship of brand trust with customer intention to receive mobile advertising.

A further avenue for future research involves the use of mobile advertising in conjunction with other media. Although there are a substantial number of research papers on the use of multiple media in a campaign (e.g. Chang & Thorson 2004, Naik & Raman 2003, Edell & Keller 1989, Confer 1992, 1991, Sheehan & Doherty 2001), hardly anything is known about synergies resulting from the use of mobile media in a campaign. Thus, synergistic mixes of mobile media and more traditional media need to be examined.

Further, mobile messages, especially SMS text messages, provide a simple function of forwarding received messages. Prior research indicates that a substantial number of people are utilizing the opportunity to forward advertising messages received (Trappey III & Woodside 2005). Therefore, the forwarding of mobile advertising messages to other consumers in terms of viral marketing (cf. Phelps *et al.* 2004) and penetration should also be examined. In addition, it has been argued that highly focused, one-to-one communications can be beneficial to building long-term, durable relationships (Peppers *et al.* 1999, Arnold & Tapp 2001).

In addition, researchers (e.g. Sultan & Rohm 2005) have suggested that mobile marketing, like Web communications, can be interactive but it also offers an opportunity to a closer brand connection because of the personal nature of mobile phones. Thus, it would be useful to explore how interactive mobile marketing aids marketers to build and maintain long-term, profitable relationships with customers.

Moreover, probably one of the most important findings of the present study is that permission is negatively associated with consumers' intention to receive mobile advertising. This finding makes considerable sense, given the spam and other possible violations of physical privacy, which are of great concern to consumers. However, as stated by Okazaki and Taylor (2008), it is virtually unknown why consumers choose not to opt-in or avoid mobile adverting. Thus, permission issues should be further explored in future research.

Another important area to explore is that of mobile ad copy. Especially with SMS advertising, it is a real challenge for advertisers to produce advertisements that includes benefits, and are eye catching, relevant, and effective in a space of 160 characters (Barwise & Strong, 2002). Thus, future research should perform true experiments with diverse ad content and campaign designs. Such experiments may provide useful information on the impact of different advertising techniques and messages on consumers' intentions, and ultimately their responses to mobile advertising.

Obviously, many unanswered questions exist in regard to mobile advertising. While this paper only attempted to address some of the many knowledge needs related to advertising via mobile channel, we believe that the ideas put forth herein contribute to understanding of intentions to receive mobile advertising, and the suggestions for future research point to intriguing avenues for investigation.

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Appendix

Background information of the company and the interviewee:

- The name of the interviewee
- Education and occupation of the interviewee
- The name of the company
- A short overview of the company and its activities

Marketing and marketing communications in general:

- The meaning and definition of the concepts

Current marketing communications activities, i.e. marketing communications mix and media mix:

- The marketing communications channels used in the company.
- Planning: the responsible persons and external agencies, segmentation of the target audience, marketing budgets.
- Communications mix: the role of divergent promotion mix elements in the company's marketing, the utilization, coordination and cooperation of the different elements.
- Media mix: the channels used in the company, the coordination and planning of the channel choices.
- Marketing messages: the central idea and the main message of the company's marketing communications, the uniformity of the message throughout the organization and divergent media, the development and the evaluation of the messages.
- Implementation: the persons responsible of implementing the different marketing actions, coordination of promotional activities, the unity of the channels, the effectiveness of the campaigns.

Experiences of mobile marketing / advertising in general:

- The concept of mobile marketing and advertising.
- Divergent mobile marketing activities.
- Motivation towards mobile marketing.
- The role of advertising agencies and media agencies mobile marketing value network.
- Mobile marketing ecosystem in general.
- Success factors of mobile marketing.

Experiences of mobile marketing technologies and campaign planning and implementation:

- The goals of previous campaigns.
- Integrated marketing communication plans (content/channels).
- Customer Relationship Management.
- Producing and testing ads.
- Mobile advertising server (hosted / acquired).
- A Short number.
- The price of the messages.
- Delivering the message (gateway).
- The campaign logic.
- Analyzing the campaign data.
- The role of other channels in the campaigns.

Opinion about the future of mobile marketing / advertising including consumer behavior related to mobile advertising campaigns:

- Future of mobile marketing in general.
- Most important forms of mobile marketing in the future.
- Success factors of future mobile marketing.
- The players in the future mobile marketing value network.
- The roles of different players in future mobile marketing value network.

Original papers

The thesis is based on the introductory chapters and the following papers:

I   Leppäniemi M, Sinisalo J & Karjaluoto H (2006) A Review of Mobile Marketing
     Research. International Journal of Mobile Marketing 1(1): 30–40.
II   Leppäniemi M & Karjaluoto H (2008) Mobile Marketing: From Marketing Strategy to
     Mobile Marketing Implementation. International Journal of Mobile Marketing (in
     press).
III Leppäniemi M, Karjaluoto H, Sinisalo J & Salo J (2006) In: Diehl S & Terlutter R
     (eds) International Advertising and Communication - Current Insights and Empirical
     Findings. Wiesbaden, Deutscher Universitäts-Verlag: 397–415.
IV   Leppäniemi M (2008) Determinants of Intentions to Receive Mobile Advertising
     Messages: A Theoretical Framework and Empirical Study. Manuscript.
V   Leppäniemi M & Karjaluoto H (2008) Exploring the Effects of Gender, Age, Income
     and Employment Status on Consumers' Responses to Mobile Advertising Campaign.
     Manuscript.

Reprinted with permission from Mobile Marketing Association (I and II), Deutscher Universitäts-Verlag / GWV Fachverlage GmbH (III).

Original publications are not included in the electronic version of the dissertation.

17. Nätti, Satu (2005) Customer-related knowledge utilisation in the collaborative relationships of professional service organisation

18. Juutinen, Artti (2005) Biodiversity conservation in forestry: essays on the economics of site selection

19. Korhonen, Marko (2005) Nonlinearities in exchange rate: evidence from smooth transition regression model

20. Järvinen, Janne (2005) Rationale for adopting activity-based costing in hospitals. Three longitudinal case studies

21. Pekkarinen, Saara (2005) Economic analysis of travelling. Studies on travel behaviour in Finland

22. Holma, Heikki (2006) Supply chain management and industry cyclicality. A study of the Finnish sawmill industry

23. Lähteenmäki, Ilkka (2006) The development of the Finnish banking industry from a partnership perspective

24. Salo, Jari (2006) Business relationship digitalization. A case study from the steel processing industry

25. Kortela, Heli (2006) The predictive power of financial markets. Essays on the relationship between the stock market and real economic activity

26. Silvola, Hanna (2007) Management accounting and control systems used by R&D intensive firms in different organizational life-cycle stages

27. Simonen, Jaakko (2007) The effects of R&D cooperation and labour mobility on innovation

28. Kyröläinen, Petri (2007) Essays on investor behavior and trading activity

29. Karjalainen, Pasi (2007) Valuation of intangible assets in different financial environments

30. Jänkälä, Sinikka (2007) Management control systems (MCS) in the small business context. Linking effects of contextual factors with MCS and financial performance of small firms

31. Hyvönen, Johanna (2008) Linking management accounting and control systems, strategy, information technology, manufacturing technology and organizational performance of the firm in contingency framework

32. Lämsä, Tuija (2008) Knowledge creation and organizational learning in communities of practice: an empirical analysis of a healthcare organization