CRITICAL SUCCESS FACTORS IN MULTICHANNEL MOBILE MARKETING: A DELPHI STUDY

Yiwen Huang (Raymond)

A thesis submitted to
Auckland University of Technology
in fulfilment of the requirements for the degree of

Doctor of Philosophy (PhD)

2012

School of Computing and Mathematical Sciences

Table of Contents

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Yiwen Huang (Raymond)

November 2012

Acknowledgements

Ethical Approval

Conduct of the research reported in this thesis was approved by the Auckland University of Technology Ethics Committee, Reference Number: 10/117.

About the Researcher

Yiwen Huang (Raymond) has been a PhD candidate at the School of Computing and Mathematical Sciences at AUT University since early 2009. His undergraduate work at the Business School at the University of Auckland focused on marketing and operational management. Raymond completed his Master's degree at AUT University in 2007, and had a strong interest in mobile communication and technologies (MCTs). Raymond's PhD study has been focused on the use of MCTs for marketing activities.

Hi, I am Raymond, thank you very much for reading my PhD thesis. My research focus is on assessing the factors that impact on the success of *multichannel mobile marketing*. The principle of marketing is to exchange information between business and consumers. We need to have a medium or channel that supports the communication between the two parties. When a marketing message is delivered to a mobile device over a mobile communication platform, this process is known as mobile marketing.

At present, services and communications for both individuals and businesses are supported by the use of ICTs. When the term 'mobile' is involved, the three specific mobile-oriented features for enhancing user experiences and operational performance are: mobility, personalization and interactivity. In my previous work, due to network and device convergence between stationary and mobile computing, I found that future mobile marketing service is likely to be deployed over a multichannel marketing campaign, with the use of various types of mobile communication tools. Therefore, in future I would like to investigate multichannel mobile marketing campaign implementation and service deployment, and perhaps user acceptance.

If you think the topic of my research is of interest to you, or is relevant to what you are presently doing, please feel free to contact me at yiwenhuang917@gmail.com. I would be very pleased to have a discussion with you.

The following publications that relate to the work reported in this thesis have appeared:

Huang, R. (2012). The identification, ranking and categorization of mobile marketing success factors. *International Journal of Mobile Marketing*, 7(2), 41-49.

Huang, R., & Petrova, K. (2011). Deployment and Success Factors for the Mobile Internet: A Case Study Approach. *International Journal of Technology Diffusion, 2*(1), 34-55.

Huang, R. (2011). Value, Interest and Power A Three Dimensional Model for Mobile Marketing Stakeholder Analysis. *International Journal of Mobile Marketing, 6*(1), pp. 41-51.

Huang, R., & Symonds, J. (2009). Mobile marketing evolution: Systematic literature review on multi-channel communication and multi-characteristics campaign *In Proceedings of 13th Enterprise Distributed Object Computing Conference* (EDOC2009, Auckland). Washington DC: IEEE.

Huang, R., & Petrova, K. (2007). Mobile Internet deployment models in New Zealand. In S. Krishnamurthy (Ed.), *Proceedings of IADIS International Conference e-Commerce* (pp. 170-175). Algarve, Portugal: IADIS.

Abstract

This thesis reports a comprehensive examination of mobile marketing (m-Marketing) success factors and proposes a new m-Marketing success model. The model leverages a combination of DeLone & McLean's Information Systems (IS) success model and the Technology Acceptance Model (TAM).

Through a systematic literature review it is observed that m-Marketing evolution is associated with the emergence of mobile technology generations and that multichannel is the future trend of m-Marketing. A total of 23 m-Marketing success factors were identified from single-channel m-Marketing literature (with a variety of channels considered, including SMS, MMS, mobile web, and mobile TV). Given the emergent nature of multichannel m-Marketing, 31 m-Marketing experts, comprising 12 academic researchers and 19 industry professionals, were recruited for and variously participated in a 3-round Delphi study, with their numbers decreasing from round to round (to 22 and 19 participants, respectively). These experts contributed via an electronic data collection system to identify, score and categorize success factors for both single-channel and multichannel m-Marketing, with both quantitative and qualitative data gathered from the Delphi panel members.

Six new m-Marketing success factors were identified from the Delphi study: campaign popularity, campaign promotion, interoperability, user power, clutter on mobile medium, and customization. By using descriptive statistics the researcher finds that brand trust, entertainment, location awareness & mobility, response time, frequency, and technical support are not critical for multichannel m-Marketing, whereas interoperability is very critical for multichannel m-Marketing but not critical for the single-channel approach. Acceptance and campaign promotion are found to be the most critical success factors for both single-channel and multichannel m-Marketing, while usability, profit/value, and interoperability are the most critical for the multichannel approach, and permission is the most critical factor for the single-channel approach. Non-parametric analysis techniques were used to investigate the existence and degree of difference in perceived factor importance ratings for single-channel and multichannel m-Marketing. The results show that profit/value, usability, response channel and interoperability are significantly more important in multichannel m-Marketing; in contrast, content, accuracy, response time and permission are less critical. The researcher also uses correlation analysis to examine related factor pairs, and factor analysis is used to categorize the set of 23 multichannel m-Marketing success factors with three- and six-component extractions. The Delphi panel also categorised the m-Marketing success factors into three groups (m-Marketing development, use and deployment, and impacts) based on a 3-phase model, providing insight as to the key factors at different stages of m-Marketing campaign development and use. The researcher compares the results from both factor analyses and participants' inputs.

Finally, the relevance of the various success factors to groups of m-Marketing stakeholders is identified and discussed in this thesis; the entire set of m-Marketing success factors is assigned by Delphi participants into two groups, based on their determination of whether these factors influence consumers' satisfaction and/or net benefit to brand owners and service providers. The totality of study outcomes are represented in a multichannel m-Marketing success model. The relationship between multichannel m-Marketing success factors with both information system success theory and technology acceptance theory in m-Marketing are demonstrated.

Chapter 1: Introduction

The use of mobile computing and its evolutionary impact on business operations has been acknowledged in the last five years to be among the Grand Challenges of Computing Research (Kavanagh & Hall, 2008). Mobile computing and communications provide economic potential in the form of business and wealth creation. In addition, the rapid development and evolution of mobile technologies facilitate the use of mobile communication tools and so present a constant stream of new challenges to both industry representatives and academic researchers. This PhD thesis is situated in the field of mobile business; more specifically, it examines the use of mobile technologies and their impact on marketing activities. The research scope of the study is focused on the investigation of mobile marketing (m-Marketing) evolution and the transition from single-channel to multichannel mobile communication. The main intent is to study the success factors of m-Marketing development, adoption and deployment, and their impact, through a multiple-round survey of domain experts. In doing so, the research uses the well known DeLone and McLean information systems success model (DeLone & McLean, 1992, 2003b) and the technology acceptance model (TAM) (Davis, 1989; Davis, 1993) in combination and arrives at an m-Marketing success model.

1.1 Research Background

The evolution of marketing strategies and models is highly dependent on the development of technological tools and communication media – the vehicles through which marketing strategies are implemented. When communication tools are used for marketing message delivery, they are also considered to be communication channels for business-consumer interaction. According to Mort & Drennan (2005), mobile communication is the latest innovative channel for performing marketing activities. M-Marketing has achieved initial commercial success by using short message services (SMS), a unique feature available on mobile phones, to deliver marketing messages. As mobile technologies have become more mature and yet more versatile, end user services such as multimedia message services (MMS), mobile Internet services (MIS) and mobile television services (Mobile TV) are being deployed as marketing tools for promoting business products and services.

Barnes and Scornavacca (2004) note that m-Marketing has indeed evolved along with the development of the mobile technology generations. When m-Marketing uses a sole mobile communication tool for message delivery, e.g., SMS marketing or mobile web marketing, this is known as single-channel m-Marketing (Rangaswamy & Bruggen, 2005a). The use of a multichannel strategy in m-Marketing has been proposed in (Kavassalis et al., 2003) and

(Leppaniemi & Karjaluoto, 2005). However, these multichannel approaches are associated with the use of other non-mobile channels. Pure multichannel mobile communication was introduced in (Germanakos, Samaras, & Christodoulou, 2005), and the approach applied to the delivery of mobile government services. According to (Payne & Frow, 2004), an integrated mobile communication approach utilising mobile telephony, SMS, WAP and 3G mobile services was adopted to support customer relationship management for m-Marketing service strategic analysts. In the context of this thesis then, multichannel m-Marketing refers to the use of multiple mobile communication tools (or channels) over mobile networks and through mobile devices in order to perform marketing activities.

Many well-known m-Marketing campaigns are single-channel (e.g., SMS, Web or mobile TV). For example, ZENBU WIRELESS provides a popular search engine that uses mobile SMS for small business advertising in New Zealand; also, Vodafone NZ started deploying m-Marketing services via its web-based campaign (Vodafone Live) in 2009; furthermore, the Norwegian Broadcasting Corporation (NRK) is a leading Mobile TV advertising service provider in Europe that uses interactive television programs (IPTV) as a communication tool for promoting business products and services. Although these m-Marketing campaigns have achieved commercial success, they only focus on providing m-Marketing services to particular consumer groups and use only a single-channel communication approach for business-consumer interactions. For example, Vodafone Live is available only to 3G mobile subscribers; in order to use this particular m-Marketing campaign, a mobile broadband connection has to be enabled on consumers' mobile devices.

Due to device and network convergence between stationary computing and mobile computing, multiple communication tools (e.g., Voice, SMS, MMS, Web, TV) are integrated into current 3G and emerging 4G mobile services. More recent mobile communication platforms are technically capable of supporting a multichannel marketing campaign. As a result, m-Marketing industry players (e.g., Vodafone, T-Mobile, MobiAD, AdMob, Madhouse), mobile service providers (e.g., Vodafone, Nokia, Motorola) and academic communities (e.g., Mobile Marketing Association, Mobile Marketing Magazine, Mobile Manufacturers Forum) are interested in understanding and potentially determining how future m-Marketing can be successfully deployed over a multichannel communication campaign, and whether multichannel m-Marketing is capable of offering better user experience than a single-channel communication campaign (Frenchman et al., 2009; Laszlo, 2009; Zaidi, 2009). Since 2010 some leading m-Marketing service providers including BitM3 and TXT2GO have launched multichannel m-Marketing campaigns to brand owners and consumers (Bluebookadvertising, 2010; TxT2GET, 2011b).

1.2 Rationale for the Study

SMS marketing has been investigated extensively by academic researchers, and some more recent m-Marketing studies have considered the use of other mobile communication tools (e.g., MMS, mobile Web, Mobile TV) typically as a single service. This thesis studies emerging trends in m-Marketing by first conducting a meta-analysis of 230 relevant journal publications to evaluate the relationship between the mobile technology generations and the development of m-Marketing. The outcome of the meta-analysis indicates that multiple mobile communication tools (or channels) could be adopted and deployed over an integrated m-Marketing system. As a result, multichannel m-Marketing is identified as the central research theme. The researcher then examines the success factors of multichannel m-Marketing and proposes a theoretical model for determining the success of multichannel m-Marketing.

As noted above, multichannel m-Marketing has been introduced and deployed in the marketplace only recently and by a small number of service providers e.g., TXT2GO, BizM3 (BizM3, 2009; TxT2GET, 2011b). Thus, it is too early to say if using multiple mobile communication tools for marketing activities is effective directly from a user perspective. Since no previous empirical study has been found that examines multichannel m-Marketing, this thesis both explores and suggests some new directions for research in the areas of mobile business and m-Marketing. First, this study contributes by providing guidelines for future multichannel m-Marketing campaign development and deployment. Second, the findings of this thesis indicate a new research area for (m-)Marketing researchers, namely the area of multichannel m-Marketing.

Success factors for SMS marketing (a form of single-channel m-Marketing) have been well studied in many investigations and with various frameworks. For example, (Scharl, Dickinger, & Murphy, 2005a) examine m-Marketing success factors by looking at message, media and users; success factors that influence m-Marketing acceptance are also identified in (Leppaniemi & Karjaluoto, 2005), while success factors for m-Marketing attitudes are identified and discussed in (Haghirian & Sangyo, 2005). This thesis examines success factors for m-Marketing and proposes a model that can be applied for determining m-Marketing success. The model is based on the integration of the widely used IS success model and the TAM by following the approach proposed in (Wixom, 2005). The model is tested specifically against the multichannel m-Marketing approach, with empirical evidence collected from a multi-round Delphi investigation.

1.3 Research Objectives

This thesis is an investigation of m-Marketing success factors. In particular, it explores and discusses the perceived level of criticality of success factors in relation to the multichannel m-Marketing approach. The researcher also maps out the evolution of m-Marketing and its future trends through comparing success factors for single-channel and multichannel approaches. The research is directed towards the following objectives:

- To identify and verify success factors for single-channel and multichannel m-Marketing;
- To investigate the difference in success factors for single-channel and multichannel m-Marketing through a Delphi study;
- To categorise the success factors for multichannel m-Marketing through a Delphi study;
- To explore the role of m-Marketing acceptance and its impact on m-Marketing success;
- To examine how certain variables (consumer satisfaction and profit/value-oriented stakeholder benefit) that drive user acceptance of m-Marketing are related to m-Marketing success factors;
- To propose an m-Marketing success model and use this model to evaluate multichannel m-Marketing success.

1.4 Chapter Summary and Outline of Thesis

This chapter introduces briefly the notion of m-Marketing with both single-channel and multichannel approaches. The rationale for this research and its potential contributions are also described. The chapter describes the research scope, defines the research focus on *multichannel* m-Marketing, and outlines the research objectives. Since m-Marketing is a cross-disciplinary topic, this thesis studies success factors for m-Marketing and the impact of information technology (mobile technology) on a specific business process (marketing activities).

The next chapter presents a review and meta-analysis of the relevant research literature. This informs the development of an m-Marketing success model in Chapter 3. In Chapter 4 the research design is described in detail, and in Chapter 5 the results and findings are reported. These findings are discussed and interpreted in Chapter 6, and the thesis is concluded in Chapter 7.

Chapter 2: The Evolution of Mobile Marketing

Academic researchers have defined marketing communication as a business process for delivering marketing messages, which contain information for promoting goods, services and ideas, from brand owners to consumers (Sheth & Parvatiyar, 1995; Srivastava, 1999). When mobile communication technologies (MCTs) are used as media for delivering marketing messages, this process is known as m-Marketing (Friedrich, et al., 2009; Leek & Christodoulides, 2009; Tanakinjal, Deans, & Gary, 2008). This Chapter reviews literature in terms of marketing in general, the mobile technology generations, mobile communication channels, issues of m-Marketing and examples of multichannel m-Marketing campaigns.

2.1 Marketing

This first section provides brief background information about marketing in general. It then introduces m-Marketing which uses mobile technology for exchanging marketing information between brand owners and consumers.

2.1.1 Philosophy and Marketing Research

The effect of philosophy in marketing research is challenged and argued by many researchers. Hunt (1991) suggests that philosophy does not actually contribute to the progress of marketing science. Hunt and others contend that marketing progress is driven by practical factors such as demand, relationships and technology (Zineldin, 2000). However, Dibb and Stern (2000) argue that philosophy plays an important role in marketing research, as the most appropriate philosophy essentially guides marketing research. When philosophy is considered in conjunction with marketing research, it provides knowledge and guidance, so it has a positive and significant role; philosophy is also said to inform guidelines to test issues effectively in the practical world (Hunt, 1991).

Some researchers have attempted to determine *which philosophy dominates marketing research* (Hunt, 1991, pp.396-397), and so drives the development of the discipline. In order to answer this question, several types of theories of knowledge, or epistemologies, are involved, including reality relativism, constructivism, theoretical positivism and empiricism (Niiniluoto, 1991). Alexander and Winne (2006, pp.305-320) suggest that knowledge is the intersection of truth and belief, and emphasise that it depends on the following factors: 1) the learning process of the learner in relation to new concepts; 2) the

preference of practical experiences over abstraction, and 3) the importance of evidence. Hunt (1991) claims that the "Marketing discipline continually transgressed by indiscriminately borrowing concepts, theories and methods from other disciplines" (p.398). The highly flexible and adaptable nature of the marketing discipline is one of the factors that underlie the development of marketing theory, since its progress depends on progress in other disciplines (Hills, Hultman, & Miles, 2008). This does not necessarily mean that the marketing discipline lacks its own theory and knowledge (Goulding, 2002). Rather, the aggregation of theories and knowledge from multiple sources has built a solid foundation for marketing theory (Hunt, 2002). The intersection of marketing knowledge with other disciplines allows the transfer of evidences and experiences; as outlined in (Moller & Halinen, 2000), this forms a general theory of relationship marketing.

2.1.2 Comparison of Marketing Theories

The development of marketing theories has therefore involved the borrowing of a number of abstract ideas, opinions, speculations, models and frameworks, processes and procedures from other related disciplines.

Since marketing is a business activity simple marketing theory has inherited many properties from the business discipline (Ozcan, 2004). The ongoing buyer-seller relationship results in the related marketing activity, which relies significantly on communication media for delivering marketing messages (Schultz, Tannenbaum, & Lauterborn, 1993). The relationship between buyer and seller has therefore transformed into a relationship between marketing message sender (sellers or brand owners) and receiver (buyers or consumers).

The *integrated marketing communication theory* relies on the premise that the communication discipline is involved in the marketing communication process (Hutton, 1996); the observable outcome from this is that initial marketing theory has been augmented and used in an enhanced and more effective manner.

This thesis studies m-Marketing, with the integration of marketing communication and mobile technologies. In line with the rapid emergence of the computing discipline, integrated marketing communication theory has effectively leveraged the technology of the day, and mobile technology has been used more recently as a medium for marketing communications. Consequently, since this particular theory utilises the knowledge of business, communication *and* computing, it is named '*m-Marketing theory*'.

Table 2.1 presents a comparison between these marketing theories and the corresponding effective scope.

Table 2.1
A comparison between marketing theories and corresponding effective scope

Theory	Discipline	Description	Distribution	Consequence
Simple Marketing	Business	Marketing is a particular business activity	1-1 1-Many	Number of receivers is small
Integrated Marketing Communication	Communication	Effective use of simple marketing	1-1 1-Many	Number of receivers is larger
m-Marketing	Computing (Mobile)	Specific use of integrated marketing communication	1-1 1-Many	The 'receivers' are in fact interactive and responsive

The effective study of m-Marketing therefore requires a multidisciplinary research approach. In (Fouskas, Giaglis, & Kourouthanassis, 2005), the authors maintain that m-Business researchers face an overabundance of interdisciplinary research challenges and so they outline a road map that they contend should involve the two disciplines of business (e.g., marketing communication) and technology (e.g., mobile technology) and three dimensions (Service, Value and Technology). As a result, this study reviews relevant literature for each of these two disciplines. The researcher then applies a three-phase IS success model by matching the three dimensions outlined in (Fouskas, et al., 2005), namely Technology Development, Service Use and Deployment, and Value as Impacts. The identification of m-Marketing stakeholders (in section 2.5) also follows this approach.

2.2 Marketing Channel Evolution

This section explores the evolution of marketing by studying different channels and comparing their features and shortcomings. Problems and challenges arise with each evolutionary step in communication media. In fact, even the use of word of mouth advertising has been accompanied by legal issues (Low, 2002). Even though word of mouth advertising is unpaid written or oral promotion by satisfied customers that promote business products or services, it is possible that unrealistic messages or miscommunications might be relayed to the public (Piddshetti, 2007). Such problems normally cease to exist once consumers determine the actual facts about the products or services, as pointed out in (Richins, 1983). However, with the advance of technologies, a new type of issue has emerged, namely unwanted circulars e.g., the marketing message contained in a mobile short message. As a consequence, according to (Krishnamurthy, 2001), permission-based marketing receives higher consumer rating and acceptance than other non-approved forms.

In this Chapter, the researcher first presents background information on marketing. Second, marketing channel evolution is examined by exploring different marketing channels and comparing their features and shortcomings. Also, a variety of definitions for m-Marketing found in relevant literature are reviewed. The connection between mobile technology generations and m-Marketing evolution is discussed. The researcher's initial investigation, a meta-analysis based on a systematic literature review of 230 journal papers that present m-Marketing research studies, shows that multichannel m-Marketing is an identifiable trend (Huang & Symonds, 2009). The researcher also explores issues related to SMS marketing and introduces a selection of illustrative examples of multichannel m-Marketing campaigns.

2.2.1 Face-to-Face Marketing

The most traditional and direct marketing approach is based on face-to-face communication. Face-to-face marketing can be used in diverse ways to meet a variety of objectives. However, its essence is interaction, and without creating a sense of theatre, some interest or an incentive to respond, it is increasingly less likely to succeed. It is usually difficult to deliver a marketing message to multiple recipients or a group of target customers from a single sender by using the face-to-face marketing approach.

2.2.2 Printed Material Marketing

Since the era of printed materials first began consumers have found their mailboxes full of sometimes unwanted advertisements and flyers. However, such a problem is relatively easy to solve and involves simply throwing away the unsolicited or unwanted materials or putting a *no circulars* or *no junk mail* sign on your mail box (Coderre, St-Laurent, & Mathieu, 2004). Usually there are local bylaws to control this marketing approach but whatever control there may be it has had little impact on the use of this type of communication media (Morimoto & Chang, 2006).

2.2.3 Radio and TV Marketing

Determining the demographics of television and radio audiences and their viewing or listening habits is a necessary marketing function. Broadcast marketing that makes use of radio and television channels for delivering marketing messages has become well-accepted by consumers because of its potential for entertainment and richness (Keller, 2001). The marketing field has become more complicated and difficult to control since broadcasting systems began to operate (Balza & Hancea, 1996; Galloway & Brown, 2004). However, some content of radio and television programs may not be suitable for all

consumers (Oliver & Krishnamurthy, 2002), e.g., violence is inappropriate for younger people. Content control is highly recommended by advertising agents and radio/TV program providers. Governments have frequently tried to legislate and constrain the content of broadcasting communication media as well as the options available to consumers (Ram & Sheth, 1989).

2.2.4 Telemarketing

The marketing approach that uses telephones as communication media is referred to as telemarketing. Cold calling behaviour associated with telemarketing is not always welcome (Mann, 1999), since an incoming call will very likely interrupt whatever the consumer is doing. If the call is unexpected and not accepted/welcomed, it is very likely to create annoyance and ultimately a failure in the marketing process (Mann, 1999). By setting up appropriate rules and strategies, telemarketing could still be a valid marketing approach to particular target consumers in a promotion and advertising context. Another challenge of using telemarketing is that this marketing channel can be used for fraud relatively easily, so it is essential to set up appropriate legislative solutions against telemarketing fraud (Lee & Geistfeld, 1999).

2.2.5 Internet e-Marketing

The Internet as a marketing medium came to prominence in the early 1990s. Relevant legislation, the communication approaches employed, and consumer behaviour when using Internet marketing have all changed significantly in the interim and are now very different from those associated with other marketing channels (Mehta & Sivadas, 1995; Peterson, Balasubramanian, & Bronnenberg, 1997). With the reach and wide influence of the Internet, this medium of communication brings many uncertainties to the marketing domain (Bush, Venable, & Bush, 2000). Security and privacy are the most common issues with which online consumers are concerned when dealing with Internet marketing (Tsai, et al., 2011). The globalisation of the Internet has resulted in laws becoming limited in their applicability. The differences in regulations in different countries have created gaps that can potentially lead to security risks (Bowrey, 2005). As a result, unwanted marketing messages could not actually be controlled or stopped by regulation (Hansell, 2003). The credibility of this marketing communication medium has therefore dropped to a level where some consumers are in doubt as to whether they are actually communicating with genuine sellers, and whether the information delivered to them is correct and accurate (Pfleeger & Bloom, 2005). Consumers are also unsure about the privacy of information they provide to a remote party, and without clear regulations set, it is hard to know whether the information provided is actually treated as stated in the ubiquitous privacy disclaimer (Miyazaki, & Fernandez, 2000). All of this has led to a suspicion of the medium, which eventually – negatively – influences consumer acceptance of this marketing channel.

2.2.6 M-Marketing and Its Definitions

M-Marketing is a specific type of marketing in its own right. It is an interactive process that combines both push and pull marketing activities. More importantly, according to prior research it has successfully achieved a higher response rate than other marketing approaches because of two particular features: user permission and acceptance (Barnes & Scornavacca, 2004; Tanakinjal, et al., 2008).

M-Marketing is a marketing activity that involves the use of mobile devices such as mobile phones, smart phones or PDAs (Mort & Drennan, 2005). Kurkovsky and Harihar (2006) point out that mobility and location-awareness are among the unique features of mobile technology that also apply to m-Marketing. Mobile business has the advantage of personalisation; also, the use of mobile systems can draw data directly from users that is constant and accurate (Ho & Kwok, 2002).

M-Marketing is defined as the use of a mobile medium as a means of marketing communication in (Heinonen & Strandvik, 2007; Salo & Karjaluoto, 2007) or as the "distribution of any kind of promotional or advertising messages to customers through wireless or mobile networks" (Leppaniemi & Karjaluoto, 2005). The m-Marketing Association (2011) recently redefined m-Marketing as "*a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network*". Sometimes, m-Marketing is called wireless marketing (MMA, 2011). However, 'wireless' is not necessarily 'mobile'. M-Marketing is also generally characterised as using interactive mobile communication media to provide consumers with time- and location-sensitive personalised information, to help brand owners to promote goods, services and ideas, thereby generating value for all stakeholders (Scharl, et al., 2005a).

2.2.7 Comparison of Marketing Channels

In order to outline the evolution of marketing from a simple and direct approach to one involving increasingly complex communication tools this section compares features of each marketing channel according to three perspectives: timeline, distribution and response rate. This comparison informs the contention that communication channel evolution leads to progress in the development of marketing approaches. Mobile technology is a tool/medium for performing marketing activities, whereas mobile marketing is a business approach that leverages the evolution of communications applied to the marketing field.

2.2.7.1 Timeline

Marketing channel evolution relates directly to the development of communication tools and media. Based on previous descriptions, Table 2.2 summarises the marketing evolution process by comparing different marketing channels and noting their longevity. It can be seen that some marketing channels have been used for quite extended periods of time. As mentioned in (Mohr & Nevin, 1990) a marketing channel is 'alive' if the communication approach (e.g., word of mouth, printed materials, telephone, broadcasting, Internet) is not dropped from use by brand owners and consumers.

Mobile communication is therefore the latest innovative approach through which brand owners and consumers can exchange marketing information. In the last decade, SMS as a mobile communication tool has become well-liked by many m-Marketing service providers, brand owners and consumers (Carroll, et al., 2007; Ellis, Ellis, & Barraclough, 2007). As mobile technology has continued to mature, further services such as multimedia message services (Battiato, Farinella, Giuffrida, Sismeiro, & Tribulato, 2009) and mobile Internet services (Haghirian & Inoue, 2007) have been deployed as marketing tools for promoting brand owners' products and services.

Table 2.2
Marketing Channels Comparison - Timeline

Marketing Channels	Examples of Tools	Timeline
Face-to-Face Marketing	Direct sales conversation and demonstration	Thousands of years till now
Printed Material Marketing	Brochure, newspaper or magazine	Hundreds of years till now
Radio and TV Marketing	Television or radio	Early 1950s till now
Telemarketing	Telephone call	Early 1980s till now
Internet Marketing	Website, online forum, email	1990s till now
M-Marketing	SMS/MMS, mobile web	Beginning of 21st century till now

2.2.7.2 Distribution

The goal of a marketing strategy is to deliver a promotional business message from brand owners to consumers, and ultimately increase sales for brand owners (Rowley, 1998). Based on previous descriptions, Table 2.3 summarizes the marketing evolution process by comparing different marketing channels in terms of their scope of distribution.

Table 2.3
Marketing Channels Comparison - Distribution

Marketing Channels	Distribution	Description
Face-to-Face Marketing	to (1 or many)	Size of 'many' is small
Printed Material Marketing	to (1 or many)	The larger the 'many', the higher the cost
Radio and TV Marketing	to many	The 1 or 'many' may not receive the marketing message
Telemarketing	to (1 or many)	The 1 or 'many' may not want to receive the message
Internet Marketing	to (1 or many)	The 1 or 'many' may not trust messages sent via the Internet
M-Marketing	to (1 or many)	The 1 or 'many' will accept the message if permission is given

When a new communication medium becomes available, brand owners look to utilize the new tools and media with the purpose of gaining wider distribution of their products and services. Each marketing channel has its shortcomings, and it is likely that later channels overcome (in part) problems that have occurred or limitations that are inherent in the use of previous channels. For instance, using printed materials for marketing increases the number of recipients and so overcomes a limitation of face-to-face marketing (Phelps, Lewis, & Mobilio, 2004). However, a new problem arises if there is a very large number of intended recipients since higher costs are incurred to reach all customers (Paul, Redman, & Sanson-Fisher, 2004). In order to solve the cost issue of printed mail marketing, brand owners can use broadcast marketing approaches such as Radio/TV, telephone and Internet (Cheung, 2008; Paul, et al., 2004). Thousands or even millions of recipients can receive marketing messages broadcast through marketing channels such as these. However, brand owners do not know whether consumers have actually received their message (Beville, 1988); thus it is difficult for brand owners to directly know their customers' views about their products and services. In order to capture the consumers' behaviours and feedback, brand owners can use telemarketing and Internet marketing as direct marketing tools that enable communication with consumers in an interactive manner. Unfortunately (and as noted above), telemarketing is not always welcome because so-called *cold calling* annoys consumers (Galloway & Brown, 2004). Internet marketing campaigns are sometimes deployed with poor security and privacy, and therefore cannot necessarily gain consumers' trust and acceptance. Finally, brand owners and marketers believe that permission is one of the most important factors for consumers to accept information via a marketing channel and in doing so signal acceptance of the brand owners themselves. M-Marketing campaigns are therefore being built based on an assumption of user permission (Barwise & Strong, 2003).

2.2.7.3 Type and Response Rate

Consumers' response rates to marketing channels have a direct relationship with consumer acceptance (Barnes & Scornavacca, 2004; Rettie, Grandcolas, & Deakins, 2005). According to (Barnes & Scornavacca, 2004), there are two types of marketing approach: push marketing and pull (interactive) marketing. In the marketing field, *push* is used to describe the activities that are initiated by the product or service providers, and in this situation the consumers are passive, whereas *pull* refers to those activities that are initiated proactively by consumers. As outlined in (Goyder, 1985), a face-to-face conversation has a high net response rate; however when it is applied to sales and marketing, this approach is unable to reach large numbers of consumers. Although printed material via mail may reach more consumers, the response rate is not as high. Also, this approach requires additional administrative effort and material cost (Goyder, 1985). Conventional TV and radio marketing campaigns cannot receive consumer responses from the same channel due to the one-way nature of the communication channel (Duncan & Moriarty, 1998). Telemarketing faces privacy and ethical issues, and therefore the response rate may not be high (Duncan & Moriarty, 1995). Although the Internet has been considered as a powerful tool for B2C (business to consumer) and B2B (business to business) marketing (Facchetti, Rangone, Renga, & Savoldelli, 2005), consumer response rates are influenced negatively by a lack of trust in Internet marketing campaigns due to the growing incidence of online fraud (Miyazaki & Fernandez, 2000) and privacy concerns. Table 2.4 summarises the evolution of marketing channels by comparing the different channels in terms of their types and response rates.

Table 2.4
Marketing Channels – Type and Response Rate

Marketing Channels	Marketing Types	Response Rate	Comments
Face-to-Face Marketing	Push, pull & interactive	High	Lower number of respondents
Printed Material Marketing	Mainly push-based	Low	Requires time and cost to generate response
Radio and TV Marketing	Mainly push-based	Low	Usually one way communication
Telemarketing	Mainly push-based	Low	Cold call is not welcome
Internet Marketing	Push, pull & interactive	Depends	Concerns re security against online threats
M-Marketing	Push, pull & interactive	Comparatively high	If user permission is given

It can be seen in Table 2.4 (and those shown just prior) that, apart from m-Marketing in its present early form, each marketing channel has certain shortcomings and disadvantages; none receives a particularly good response rate because the marketing channel used, the communication tool and/or the medium are not well-accepted by consumers (Trappey & Woodside, 2005).

These authors also indicate that response rate is linked to the type of marketing approach. Pull and interactive marketing channels seem to be more welcome than the pure push-based marketing channels; also, comparatively higher response rates are received if the marketing campaigns are given permission by consumers (Trappey & Woodside, 2005).

One of the critical factors that brand owners consider when deciding whether to continue using a particular type of communication medium to perform their marketing activities is effective consumer response (Kondo & Nakahara, 2007). In previous research, mobile advertising messages have been found to have a 5-10 times higher click-through rate than Internet advertising messages (Haghirian & Inoue, 2007; Haghirian, Madlberger, & Inoue, 2008). There are three priorities for ensuring effective consumer response: to increase consumer value, to remove costs that do not add consumer value, and to maximise value and minimise inefficiency throughout the supply chain (Roussos & Moussouri, 2004). The mobile phone, as a communication tool, has the potential to satisfy these three priorities, and that is the reason why brand owners or marketers have begun to choose m-Marketing over (or perhaps in addition to) other more traditional marketing channels.

This section has explored marketing channel evolution and compared different marketing channels in terms of timeline, distribution and consumer response rate. There is some evidence that mobile technology is currently the most innovative communication channel used for marketing, particularly with its specific features of interactivity and consumer permission. The purpose of comparing various mobile communication channels and their dimensions of technological evolution according to these characteristics is to make explicit the cross-disciplinary nature of mobile marketing in this research study; it is acknowledged, however, that other classification dimensions could also be considered. The next section examines how mobile technology is used as a communication channel for marketing. Mobile technology generations are also related to the evolution of m-Marketing.

2.3 Mobile Technology Generations and m-Marketing Evolution

The reviewed literature suggests that m-Marketing evolution has progressed from single-channel to multichannel mobile communication. When marketing messages are delivered over a system with a single mobile communication medium (e.g., SMS only), this is known as single-channel m-Marketing. If marketing messages are delivered over a system that allows multiple mobile communication channels or media (e.g., mobile call, SMS/MMS, Mobile Internet, and Mobile TV), this is known as multichannel m-Marketing. This section examines the link between mobile technology generations and m-Marketing evolution.

2.3.1 Current Status of Mobile Technology

As with many recent technologies the pace of development of mobile devices has been rapid. Today this class of devices includes not only the already conventional mobile phone but also a new generation of handheld devices such as the iPad. Mobile device capabilities have been expanded to meet complex user requirements. Due to its small size, portability, and the rich functionalities integrated within it, the mobile device is thought to be *"...the most popular communication tool in 21st century"* (Kumar, 2004). Although SMS was the initial commercial success driver for these devices (Barnes & Huff, 2003), the current trend associated with business services offered through mobile technologies (mobile business services) indicates a move towards using the mobile Internet (Klein & Koenigstorfer, 2007) as more and more device features rely on the Internet platform (Haghirian & Inoue, 2007). However, this trend raises a question with respect to m-Marketing: will m-Marketing follow the fate of Internet marketing and become a marketing medium that lacks users' trust (Balza & Hancea, 1996; Udo, 2001)? Given that it is different from Internet marketing, m-Marketing may still be successful if marketing campaign designers understand how to leverage the unique features of mobile technology (Facchetti, et al., 2005; Kurkovsky & Harihar, 2006) without compromising user trust. While mobile technology may be regarded as the next generation of marketing communication media, and not limited to text messaging alone (Siau & Shen, 2003a), more investigation is needed in order to better understand the role of mobile technology and how it is adopted in marketing processes (Barnes & Scornavacca, 2004).

At present, mobile devices can be categorised into three main types related to the first, second and third or later generations. First, mobile phones are those devices that are designed mainly for voice communication. They inherit all of their functionalities from the traditional mobile phones, plus they also offer features such as colour display, capability-rich operating systems and sufficient processing power to allow certain 2G or 3G features (Lindholm, Keinonen, & Kiljander, 2003). However, the primary function of these devices is still voice communication and the features ported from computers to these devices are limited. Second, the term 'smart phone' is used to describe those mobile devices that run an intensive operating system. Unlike a normal mobile phone, smart phones seek to balance desirable phone features and computing power/functionality. The design of these devices is still quite similar to mobile phones, but they have stronger processing power and larger memory to enable them to run a *diminished* version of a computer operating system, such as Microsoft Windows (Nichols, 2003). In this case, more computer applications are able to be ported to and run on such devices, but still, the emphasis is to use them primarily as phones rather than computers. Third, we also have the Personal Digital Assistant (PDA) in mobile devices. Unlike the previous two, the original main aim of PDAs is not for voice communication. Rather, the main focus here is their computing features, such as data entry, calendar and schedule management, email, contact lists, spreadsheets and word processing.

The popularity of mobile phones has prompted the notion that if a PDA can also support voice communication and text messaging, it can be considered as an all-in-one device to deal with professionals' daily needs (Anderson, 2004). Therefore, PDA devices, such as the BlackBerry, are derivatives of the traditional PDA, while also offering the features of voice communication, text messaging and other *phone* features (Anderson, 2005). From this researcher's point of view, current mobile devices have the best processing power; in addition, they also run complex operating systems that can perform tasks similar to personal computers. Although all three categories appear to be moving closer to the phone-plus-computer or computer-plus-phone configuration, these features should, in fact, become the basic standards for what a mobile device should have in the future.

Currently, mobile development in the developed world is at the deployment phase of the 4th generation of mobile technology. In a 4G mobile service, the bandwidth of the mobile network and the features provided by mobile devices have again improved. Current the 4G network has two commercial candidates: WiMax which was first launched in Korea in 2006 and LTE (Long term evolution) that was first launched in Scandinavia in 2009. WiMax can deliver up to 46 Mbps downstream speed with 4G capabilities (Koe, 2008); on the other hand, the LTE standard offers a download speed of 100 Mbps, which is a typical standard speed of a wired local area network (Koe, 2008).

Mobile technology has started to become a viable replacement for many current communication approaches, such as fixed-line telephones, personal computers, newspapers and so on. The next section explores the evolution of m-Marketing channels and examines how the mobile technology evolution just described has had a direct impact on m-Marketing development.

2.3.2 Mobile Communication Channels for Marketing

In this section, the researcher identifies and describes four different types of m-Marketing channel: mobile voice, SMS/MMS, mobile Web and mobile television. These m-Marketing channels have a direct link to the mobile technology generations outlined in the previous section.

2.3.2.1 Mobile Telemarketing (1st Mobile Generation)

A traditional telemarketing approach suggests that brand owners reach consumers through voice communication over fixed lines. The bidirectional voice communication enables brand owners to interact with consumers, thus obtaining immediate responses and feedback. This has proved to be a stable and reliable marketing approach as, after many years of development in fixed line technology, the reliability is high and the costs of communication are relatively low compared to most other marketing approaches.

With the introduction of mobile technology, advanced features such as mobility and higher availability are added to the traditional telemarketing service. Since mobile technology has been constantly improving, the cost of making mobile phone calls has decreased significantly. This encourages brand owners to perform telemarketing over the mobile communication platform. Besides, by adopting the traditional fixed-line telemarketing approach, mobile telemarketing has also introduced specific features such as interactivity and personalisation; therefore brand owners can more effectively reach their target customers as mobile devices are usually non-shared with other users. Also, the mobility of the device makes it possible to reach consumers at any point of time as the communication is not limited to a particular space, either home or office. Consequently, consumer availability is increased.

2.3.2.2 Mobile Messaging Marketing (2nd Mobile Generation)

The SMS/MMS is a unique service provided by the mobile platform. It was successfully designed to deliver functionality complementary to the voice communication capabilities of mobile phones, so that mobile users can not only communicate by voice but can also send messages in text. This helps to reduce or eliminate the chance of getting incorrect information through voice, especially when the message contains important information such as an email address, names, or a physical address, that are not easy to remember or could be misheard in voice communication (Bamba & Barnes, 2007). The mobile SMS/MMS approach also provides a cost-effective way to send messages to the receiver, particularly when compared to standard voice communication (Okazaki, 2005b). In fact, it is a successful replacement of the more traditional pager service (Dickinger & Kleijnen, 2008). SMS/MMS enable full automation of the message sending process, whereas the pager service involves a call made to the control centre to initiate message sending. Therefore, although other more advanced mobile features now exist, the SMS is still an important and popular feature for simple text communication, whereas multimedia content overcomes the limitation of the text-only content in terms of richness and entertainment (Battiato, et al., 2009).

From a marketing perspective, the messaging marketing concept is a successor to static content marketing. Unlike printed materials, SMS allows pure text only with a length constraint set for each message. However, since all mobile users are already familiar with these restrictions, a well designed text message should be able to deliver the required content to consumers. Thus, the advantages of using mobile messaging marketing are clear. First, the cost of sending the message is the lowest to both brand owners and consumers compared to other m-Marketing approaches (Okazaki, 2005b). Second, the marketing message delivery time from brand owners to consumers is real time, and lasts longer than voice communication, because the message may be stored within the device memory so that consumers can retrieve the message again when needed (Tsang, Ho, & Liang, 2004). Moreover, messages can deliver

information that is difficult to communicate by voice, such as a voucher number, or the name of a contact and their address (Mort & Drennan, 2005). Since the SMS/MMS system is based on digital communication, it is straightforward to enable computer systems to recognise the content of messages, facilitating full automation of the sending and receiving processes (Kautonen, et al.,, 2007). All of the above considerations make SMS/MMS a favoured platform for marketing activities.

2.3.2.3. Mobile Web / Internet Marketing (3rd Mobile Generation)

The Internet is now one of the most important telecommunication platforms in the world. Its polymorphism as a communication medium expands the capability of business activities and embraces users' interactive influence (Bennett, 2003). As Internet services have become more popular and well-accepted, and the costs for accessing them have decreased dramatically, these services are considered suitable for performing marketing activities (Scharl, et al., 2005a). There are multiple ways to perform marketing activities on the Internet platform. The most popular is marketing through subscription to email newsletters, where relevant topics are specified by the subscriber. There are also other marketing approaches, such as advertisements embedded in instant messenger applications (e.g., MSN Messenger, Yahoo! Messenger), website advertisements, forums and blogs. Unfortunately, due to the lack of appropriate control mechanisms for content, and concerns over privacy and security, the use of the Internet as a marketing communication medium has been found to be less welcome than was initially anticipated (Haghirian & Inoue, 2007). The leaking, trawling or unauthorised sale of personal information such as email addresses or instant messenger account details enables unauthorised parties to send unwanted messages, commonly referred to as spam, to receivers who are forced to receive them (Idwan, Alramouni, Al-Adhaileh, & Al-Khasawneh, 2008). The negative impact of spamming on a marketing campaign that uses email as its communication medium is such that brand owners may simply decide to avoid the use of the Internet in order to maintain their reputation (Merisavo et al., 2007).

Since mobile Internet marketing inherits some attributes of the Internet marketing approach, it also inherits some of the associated risks and disadvantages. However, with more appropriate mobile Internet regulations, the situation may be quite different from that relating to normal Internet access. This is due to the fact that the regulations for use of mobile communication are relatively well-defined and this is expected to resolve the issues related to privacy and security (Merisavo, et al., 2006). First of all, the costs of use of mobile Internet are higher than fixed line or stationary Internet. Although this may prevent some brand owners from utilising mobile Internet marketing, it should help to ensure that the players who have chosen to use the channel are sufficiently resourced to enforce control over the content and their processes (Bauer, et al,, 2005). Additionally, not all web resources can be displayed on mobile devices. In fact, due to the limited size of the mobile display, web

resources have to be designed specifically for that device according to strict standards (Haghirian & Inoue, 2007). These conditions increase the likelihood that mobile Internet marketing could avoid or be less affected by the failures of traditional Internet marketing.

2.3.2.4 Mobile Television Marketing (4th Mobile Generation)

The TV marketing approach is directed at audiences that are often dynamic and volatile, and so it is necessary to repeat the contents of marketing messages several times in order to assist consumers in remembering or understanding (Marez, et al., 2007). TV marketing allows high-tech involvement in marketing processes and, in addition, is said to hit consumers' psychological perceptions (Pihlstrom & Brush, 2008). The dynamic nature of such a communication channel supports the use of new elements such as animation and sound, which can further deepen the consumers' impressions (Pihlstrom & Brush, 2008). Furthermore, the ongoing correctness of the message delivered to consumers can also be increased by using live verbal and visual communication.

Current TV services can make use of the Internet protocol as a communication medium, a scenario known as IPTV or interactive TV; traditional TV programs are now available on computer devices and mobile phones. Using mobile phones for TV advertising is considered to be mobile TV marketing, which allows mobile users to select a TV program or content based on their permissions and willingness to view (Bayartsaikhan, et al., 2007). Although mobile TV advertising is aimed at the general public, it is deployed via an interactive or pull-based marketing campaign and so consumers can select to receive particular advertisements from a mobile TV service.

2.3.2.5 M-Marketing Channels vs. Traditional Marketing Channels

Table 2.5 summarises the connections between mobile generations, m-Marketing channels, the associated mobile communication media/tools and related traditional marketing channels.

Table 2.5
Mobile Generations vs. m-Marketing Channel Evolution

Mobile Generation	m-Marketing Channel	Mobile Communication medium and tool	Traditional Marketing Channel
1st Generation	Mobile Telemarketing	Mobile Voice	Telemarketing
2nd Generation	Mobile Messaging	SMS/MMS	Printed Material Marketing
3rd Generation	Mobile Internet Marketing	Mobile web/email	Internet Marketing
4rd Generation	Mobile Television	Mobile TV	Television Marketing

With each mobile technology generation a new mobile communication tool or medium becomes available and is used to perform marketing activities, which in turn enables new m-Marketing channels. As can be seen in Table 2.5, all traditional marketing channels can be deployed over current mobile communication platforms and devices. Thus, single-channel or multichannel m-Marketing are both feasible.

2.3.3 M-Marketing-Specific Characteristics

Three specific characteristics are identified in this thesis that differentiate m-Marketing from other marketing approaches: location awareness, personalisation and interactivity.

2.3.3.1 Location Awareness and Mobility

This characteristic is illustrated effectively in an example of use given in (Crowdedbrain, 2010):

> *"NAVTEQ, a global provider of maps, traffic and location data enabling navigation, location-based services and mobile advertising around the world, has announced it has been awarded the EMMA 2010 prize for most effective location-based mobile advertising campaign in Europe. The campaign, based on the NAVTEQ LocationPoint Advertising Network, enabled advertiser McDonald's to deliver location-relevant mobile ads to users of Nokia Ovi Maps when they were within a certain distance of McDonald's 82 restaurants in Finland. The campaign promoted a McDonald's cheeseburger for 1 euro. Consumers clicked on the ads to see details of the offer and to find the nearest McDonald's. The campaign yielded a 7% consumer click through rate (CTR); of those, 39% of users asked for maps to the nearest McDonald's restaurant. 'We recognise that using NAVTEQ LocationPoint to target consumers when they are near our locations and navigating them right into stores is powerful marketing,' said Tomi Wirtanen, Marketing Director, McDonald's Finland. 'We are pleased to find EMMA recognised that too.' 'We believe location can and will transform the ad experience,' said Chris Rothey, vice president, advertising for NAVTEQ. The McDonald's campaign is a superb example of this"*

The mobility inherent in mobile devices can eliminate physical limitations within the coverage area of the network. Prior research indicates that location awareness is an important factor for brand owners and consumers when considering how to carry out marketing activities (Barnes & Scornavacca, 2004). For most businesses, there are commonly three scales of location-based services of interest: country-based, city-based and suburb-based.

Location-based m-Marketing services usually provide information such as local advertisements, directory listings, local map and shop/service locations (Gidofalvi, Larsen, & Pedersen, 2008a). However, such m-Marketing services have tended to require substantial administrative effort and technological support. For consumers, it has not always been possible for them to find services or products of a specific brand in a random area, as most sources of information require a static access point with Wi-Fi connection or that the area is covered by a 3G mobile network (Barutçu, 2007). Given these challenges, early location-based marketing efforts were aimed primarily at consumers who had already lived in a specific area for a period of time, which meant a limited number of consumers who could receive *and act on* the marketing messages sent from brand owners.

The rationalisation of satellite technologies has resulted in positioning services that are no longer expensive and restricted to an elite group of users. The global positioning system (GPS) is now a common and popular service used to track and identify the current position of a specific user, and the size of a GPS-enabled device has been minimised. With the GPS service integrated into a mobile device, it can not only support normal mobile phone-related services, but can also deliver GPS-based services based on knowing the user's current position, such as providing an online map of the surrounding area and then services or products offered nearby (Tripathi & Nair, 2006). This allows consumers to seek out a desired product or service even in an unfamiliar location, and enables brand owners to communicate with consumers with more relevant, accurate and timely information (Pura, 2005).

2.3.3.2 Personalisation

An illustrative example of personalisation in m-Marketing was provided in (Monjack, 2011):

> *"Upstream, the global m-Marketing solutions provider recently announced the addition of new features to the gamification engine that forms an integral part of its Marketing Communications Suite (MCS) technology platform. Upstream's gamification engine's new, real-time personalisation features deliver key insights into interactions as they happen, enabling the platform to tailor campaigns so that their frequency, progress and content are driven by highly targeted mobile consumer segments, making it ultimately more rewarding and enjoyable for them. 'The new capabilities will enable Upstream to customize our gaming engine in very sophisticated ways to help carriers and brand owners drive the highest possible engagement and value from their mobile campaigns,' says Guy Krief, Vice-President, Innovation, Upstream. "With Upstream we identified new consumer sectors to target and employ the MCS platform, with the best gamification techniques built-in, to engage and incentivize our subscribers, increasing customer satisfaction and brand owners' loyalty"*

Mobile services can support personalisation, which means that in some situations, and after careful authentication and verification, mobile phones can be used as a cooperative substitution of other forms of personal identity such as credit cards, bank cards or social security identification (Tanakinjal, et al., 2008). Personalisation can also be integrated with location awareness, which means location-based services could be provided in an individually targeted manner through mobile devices, saving the effort of end users since there is no need to perform manual geographical filtering (Mahatanankoon, 2007).

Since the mobile communication system is inherently highly personalised, brand owners may store consumers' profiles in their own databases (under permission) for further m-Marketing activity. Unlike the Internet, where it may be highly risky to supply personal information to a remote party, mobile systems are comparatively highly regulated, and most of the time information storage is local and contextual (Bauer, et al., 2005). It has also been suggested that obtaining customers' permissions before carrying out further marketing activities is vital for establishing reciprocity and understanding (Tanakinjal, et al., 2008). Furthermore, communication and interactions between brand owners and consumers are also protected by the mobile network, although the extent of that protection depends on the level of security implemented in the system (Xu, 2006; Xu, Liao, & Li, 2008).

2.3.3.3 Interactivity

An indicative example of the role of interactivity in m-Marketing is given in (MobileMarketingWatch, 2010):

> *"More than one full year has passed since Apple last rolled out a new version of its iPhone OS. Today's update, however, is likely the most important advancement of the iPhone's operating system to date – especially if you're a developer or advertiser. Indeed, Steve Jobs' introduction of the new advertising platform called 'iAd' represents one small step for advertising and one giant leap for mobile marketers. Promoted first and foremost as a way to help developers make money, Apple will host the ads but provide a 60% cut to the devs. 'We have a lot of free or reasonably priced apps. We like that,' Jobs told his audience at this morning's new iPhone OS 'party.' 'But our devs have to find ways to make money. So our devs are putting ads into apps.' Essentially, Apple is delving deep into the apps in order to serve up a mobile advertising mechanism – one that is both interactive and packed with emotion – unlike anything ever experienced in the world of digital advertising. 'iAd,' which comes built into the new OS, will cover a broad base of digital content. From games to video, 'iAd' will allow users to enjoy and absorb ads without ever having to exit an application. Delivering a wicked cool demonstration of the 'iAd' platform today, Apple is clearly endeavouring to raise to the top of the heap as the ultimate conduit*

for effective m-Marketing campaigns that make the advertising experience more engaging than ever thought possible. With the average user spending 30 minutes per day consumed by mobile applications, Steve Jobs said the iPhone will soon have the ability to serve 'a billion ad impressions per day,' a situation that will open up 'an incredible demographic' to the advertising community"

Popularity, commonality and functional development of mobile phones are among the main drivers of m-Marketing growth. In m-Marketing, brand owners and consumers *exchange* marketing information via various channels, in a process known as m-Marketing business-consumer interaction. Unlike the static marketing communication media, which mainly focus on information delivery to consumers, mobile devices allow timely communication to take place, emphasizing interactivity (Merisavo, et al., 2007). For different marketing communication media, the time responsiveness for both push and pull marketing strategies are different, but in the m-Marketing discipline consumers and brand owners can obtain immediate results from each other because of the interactivity of mobile technology.

In the marketing process, consumers and businesses are required to interact with each other in order to carry out business activities, e.g., selling and buying. As a consequence, both brand owners and consumers expect to communicate in an efficient and effective manner so that accurate information can be delivered without misunderstandings or delay. According to (Krimmel, 2008), efficiency and effectiveness of m-Marketing interactivity are variables that can affect the level of users' satisfaction. In summary, (Haghirian, Madlberger & Tanuskova, 2005) define m-Marketing as "*using interactive wireless communication medium to provide consumers with time and location-sensitive, personalized information, that promotes goods and services thereby generating values for all stakeholders*".

2.3.4 Towards Multichannel m-Marketing – Outcomes from a Systematic Literature Review

Building on the contemporary issues evident in the work of relevant research and practice communities, the focus of this thesis is set on multichannel m-Marketing. The central pillar of this research is a Delphi study conducted to examine the success factors for single- and multichannel m-Marketing. In (Huang & Symonds, 2009) the authors systematically considered 230 journal papers and provide a meta-analysis of the relevant m-Marketing literature. In this section the outcomes of this systematic literature review are examined and discussed. The interested reader is referred to the original paper for further details of the review and its conduct.

2.3.4.1 Research Outcome Summary

After an appropriate filtering process as part of the systematic literature review, 52 journal papers were examined as primary studies in the review. Table 2.6 represents how m-Marketing channels are reflected in the sample of literature outlined in (Huang & Symonds, 2009). This sample reflects the development of mobile phone technology through the 1st, 2nd and 3rd generations.

Table 2.6.
Mobile Technology & Marketing Channel Evolution (Huang & Symonds, 2009)

Mobile Technology Evolution	M-Marketing Tool Evolution	Number of Papers	Comments
1G: Voice Communication	Mobile Telemarketing	2	No longer retains research interest
2G: Data Communication	Mobile SMS/MMS Marketing	45	Achieves success in the 21st century
3G: Internet Communication	Mobile Web/Internet Marketing	22	Mobile Internet service drives network convergence
4G: Fast Internet and Multimedia	Mobile Television Marketing Multiple Tools / Channels	4	An innovative service and new research area

As a result of widespread mobile technology development, mobile tools have become established as communication channels for m-Marketing campaigns. These mobile channels are all active and are often used concurrently. The researcher expects that more research focus will be given to 4th generation m-Marketing systems that are multichannel and draw upon capabilities from all mobile technology generations. Out of the 52 reviewed journal articles, 12 papers specifically referred to the Technology Acceptance Model (TAM), 12 papers examined user acceptance of mobile marketing, 6 papers applied Structural Equation Modelling (SEM) either to test TAM or theories based on TAM, and 5 papers studied an m-Marketing value-chain model.

The systematic review used a meta-analysis approach to evaluate the relationship between the evolution of mobile technology and m-Marketing tools. In addition, the review showed that multichannel m-Marketing campaigns are under-researched.

2.3.4.2 No Longer Just SMS Marketing

An m-Marketing campaign must be carried out through at least one of the technologically available mobile communication channels; consequently m-Marketing research has also focused on the characteristics of the selected channel and its adoption, utilization, and future trends. At present, the use of

voice communication in m-Marketing (1st generation communication channel) attracts minimal research interest. Message-based marketing (SMS/MMS) and mobile Web marketing (2nd and 3rd generation communication channels respectively) have gained acceptance and popularity and are well represented in the academic literature (Bamba & Barnes, 2007; Battiato, et al., 2009; Li & Stoller, 2007). Mobile TV (4th generation) is the most recent marketing channel investigated in m-Marketing research (Bayartsaikhan, et al., 2007). Since all mobile communication channels are active and often used concurrently by mobile device owners, it seems likely that a multichannel mobile communication campaign will be used in future m-Marketing services (Chou, Hsu, & Chen, 2003). This is supported by the findings of the meta-analysis conducted in the systematic literature review.

2.3.4.3 Multichannel M-Marketing

Traditionally, businesses use a range of marketing methods or strategies to reach consumers in order to promote or advertise products and services. For example, McDonald's fast food is one of the world's most recognised brand owners, and it uses multiple-channel marketing campaigns for delivering promotional news to consumers. For instance, McDonald's has simultaneously employed telemarketing, direct mail, Internet, television, radio, newspaper, and magazine channels (Morgan & Hunt, 1999). McDonald's' marketing approach through such channels is a traditional multichannel marketing strategy. Due to mobile technology advances (also refer to Table 2.5), all traditional marketing campaigns can be deployed using mobile services, platforms and devices. Businesses can deliver marketing messages to consumers by using a multichannel m-Marketing campaign (see Figure 2.1) and this is known as a multichannel m-Marketing strategy.
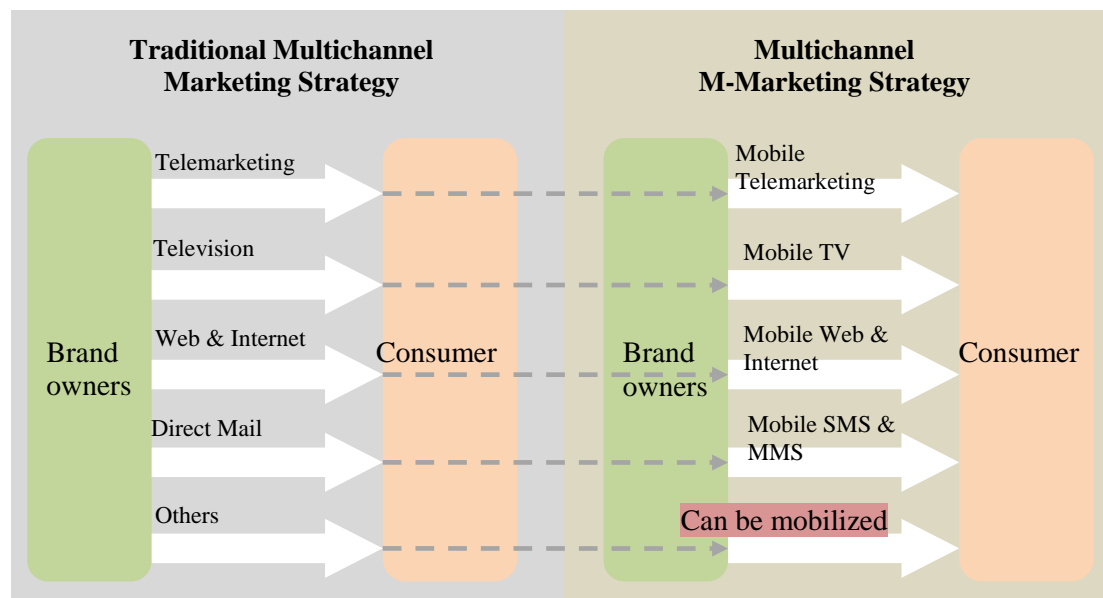
Figure 2.1. Traditional Multichannel Marketing Strategies vs. Multichannel M-Marketing Strategies - Adapted from (Morgan & Hunt, 1999) also refer to Table 2.5

Figure 2.1 depicts two types of multichannel strategy. First, the traditional multichannel marketing strategy is adopted from (Morgan & Hunt, 1999), in which brand owners use communication media such as telephone, TV, Internet and direct mail to advertise products and services to consumers. Second, the multichannel m-Marketing strategy is shown alongside, depicting brand owners delivering their marketing or promotional messages to consumers via mobile platforms with various mobile communication media such as mobile phone calls, mobile TV, mobile Internet, and SMS/MMS.

Although traditional multichannel marketing strategies successfully assist businesses in promoting their products and services, such campaigns may incur high implementation costs and may require significant deployment effort (Rosenbloom, 2006). In addition, if the targeted consumers are not users of the non-mobile communication channels chosen for a traditional multichannel campaign (e.g., they are not a newspaper reader, or do not watch TV), they are not going to receive the marketing messages or the relevant information. Moreover, it is difficult for businesses to determine if consumers receive the marketing messages sent, and to receive consumer feedback. Traditional marketing strategies usually employ a 'push' marketing approach, leaving no space for business and consumer interaction (Rangaswamy & Bruggen, 2005b). In contrast, m-Marketing uses both 'push' and 'pull' marketing approaches and can be highly interactive. Its specific features, supported by the relevant technologies (e.g., permission-based and location-based), enable the brand owner to personalise the marketing message and to make it relevant to the mobile customer's location at the time they receive it, thus creating added value for the recipient. Deploying more than one mobile communication channel in a single marketing campaign may enable brand owners to take better advantage of these unique features that make m-Marketing different from all other traditional marketing approaches (Barwise & Strong, 2003; Kurkovsky & Harihar, 2006; Okazaki, 2008).

The systematic literature review showed a clear pattern matching mobile technology generations with the proliferation of mobile communication tools (messaging and web/Internet). Very few papers address the more established voice marketing channel or the newly established television channel. Therefore, academic researchers could give greater attention to web/Internet and television channels and less to the traditional voice channel in their ongoing research. Moreover, (Ye, 2007) was the only published research effort of hundreds of reviewed articles to offer a weak connection to multichannel mobile communication. Another research paper that investigated operational performance of multichannel m-Marketing was presented at the ICBM 2005 International Conference (Schierholz, Ostrowski, Glissmann, Kolbe, & Brenner, 2005). Although this research paper was excluded from the review (because the review focused only on journal articles) it presents relevant discussion about applying multichannel mobile communications to marketing. Another reason for excluding conference papers from the study presented in (Huang & Symonds, 2009) was that conference papers might be problematic given the strong technology dimension of the research area.

From a technical point of view, since the pattern of m-Marketing tool evolution matches mobile technology generations, it can be expected that new communication tools available for mobile services enable new m-Marketing channels. Since the older mobile communication tools (e.g., voice and messaging) are still valid for current m-Marketing campaigns, we assume that future m-Marketing campaigns might be implemented over a multichannel mobile communication system but leveraging specific mobile characteristics (location-awareness, interactivity and personalisation). The research points to an expectation that these characteristics will be extensively integrated into future m-Marketing system development and deployment.

Due to the growing maturity of mobile technologies, convergence has been taking place between stationary computing and mobile computing (Ivanek, 2008; Petrova & Huang, 2007). This presents an opportunity for researchers to consider how to use multichannel campaigns for m-Marketing strategies and operations in an appropriate, effective and efficient manner. This thesis therefore examines the term 'multichannel m-Marketing' first introduced in the researcher's systematic literature review (Huang & Symonds, 2009), and reports further and more comprehensive investigations of its success factors and its significant differences from the single-channel approach. The Editor of the International Journal of M-Marketing (IJMM) states that technological convergence could significantly influence global mobile business development (MMA, 2010). It is vital to find out whether mobile communications and technologies are appropriately used or applied for business purposes (e.g., for performing marketing activities). Bouwman et al. (2007) point out that past and present mobile services are not always used in an optimal way; as a result, mobile solutions or related services are sometimes not meeting user expectations (Bouwman, Carlsson, Castillo, & Walden, 2007).

The following is a summary of the findings of the systematic literature review. These findings have directly informed the research conducted and reported in this thesis:

- Multichannel m-Marketing is a trend that runs in parallel with m-Marketing evolution.
- M-Marketing stakeholders need to be identified by further studying the m-Marketing value chain model and theory.
- A further study of m-Marketing success and success factors needs to apply the right theoretical model, e.g., success model for information systems.
- TAM needs to be considered as part of the theory for this research.
- The role of permission and acceptance for m-Marketing success needs to be further investigated since acceptance theory is popular in m-Marketing research.

The next section considers issues relating to SMS marketing, recognised as a specific and popular form of single-channel mobile marketing.

2.4 From Single-Channel to Multichannel m-Marketing

SMS marketing is (to date) the most popular and successful form of single-channel m-Marketing. Most academic investigations of m-Marketing and m-Marketing models or theories are based on SMS marketing. This section explores and discusses issues related to the move from single-channel to multichannel m-Marketing. At the end of this section, two industry examples (TXT2Get and BizM3) of multichannel m-Marketing are described as typical illustrations of its use.

2.4.1 Drivers for m-Marketing

There are several substantive reasons for the popularity of mobile devices in marketing at present. First, due to their small size mobile devices can be carried easily (Hosbond & Skov, 2007). Compared to a fixed-line telephone that requires a wired connection and has a limited scope within a premises, communication with mobile users can be established anywhere and at any time so long as there is signal coverage (Ivanek, 2008; Vrdoljak, Vrdoljak, & Skugor, 2000). Second, mobile phones now support rich content (Sugai, 2007). Their derivatives such as smart phones, Pocket PCs, PDAs and tablet devices can perform many tasks that were previously unique to computers. Compared to desktop computers, which are not movable, and laptops, which are relatively heavy, the mobile phone has become an ideal all-in-one device/platform where mobility and functionalities have converged (Anderson, 2005).

As mentioned in the summary of the previously conducted systematic literature review in Section 2.3.4, the linkage between mobile technology and m-Marketing is provided by the communication medium or tool and channel. With the involvement of mobile technologies, however, the focus of the model may need to be moved from the traditional stakeholders to the communication medium itself (MMA, 2008). The role of the mobile phone as a communication tool, however, is at a more abstract level which can become an extension of or substitution for the existing communication media (Wilkinson, 2002). More traditional media such as newspapers, posters and static printing can now be displayed on mobile devices in digital form. It is now possible to also receive animated or real-time media such as television, radio and live events on mobile devices. The data connectivity on mobile devices also provides Internet connection and allows online content to be viewed on such devices. With the additional unique text messaging feature, mobile devices have become the central integrated communication medium which allows multi-dimensional marketing communications to be performed through a single platform (Scharl, et al., 2005a). This is one of the main drivers that has pushed forward the progress of m-Marketing development and deployment.

M-Marketing stakeholders, including both brand owners and consumers, would generally prefer simplicity and convenience in both operation and use. All stakeholders tend to accept communication methods or marketing channels that are (relatively) easy to learn and use (Mylonakis, 2004). Besides this, there are some other aspects that are the drivers of the development of m-Marketing with SMS. The most prominent reason is the increasing penetration to a global market of mobile users (Observer, 2011). The coverage of the mobile network is virtually the coverage of the potential market, which can even be globalised. The process of m-Marketing also enables business-consumer communication *and interaction* (Braiterman & Savio, 2007; Gronroos, 2004). Unlike the static marketing communication media, which are mainly focused on information delivery, mobile devices allow timely two-way communication to take place, emphasising interactivity (Barnes & Scornavacca, 2004). From a technological point of view, the use of m-Marketing can lead to improvements in mobile handheld design, especially in the area of usability (e.g., size of screen). It encourages users to adapt to mobile services and use them as a necessary 'accessory' on an ongoing basis (Mahatanankoon, Wen, & Lim, 2006; Okazaki, 2008). Ding, Li and Ho (2004) offer evidence that an increasing number of applications and services are developed or ported to the mobile platform, resulting in a centripetal trend for users moving from other communication media and technology (Ding, Li, & Ho, 2004).

2.4.2 Challenges for m-Marketing

While mobile devices can be used to emulate the attributes of different communication media, the great variety of resources overcomes their limitations compared to mobile services (Satyanarayanan, 1997). Although mobility is an advantage for mobile technology and service, it can sometimes be inherently hazardous. For example, lost or stolen mobile devices may contain sensitive information, and it is difficult to verify identity due to mobility (Patterson, 2003). Mobile connectivity may be highly variable in terms of performance and reliability. Strength of signal, blockage of obstacles, and distance to the cell site, weather and interference, may all affect the reception of data and the quality of communication (Lee & Helal, 2002). It may therefore be difficult to maintain a high Quality of Service (QoS) due to the packet switching nature of the Internet Protocol. Along with the fact that all mobile devices rely on finite energy sources, this may cause unexpected communication interruptions or data corruption, which could be potentially risky to the performance of marketing activities delivered via mobile networks. These challenges are not easy to resolve, and they also have different priorities. In order to provide further knowledge regarding the best practice of future m-Marketing development and deployment, the researcher needs to identify all the success factors that are necessary to achieve stakeholder goals.

2.4.3 Barriers and Benefits of m-Marketing

The reviewed literature suggests that providing unique features is a success factor for mobile technologies (Kurkovsky & Harihar, 2006). Kurkovsky & Harihar (2006) report an in-depth investigation of the functionalities provided by mobile devices by comparing them to other forms of communication media, and suggest that the Internet service enables all e-Activities on mobile devices. Although this may seem similar to other approaches such as personal computers, the additional unique features create the overall power of mobile devices (Smith & Taylor, 2004). As introduced above, the inherent mobility of these devices can eliminate physical limitations intrinsic in the coverage of the network. Mobile devices can also provide location awareness, which means location-based services can be provided, saving the effort of the end users since there is now no need to perform geographical filtering manually (Ververidis, 2002). Table 2.7 shows the barriers and benefits of a mobile system as described in (Bouwman, et al., 2007).

Table 2.7
Barriers and Benefits of M-Business System (Bouwman, et al., 2007)

Barriers	**Benefits**
Physical: whether or not a medium is physically accessible	(**Perceived**) **flexibility** & **entertainment**: have a positive effect on the future use of mobile services.
Cognitive: understanding how systems work (technically) and how to master new technologies	**Value-added**: provides opportunities to relevant service bundles
Affective: relates to attitudes, and motivation with regard to the use of systems, such as confidence, efficacy, and trust.	**Interaction**: builds business-consumer relationship in a long term manner
Economic: relates to benefits and costs	**Mobility**: anytime and anywhere
Social: relates to cultural norms	
Political: relates to power and knowledge gaps	

Due to the fact that mobile devices are already well known and widely used, most of the barriers listed in Table 2.7, such as cognitive, physical or economic barriers, could be resolved relatively easy. The convergence of Internet technology and mobile devices means that concepts in the Internet field that are already recognised and known can be ported to the field of mobile technology. The barriers for m-Marketing are therefore lower compared to the integration of marketing with another newly released technology.

2.4.4 Consumer Attitudes and Behaviours Regarding m-Marketing

According to some prior research the most imperative success factor for m-Marketing is the gaining of user acceptance (Barnes & Scornavacca, 2004; Bauer, et al., 2005; Leppaniemi & Karjaluoto, 2005). While a user may have already accepted mobile phones, whether that user accepts a new concept delivered via their mobile device will depend on their attitude to that concept (Carroll, Barnes, & Scornavacca, 2005). This is not a 'universal truth' however. User attitude may not always have a direct connection to user acceptance. In the simple case of going shopping, a buyer may purchase something even when having a negative attitude, or he/she may not buy something while having a positive attitude (Rao & Troshani, 2007; Tsang, et al., 2004). Although attitude may affect the user's process of decision making, it is not absolutely essential. In fact, as previously stated, users are more likely to focus on the following three points to determine if they should accept m-Marketing or not: users' permission, mobile service provider control, and brand owners' trust (Bamba & Barnes, 2006).

2.4.5 Win-Win Marketing

According to the research findings presented by Scott (2008), m-Marketing can eventually achieve success; however, it will only achieve a win-win situation if two conditions are satisfied. The first requirement is investment from key players, although an excessive emphasis on this can lead to potential value not being created and therefore failing to pay attention to consumers' preferences and needs. Second, it is important to maintain a *high-quality* and *easy to use* m-Marketing experience for the consumers, with an appropriate level of investment involved.
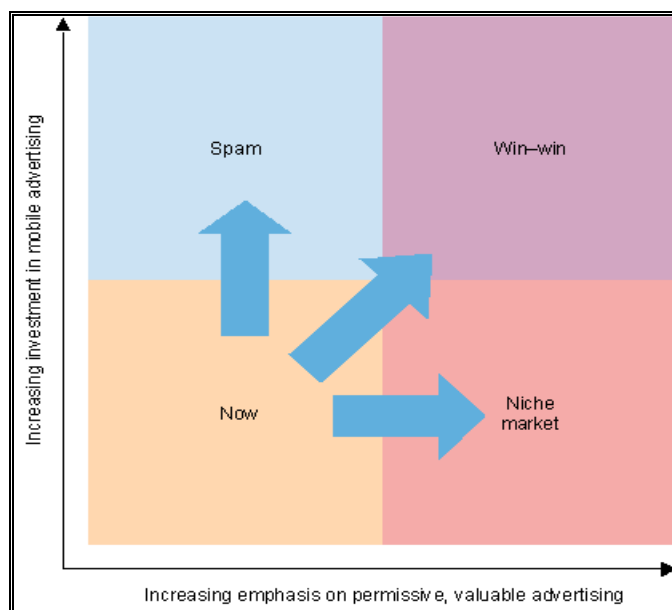
Figure 2.2. Win-Win Situation for M-Marketing Success (M. Scott, 2008)

If m-Marketing lacks investment, the Win-Win is not achieved and the strategy results in a niche market environment. A balance point for both requirements must be established to ensure that investment and consumer involvement are of the right degree.

2.4.6 Examples of Multichannel m-Marketing Campaigns

Multichannel mobile marketing campaigns have been launched recently by industry players. This section introduces two m-Marketing campaigns (BizM3 and TXT2Get) that use multiple mobile communication channels to deliver marketing messages and enable brand-consumer interactions.

2.4.6.1 BizM3 Multichannel m-Marketing Campaign

The following example is provided in (BizM3, 2009):

> *"If you're familiar with mobile marketing, you probably know that it's next to impossible for mobile carriers to push your ads directly to their subscribers. Before you can 'push' your campaign through the mobile channel, you need to 'pull' users to opt-in to receive your message and comply with FCC regulations in the process. This is where bizM3's multi-channel strategy allows you to add a mobile call-to-action to all of your existing marketing channels – both digital and traditional.*
>
> *The bizM3 platform helps you develop a multi-channel strategy to capture your customers and provides the tools to maximize the results of your campaigns across all relevant marketing channels. You can quickly assign different keywords for each marketing message to track the effectiveness of each channel. Once your customers respond to the mobile call-to-action from the various channels, our platform captures the opt-in data and allows you to analyze the efficiency of your campaigns and manage the engagement cycle.*
>
> *The mobile channel and reaching the mobile consumer, including multi-cultural audiences, is rapidly becoming one of the most important objectives for marketers today for three reasons – reach interaction and engagement. "*
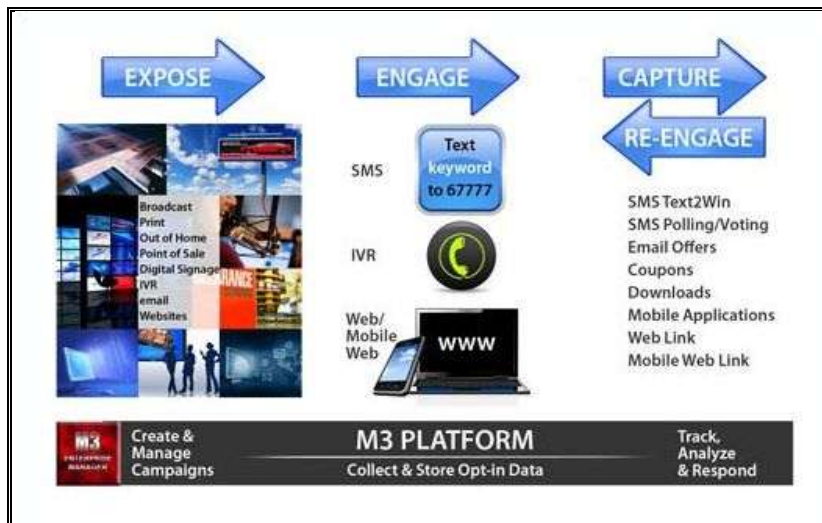
Figure 2.3. BizM3 multichannel m-Marketing Campaign (Bluebookadvertising, 2010)

Figure 2.3 depicts the multichannel m-Marketing service deployed by BizM3 and the operational process of the M3 m-Marketing campaign. The M3 platform BizM3 is a cutting-edge mobile marketing technology business that provides solutions and tools for advertising campaigns and deployment strategies. In late 2009, BizM3 was the first business to offer a multi-channel mobile content management and distribution platform for m-Marketing services. The BizM3 m-Marketing campaign uses customised short code and SMS opt-in services; marketing messages can be delivered via an integrated m-Marketing campaign with communication channels such as: interactive voice response, SMS, mobile Web (WAP), Kiosk/Digital Signage, mobile radio and TV.

2.4.6.2 TXT2GET Multichannel m-Marketing Campaign

The following example is provided in (TxT2GET, 2011b):

> *"As media becomes more and more fragmented (so many competing TV channels, radio stations, print titles and websites), the cost of delivering an advertising message to a broad spectrum of consumers has be- come prohibitively expensive. For years, smart marketers have been refining the targeting of their ads to hit those most likely to purchase, and purchase profitably for the organisation.*
>
> *Despite this, however, the link between even well targeted advertising and its response mechanism has routinely been broken. The advent of text response is a proven way to repair that link and boost advertising effectiveness. Quite simply, organisations can no longer afford to pay to have consumers see their ads, desire their products or services, but then have those same consumers take no action for want of a convenient response mechanism.*

Consumers have shown they are keen to research products or services they are interested in, and they also want the ability to respond to advertising in their own time (immediately in many cases), even when this is outside of normal business hours. Organisations that recognise this and provide these potential customers with a convenient 24/7 response mechanism will certainly secure themselves a significant marketing advantage."

	TV (visual material)	Voiceover material	Print	Oline	Radio
Expressly use the noun 'subscription' or the verb 'subscribe' to convey the activation method	Must be at least 50% of the size of the premium rate number and displayed for the same period as the premium rate number (but in any event for at least 10 seconds). **Campaign has to be double-opt in**	The word 'club' may be used to describe the service provided that the word ésubscriptioni or ésubscribei is used in relation to the pricing information. **Campaign has to be double-opt in**	Must be contained in the main body text. If the size of the premium rate number is between 24 and 48 point font, must be at least 25% of the size of the premium number; if premium rate number over 48 point, must be at least 12 point. **Campaign has to be double-opt in**	Must be at least 50% of the size of the premium rate number and contained in the main body text. Must be on the same page (ie above the fold). **Campaign has to be double-opt in**	Must be clearly stated if it is a subscription activation. **Campaign has to be double-opt in**
Include cost information	Must be prominent and highly visible.	x	Must be prominent and highly visible.	Must be prominent and highly visible. Must be at least 50% of the size of the premium rate number and contained in the main body text. Must be on the same page (ie above the fold).	Must be clearly stated
Include frequency of billing information	Must be prominent and highly visible.	x	Must be prominent and highly visible.	Must be prominent and highly visible.	Must be clearly stated
Additional requirements	Text must be held on screen long enough to be read by the average viewer (min. 0.2 seconds per word, and never less than 5 seconds). The short-code must be displayed for at least 10 seconds	x	A minimum of 6 point font is required.	x	x

Figure 2.4 & 2.5. Txt2GET multichannel m-Marketing Campaign (TxT2GET, 2011a)

Figures 2.4 and 2.5 represent the multichannel m-Marketing service deployed by TXT2GET and the operational process of the TXT2GET m-Marketing campaign. Similar to the BizM3 campaign, TXT2GET is another firm that launched multichannel m-Marketing campaigns in late 2010, in the USA, Australia and New Zealand. TXT2GET also uses SMS for user opt-in, and then enables multiple interactive and advertising response channels such as SMS-Marketing print, SMS-Marketing Voice, SMS-Marketing TV, SMS-marketing email, and outdoor SMS-Marketing signage. Its recently deployed TXT2GET service in New Zealand allows email and voice opt-in services; sometimes, a double opt-in process is required.

The above examples demonstrate that mobile technology has matured sufficiently to support m-Marketing and that multichannel mobile communication is being used to perform business activities. As a consequence, industry players have started developing and deploying multichannel m-Marketing campaigns or services. This fact confirms the outcome of the meta-analysis presented in Section 2.3.4, that multichannel m-Marketing is a trend that has developed along with m-Marketing development. However, it remains unclear how to ensure the success of multichannel m-Marketing, an issue of interest to both industry players and academic researchers. From the service providers' point of view (in the examples provided by BizM3 and TXT2GET), multichannel m-Marketing can raise the consumer response rate. With multichannel m-Marketing, consumers can choose their preferred communication channel (e.g., email, message, phone call or the Web) to complete the marketing information exchange process; however, in the case of single-channel m-Marketing, consumers have to give up using the campaign if the communication channel is not their preferred one.

2.5 Chapter Summary

This Chapter introduced the link between marketing and technology, and examined how mobile communication channel evolution is associated with the evolution of mobile technologies. A variety of definitions for m-Marketing found in relevant literature were reviewed and a range of m-Marketing issues were studied. The researcher has reviewed a range of academic studies in the area of m-Marketing. Fundamental knowledge in this field, the new research direction of *multichannel m-Marketing* as well as the researcher's own thoughts have been discussed in detail. In Chapter 3, m-Marketing models related to stakeholders, success and acceptance are reviewed, and a list of m-Marketing success factors is identified and described.

Chapter 3: Understanding and Modelling Mobile Marketing Success

In this Chapter, a three-dimensional model (Technology-Intention-Value, or T-I-V) for m-Marketing stakeholders is constructed by evaluating the m-Marketing value chain model and the technology acceptance model (TAM). An m-Marketing acceptance model is then proposed based on a theoretical integration of user satisfaction and technology acceptance. From a review of marketing literature related to the use of SMS, 23 m-Marketing success factors are identified and described. At the end of the Chapter, the researcher combines the TAM-based m-Marketing acceptance model with DeLone and McLean's IS success model, and proposes an m-Marketing success model.

3.1 Mobile Marketing Stakeholder Analysis

In order to ensure an in-depth analysis and understanding of m-Marketing processes and operations, relevant stakeholders are identified and described through consideration of the m-Marketing value chain. The emergence of m-Marketing has been driven by mobile marketing companies (Lepp äniemi, Karjaluoto, & Salo, 2004); also, key components of the m-Marketing value chain are investigated, and telecommunication and advertising industries are included. M-Marketing stakeholders are identified and are categorised using the three variables (T-I-V) and also in regard to their roles, responsibilities and level of influence in m-Marketing processes and operations: 1) Technology related 2) Intention for m-Marketing and 3) Value gained.

3.1.1 M-Marketing Value-Chain Model

In order to attract stakeholders' interest, m-Marketing must be perceived by them as an attractive option while also providing them with value in monetary terms (Barnes, 2002). Although m-Marketing offers non-dollar benefits to consumers, the perceived advertising value of marketing content or advertising information can drive consumers' intention to use m-Marketing (Haghirian, et al., 2005; Leppaniemi & Karjaluoto, 2005). Leppaniemi, Sinisalo and Karjaluoto (2006) have constructed a value chain model for m-Marketing. An example in the mobile industry would be the propagation of a marketing message from a telecommunication (network) provider, to an m-Marketing (service) provider, and then to advertising (content) providers, and finally to the users (consumers and brand owners), as shown in Figure 3.1.
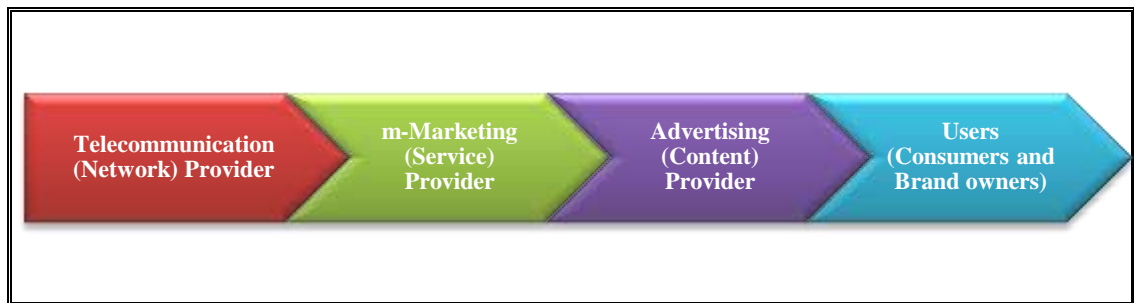
Figure 3.1. M-Marketing Value Chain Model

3.1.2 M-Marketing Stakeholders

According to the studied value-chain model, there are four stakeholders identified for m-Marketing. They are the m-Marketing provider, telecommunication provider, advertising provider and users. In order to identify and understand their different roles and responsibilities in m-Marketing development and deployment, further discussion of these m-Marketing stakeholders is now provided.

3.1.2.1 M-Marketing (Service) Provider

This stakeholder develops m-Marketing campaigns and deploys m-Marketing services to users (brand owners and consumers). According to the business requirements and user expectations of m-Marketing, m-Marketing service providers are responsible for the design and development of marketing campaigns over mobile communication platforms, in addition to the deployment of m-Marketing services that can be carried out on mobile handheld devices (Karjaluoto et al., 2007).

In order to design and develop an m-Marketing campaign that functions as expected, it is vital to ensure that the hardware and software of the m-Marketing system can satisfy the requirements and demands of the users (Leppaniemi & Karjaluoto, 2008). According to Merrilees, Getz and O'Brien (2005), the main objective of developing such an m-Marketing campaign is to provide a platform that deals with marketing activities over the mobile network and, in return, creates revenues for brand owners and other commercial stakeholder groups. M-Marketing providers should not only understand the needs of marketing and its operational requirements, but they also need to recognise how mobile technologies can be used to maximise the benefits and efficiency of marketing activities.

From a technical point of view, m-Marketing providers have the power to influence the m-Marketing operational process; they also have a high degree of interest in finding out about the level of acceptance for all users involved (Bauer, et al., 2005). For example, the m-Marketing provider needs to take care of the quality of system and service, and also to sort out usability problems

(Haghirian, et al., 2005). Furthermore, in terms of service deployment, issues such as the impact of trust, user opt-in, permission, privacy, security, and interactivity should be carefully considered (Merisavo, et al., 2007; Roussos & Moussouri, 2004). Also, m-Marketing providers have to ensure as far as possible that the m-Marketing campaign and service are consistent and satisfy technological and user requirements. Value for this stakeholder is generated through the use and adoption of the m-Marketing campaign and its services.

3.1.2.2 Telecommunication (Network) Provider

Telecommunication providers include mobile network or device providers and they are an inherent component of the value chain since m-Marketing data communication takes place via mobile networks and devices.

Mobile network operators provide and manage the m-Marketing channels and communications. M-Marketing relies on mobile technologies as a base, and all operational processes require an interconnected mobile network for message delivery (Shim et al., 2006). The network operators comprise the owners of a mobile network or the operators of a mobile network. Since they have full or partial control over the mobile infrastructure and related services, it is in their interests to obtain and maintain relationships with m-Marketing service providers (Pousttchi & Wiedemann, 2006). Competition among providers drives interest in cutting-edge technologies and processes in the mobile (marketing) area for network operators and service providers (Irvine, 2001; Kuoa & Yub, 2006). Although mobile network and service operators are responsible for the control and management of data traffic, relatively speaking they do not have very strong or direct influencing power over m-Marketing operations. The telecommunication provider can receive business revenue from mobile services (e.g., Mobile Internet services, SMS).

Mobile device manufacturers design, build and supply mobile devices for users. The device provider is responsible for the mobile device usability design, functionality design and capacity design (Braiterman & Savio, 2007). Clearly m-Marketing cannot be performed without the use of mobile devices. It is important that the used mobile devices are capable of 'cooperating' with the m-Marketing campaign and the mobile communication platform (Pousttchi & Wiedemann, 2006). Mobile marketers work to use phones that are popular with the targeted consumer group(s). However, the development of mobile devices is not principally for m-Marketing services, thus support for m-Marketing is of relatively lesser interest to device providers.

3.1.2.3 Advertising (Content) Provider

Advertising providers include message content providers and advertising agencies.

A content provider is – clearly – extremely important to a marketing operation. The raw marketing message requires an appropriate level of design and refinement before being delivered to consumers. Content providers generally focus on the design of message elements such as text, graphics and sometimes multimedia, and obtain direct revenue from brand owners. Although the design may be specific to m-Marketing, the general concepts and processes may also be applied to other communication media such as posters, telemarketing, newspapers or television. However, there are some requirements specific to the mobile channel that need to be met. Therefore, content providers cannot simply apply the same concepts and processes to m-Marketing content design without having an in-depth knowledge of the m-Marketing process. It is also noted that content providers are not *directly* involved in the m-Marketing process, which means they generally have little power to control and influence the process.

Advertising specialists or agencies are the parties that assist brand owners to use the most appropriate marketing method. Their main objective in the m-Marketing value chain model is to serve as an aggregator in order to generate revenue. Although advertising agencies do not have great power to directly influence or manage m-Marketing, they can raise brand owners' interest or intention to use m-Marketing, given an assumption that advertising over mobile communication has greater efficiency when compared to other conventional marketing approaches. Although they have control in the selection of media used for a particular case, they do not have any strong interest in how technical issues influence m-Marketing processes. They are value-driven stakeholders.

3.1.2.4 Users (Brand Owners and Consumers)

M-Marketing users are brand owners and consumers, also known as marketing message senders and receivers.

Brand owners are product and service providers. These stakeholders promote their products or services to their intended consumers by sending marketing messages (Merrilees, Getz, & O'Brien, 2005). In this situation, brand owners have decision making power when choosing a particular mobile service as a communication medium for delivering their marketing messages. Brand owners also expect marketing activities to lead to increased sales regardless of the chosen marketing campaign (Clulow, 2005). Therefore, brand owners expect to obtain monetary value indirectly from the use of m-Marketing. Moreover, it is noted that brand owners are not especially interested in how m-Marketing operates, but have a strong intention or willingness to use m-Marketing if benefits are received as a consequence of the process (Leppaniemi & Karjaluoto, 2005). Brand owners have to invest in and initialise the m-Marketing operation (Haghirian, et al., 2005). If the m-Marketing approach is considered inappropriate by brand owners, a consequent lack of interest and/or willingness to invest may lead to a complete withdrawal from the m-Marketing service.

Consumers are the receivers of marketing messages and they are also vital for the m-Marketing operation. Under the protection of government regulation, consumers have the most influence on the m-Marketing outcome (Merisavo, et al., 2006). It has been estimated that nearly 60% of people worldwide will own a cell phone by the end of 2011 (Observer, 2011). This overwhelming number of end users influences the decision as to whether to accept or refute whether the mobile phone is an appropriate tool through which to perform marketing activity. In this case, m-Marketing success depends significantly on consumers' satisfaction and acceptance, and obtaining user permission has been found to be one critical success factor for that acceptance (Barnes & Scornavacca, 2004; Rohm & Sultan, 2006). The approach of m-Marketing depends significantly on the users i.e., on consumer behaviours related to mobile phones, mobile communication tools and the m-Marketing services (Rao & Troshani, 2007). Apart from the above, however, consumers may not be interested in the process of m-Marketing; in particular they may not (wish to) understand how mobile communications and information technologies participate in an m-Marketing process (Bamba & Barnes, 2006). The fact is, as long as they can receive the appropriate information of their choice and with their permission, they may not be interested in the *flow* of the message. Consumers are the main source of direct or indirect revenue for other players in the m-Marketing value chain model (Sabat, 2002). However, consumers are frequently price driven, so cost of service is a factor that can influence their intention to opt-in and respond to messages sent via m-Marketing campaigns.

3.1.3 Three Dimension Model of m-Marketing Stakeholders (T-I-V)

This section proposes an m-Marketing stakeholder model built by adapting the three-dimension stakeholder identification approach outlined in (Huang, 2011); the proposed model in this study is also supported by variables derived from the value-chain model and TAM.

The three dimensions proposed in Huang (2011) were used as three variables to describe stakeholders for m-Marketing. They are as follows:

- *Value (Benefits)*: "the criterion is whether this stakeholder receives dollars as one of the outcomes and expectations from the mobile marketing".

- *Interest (Intention to use)*: "the condition is whether this stakeholder is particularly interested in mobile marketing operational process and outcome as well as the extent of interest itself".

- *Power (Use and impact)*: "which means whether this stakeholder can have significant impacts on mobile marketing operational process and outcome" (Huang, 2011).

M-Marketing is considered to be a multi-sector service that consists of telecommunication providers, advertising providers, brand owners and consumers. In order to establish the relevance of the technology adoption model (TAM) it needs to be reiterated that m-Marketing is a technology-driven marketing process. Thus technology is an enabler of m-Marketing development, use and deployment. Also, other researchers point out that for stakeholders there is a direct relationship between value creation and level of interest, including user power and user attitude (Clulow, 2005; Merrilees, et al., 2005; Payne, Ballantyne, & Christopher, 2005). As outlined in (Koivumaki, Ristola, & Kesti, 2006; Legris, Ingham, & Collerette, 2003; Mathieson, Peacock, & Chin, 2001b), the level of *intention* to use technology (in this case m-Marketing) is a vital variable that can characterise stakeholders (as far as the TAM is concerned). Finally, Miller and Lewis (1991) believe that stakeholders exchange value during the marketing process; *Value* provides power that links together stakeholders who use and deploy m-Marketing. This fits the requirements for Power in Bunn's stakeholder model, thus Value becomes another relevant variable (Huang, 2011; Troshani & Hill, 2009).

Following the above, the variables *value*, *intention* and *technology* are used to construct an m-Marketing stakeholder model as shown in Figure 3.2. Accordingly, the model is denoted as a T-I-V model. The first variable is *Technology,* which indicates whether a stakeholder provides technology or provides some other support that enables the m-Marketing acceptance process. The second variable is *Intention to use* m-Marketing and it indicates whether a stakeholder is particularly interested in m-Marketing operational processes and outcomes as well as the extent of that interest. The third variable is *Value (Benefits) from m-Marketing*, and it indicates whether a stakeholder receives value as an expected outcome from the m-Marketing process.
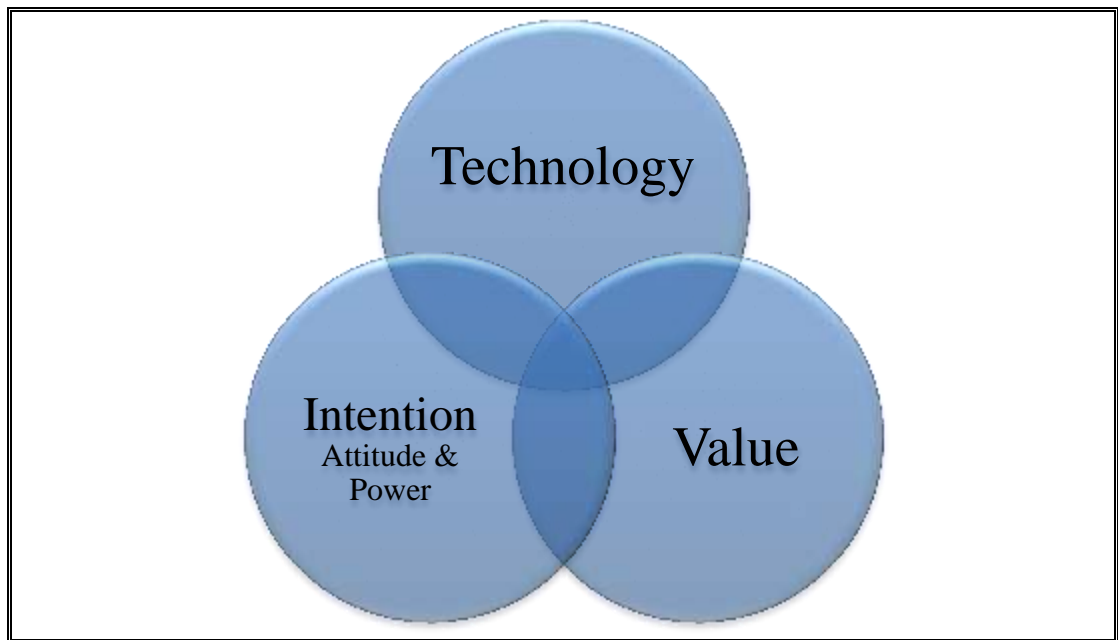
*Figure 3.2.*Three-Dimensional T-I-V Model for m-Marketing Stakeholders

Table 3.1 presents the stakeholders and their roles in the T-I-V model.

Table 3.1
M-Marketing Stakeholders in the T-I-V Model

Stakeholders	Technology	Intention	Value
M-Marketing Provider	Yes	Yes	Yes
Telecommunication Provider	Yes	No	Yes
Advertising Provider	Yes	No	Yes
Users – Brand Owners	No	Yes	Yes
Users – Consumers	No	Yes	Yes

Although brand owners and consumers are both users their roles have different aspects in terms of the means of gaining value, thus they are considered as separate parties here. For consumers who are involved in m-Marketing, although user acceptance and satisfaction are critical, the motivation for using m-Marketing is not acceptance and satisfaction *per se*. Rather, from the consumers' point of view, by using m-Marketing they still have to obtain value that is high enough to override the monetary costs and the effort spent on conveying acceptance and granting permissions; even though consumers can also receive monetary value from m-Marketing e.g., spend less money on a purchase after relevant marketing information is gathered. On the other hand, brand owners gain value from sales.

3.1.4 TAM-based m-Marketing Acceptance Model

The TAM is a model (see Figure 3.3) that represents the interaction between users and technology (Davis, 1989; Legris, et al., 2003). When m-Marketing is considered in terms of TAM , marketers and service providers first consider the usefulness and ease of use of m-Marketing, and then develop and deploy the m-Marketing technology to users (consumers and brand owners) (Gefen & Keil, 1998). This is a process of technology creation that leads to the actual m-Marketing development. Next, user attitude and intention to use such a technology (m-Marketing) is driven by the level of influence of users (consumers and brand owners), a process of technology use that leads to the actual m-Marketing use (Davis, 1993).
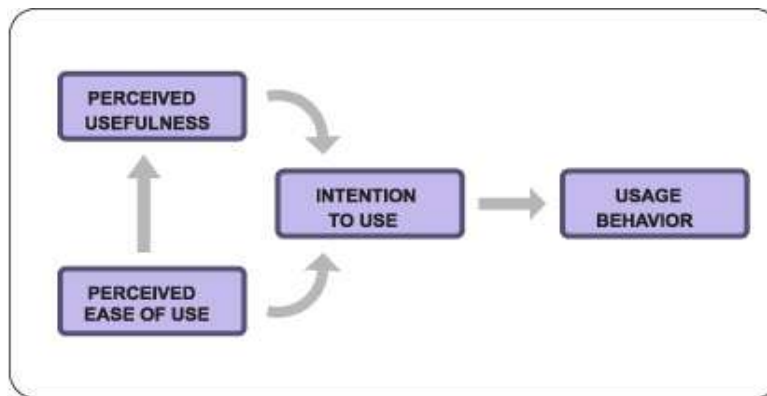
Figure 3.3. Technology Acceptance Model (Davis, 1989)

When the T-I-V stakeholder model is combined with TAM (see Figure 3.4), m-Marketing acceptance can be shown as an overall goal that should occur after the appropriate creation and use of m-Marketing, leading to brand owners and consumers gaining value (Mathieson, Peacock, & Chin, 2001a).
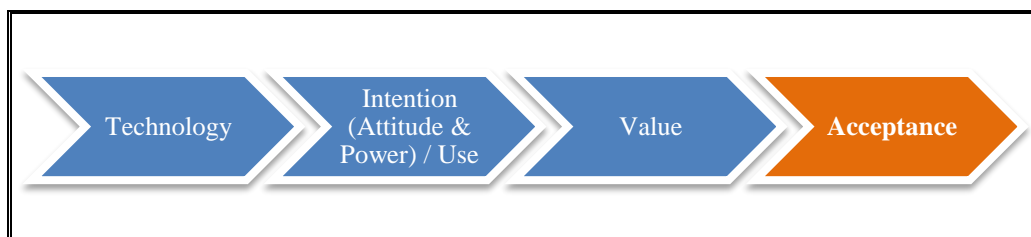
Figure 3.4, Modified TAM integrated with T-I-V m-Marketing stakeholder model

A theoretical integration of user satisfaction and technology acceptance is proposed in (Wixom, 2005) and is applied to the m-Marketing field in this thesis. Technology acceptance for m-Marketing is driven by user acceptance (Barnes & Scornavacca, 2004; Bauer, et al., 2005). In m-Marketing stakeholder analysis, users include both consumers and brand owners. Therefore, from a perceived value point of view, m-Marketing acceptance has two aspects: 1) whether consumers are satisfied with the use and deployment of m-Marketing, and 2) whether brand owners receive business profit from m-Marketing. A complete user-based m-Marketing acceptance model is presented in Figure 3.5.
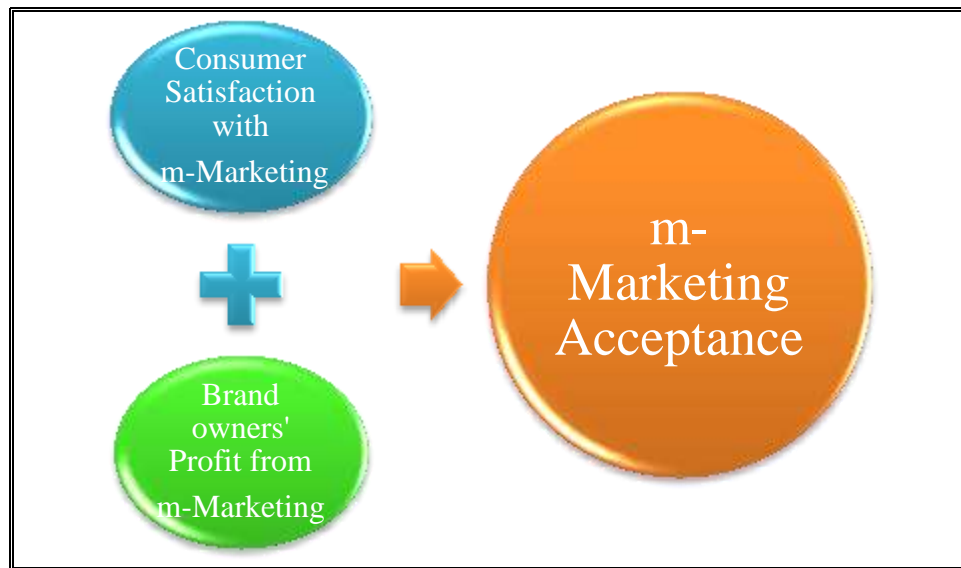
Figure 3.5. User-based m-Marketing Acceptance Model

Consumers have a strong influence on the satisfaction level of m-Marketing, that in turn leads to an impact on acceptance (Bauer, et al., 2005; Heinonen & Strandvik, 2007). As outlined in (Varnali & Toker, 2010), perceived value and satisfaction are significant consumer-based variables that drive the acceptance of m-Marketing. Consumers do get monetary value directly from the m-Marketing service. In contrast, brand owners, telecommunication providers and advertising providers are considered profit-driven stakeholders as these stakeholders aim to receive direct monetary value (profit) from m-Marketing. As a consequence, in order to obtain acceptance, m-Marketing should meet the expectations of all user stakeholder groups: satisfaction from consumers and monetary benefits for profit/value-based stakeholders.

3.2 Determining m-Marketing Success

The aim of this research study is to identify success factors for m-Marketing and to then build a suitable, expert-informed theoretical model of m-Marketing success. Given this, the research utilises a well-known information system (IS) success model to underpin this work.

3.2.1 Information System Success

The information system success model was first proposed by (DeLone & McLean, 1992) and was later revised by the same authors (DeLone & McLean, 2003b). The model has been widely accepted, and has been applied extensively in eCommerce or m-Computing/Commerce/Business research studies (see Table 3.2). It has become a popular theoretical framework used to identify success factors or to examine (the determinants of) user acceptance.

Table 3.2
Examples of use of the DeLone and McLean IS Success Model

Year Published	Research Term	Citation
2011	eCommerce success	(Molla, 2001)
2004	eCommerce success	(DeLone & McLean, 2004)
2008	eCommerce success	(Wang, 2008)
2009	Factors affecting mobile computing	(Kima et al., 2009)
2007	User acceptance of mobile Internet	(Shin, 2007)
2009	Mobile health success factor	(Chatterjeea et al., 2009)
2006	User acceptance of eBusiness	(Lai, 2006)
2010	Factors influencing mobile Internet usage	(Shin et al., 2010)
2006	m-Commerce success	(Lin & Wang, 2006)
2009	Factors affecting m-Banking success	(Lee & Chung, 2009)
2005	Mobile Internet success factors	(Cheong, 2005)

In this thesis the DeLone and McLean IS success model is applied to m-Marketing in order to build a theoretical framework for categorizing m-Marketing success factors and to support the structuring and presentation of an m-Marketing success model. In doing so the roles of satisfaction and acceptance in m-Marketing are considered. In (Petter & McLean, 2009), the authors present a meta-analysis based on a review of 52 papers that used the IS success model. They point out that this model provides particular insights that allow users to evaluate an information system's success and to demonstrate the relationships between success factors. As such it is a suitable model for the work undertaken and reported here.

3.2.2 Initial m-Marketing Success Model

DeLone and McLean (1992) presented an integrated view of the concept of IS success by introducing a comprehensive taxonomy that consists of six categories of factors that affect an information system's success (DeLone & McLean, 1992). As a result, the initial IS success model is a three-phase unidirectional chain model with six components: system quality, information quality, use, user satisfaction, individual impact and organisational impact.
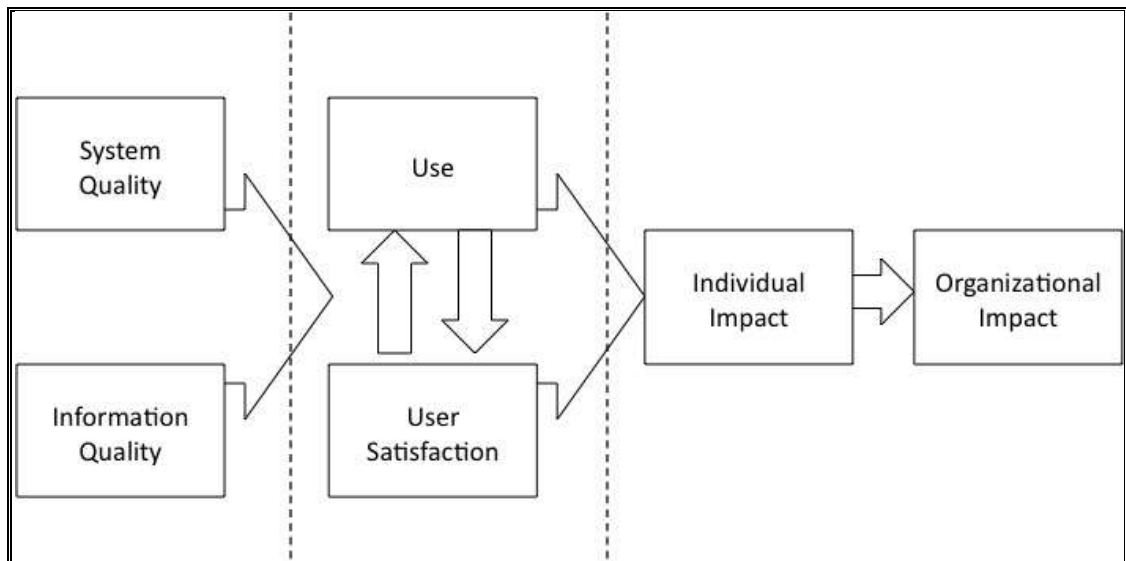
Figure 3.6. Information System Success Model (DeLone & McLean, 1992)

In Figure 3.6, the first phase represents the *creation* of the information system, which contributes to system quality and information quality. These two components influence use of and user satisfaction with the information system, which belong to the second phase – *use*. After the *use* phase, the *impacts* on individuals and organizations are the consequences of the use of the information system. DeLone and McLean also believe that individual impacts contribute to organizational impact, and these are the consequences of the use of a given information system. Considering m-Marketing in light of this model leads to the initial m-Marketing success model as presented in Figure 3.7.

Figure 3.7. Initial m-Marketing Success Model Adapted from DeLone & McLean (1992)

However, Seddon (1997) proposed that measuring information system success should combine variance and process models. While a process model itself is useful for representing the information system progression, it is not appropriate for measuring information system success (DeLone & McLean, 2002). This view has been supported by many subsequent empirical investigations that have studied information systems success (DeLone & McLean, 2003a, 2004; Molla, 2001; Wang, 2008). As a result of all those studies, ten years later DeLone and McLean modified their initial IS success model as shown in Figure 3.8. This model has informed the development of an amended m-Marketing success model as detailed in the next section.
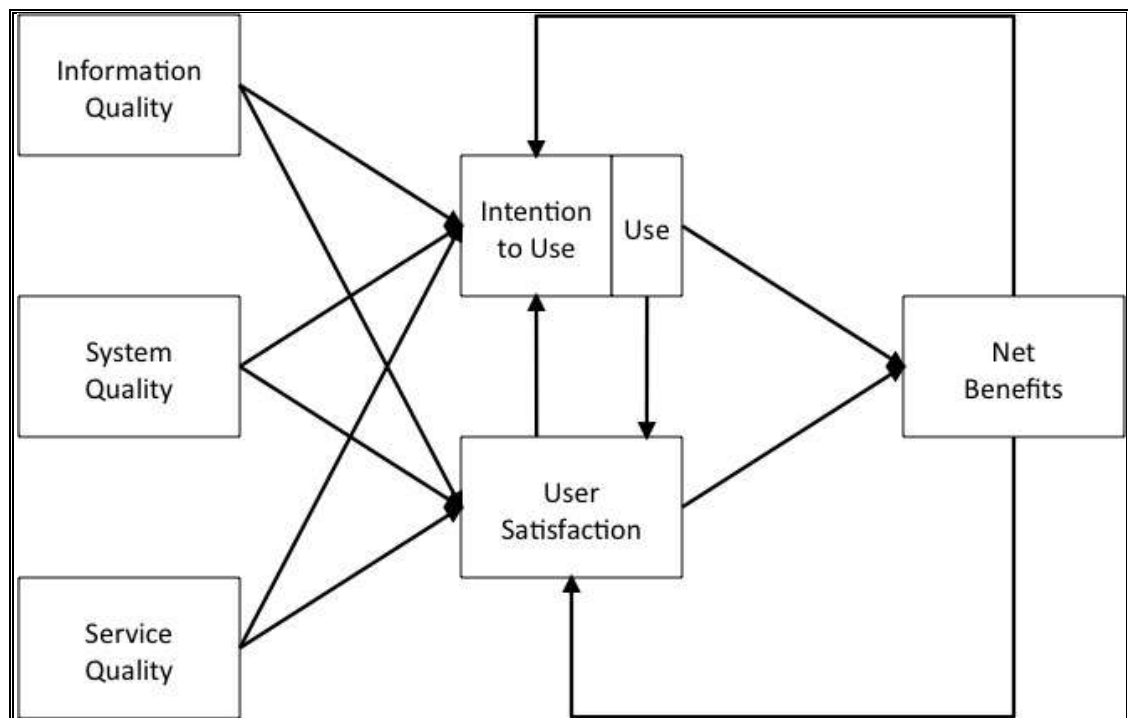
Figure 3.8. Revisited Information System Success Model (DeLone & McLean, 2003)

3.2.3 Theoretical Integration: TAM & IS Success Applied to m-Marketing

When comparing the two IS success models (DeLone & McLean, 1992, 2003b) it is evident that *Service Quality* has been added to the revised IS success model in the development phase. The deployment and use of the information system have been split up into two sub-components - *Intention to use* and *Use*. This change forms a cyclic relationship between *Intention to use* and *Use*. Furthermore, individual impacts and organisational impacts are no longer separate components. They are combined together and assessed in terms of *Net benefits* which represent the main goals of the development and use of information systems. The model is also no longer unidirectional. In this revised model, net benefits influence the intention to use the information system and also have an effect on user satisfaction. The DeLone and McLean revisited IS success model (Figure 3.8) uses net benefits because the authors believe that impacts or consequences can be positive or negative, whereas benefits are always positive, whether as an impact or consequence.

DeLone and McLean state that the revised IS success model consists of three main phases:

- Development, which includes quality of system, information, and service (the latter added in the revised model);
- Use and deployment, which involve the intention to use and the actual usage of the system;
- Impacts, which are mainly expressed in terms of net benefits.

It is contended here that m-Marketing is a special case of information system use that is influenced by the TAM adoption process. According to the stakeholder analysis reported above, all m-Marketing stakeholders gain value from the m-Marketing process. Furthermore, it is also contended that acceptance can only be achieved when m-Marketing users (consumers *and* brand owners) experience satisfaction in all three phases of the m-Marketing process. The researcher has followed the theory-building process outlined in (Wixom, 2005), with the purpose of bridging user satisfaction and technology acceptance, in order to identify the role of satisfaction and acceptance in determining m-Marketing success.

As shown previously, in Figure 3.6, m-Marketing acceptance is driven by user satisfaction (that includes consumers' satisfaction and profit/value-based stakeholders' benefit). When m-Marketing is considered in terms of the three phases of development, use and deployment, and impacts, user satisfaction should be considered in all phases in order to build m-Marketing acceptance. By integrating the TAM-based m-Marketing acceptance model and the 3-phase m-Marketing process success model, a 2nd Stage m-Marketing Acceptance Model is proposed, and is depicted in Figure 3.9.
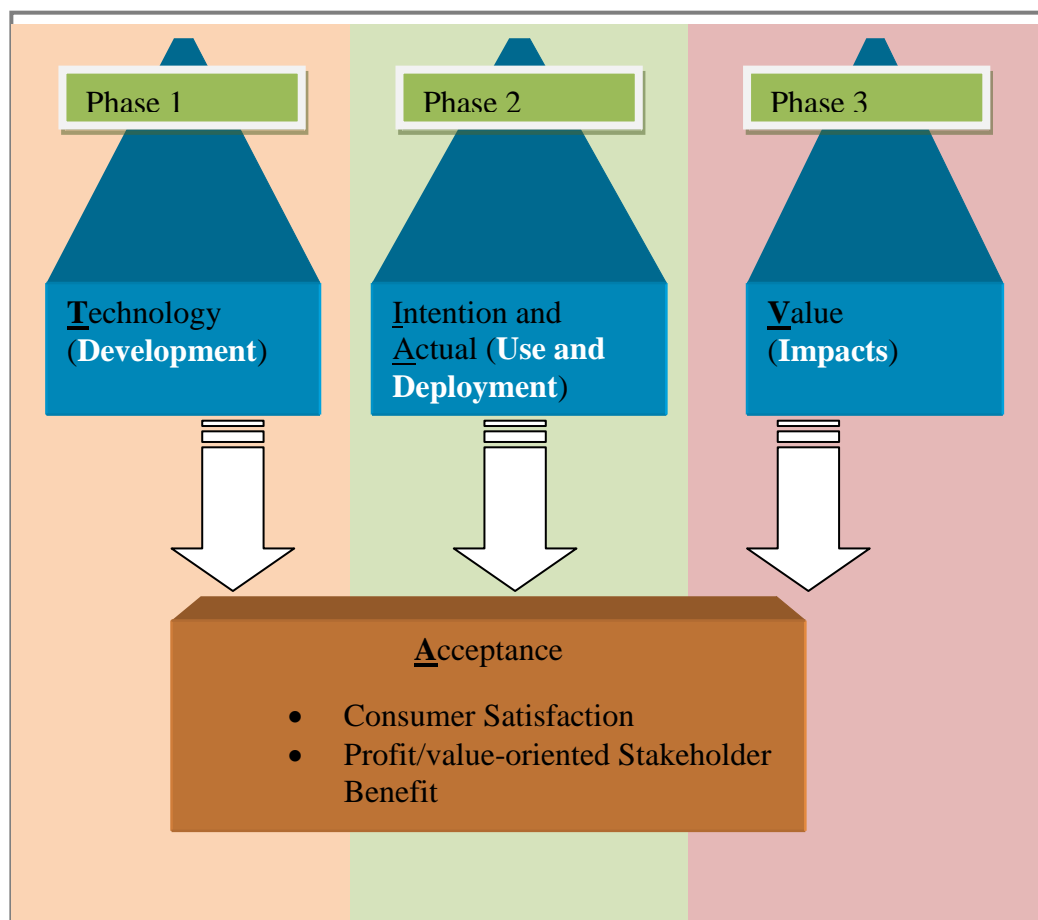
Figure 3.9. 2nd Stage m-Marketing Acceptance Model

The components presented in Figure 3.9 and their connections to acceptance are described as follows.

<u>Technology</u> – m-Marketing system design and development are driven by m-Marketing providers; consideration also needs to be given to other technical and non-technical support provided by stakeholders such as mobile network support, mobile device support, content support and m-Marketing campaign support. The main purpose of adopting technology in this particular context is to implement an m-Marketing campaign with satisfactory system quality, information quality and service quality, by meeting the requirements identified in the revised IS success model of DeLone & McLean (2003).

<u>Intention (Power/Attitude)</u> – according to the technology acceptance model, a shift from intention to actual use of technology must exist (Dishaw & Strong, 1999; Legris, Ingham & Collerette, 2002). As a result, when the researcher examines m-Marketing service deployment, intention to use and actual use of m-Marketing are two terms that require special focus. However, an intention to use m-Marketing does not necessarily mean its acceptance; the actual process of using m-Marketing and its consequences also need to be considered. When m-Marketing is ready for use and the service is deployed, it is vital to involve the users in order to evaluate user power and attitude. The actual use process is therefore preceded by the user's intention to use m-Marketing.

<u>Value</u> – this represents the benefits (profit-based or non-profit-based) for m-Marketing stakeholders as outlined in the DeLone and McLean IS success model; furthermore, perceived value is considered to have an impact on the outcomes of m-Marketing. While impacts or consequences are not always positive, the term Value means that benefit is a positive outcome of developing and using m-Marketing.

<u>Acceptance</u> – user acceptance can be achieved if:

- Technology is appropriately adopted and a satisfactory m-Marketing system is developed;
- M-Marketing service is appropriately deployed, to meet users' expectations and create intention to use such a service with a satisfactory level of willingness;
- M-Marketing stakeholders are satisfied with the value (benefits) they receive from their use of m-Marketing.

As identified in a recent literature review of 255 peer-reviewed journal articles published between 2000 and 2008, there is no commonly accepted classification framework for m-Marketing, and an agreed conceptualization of the phenomenon is still lacking (Varnali & Toker, 2010). This is the initial motivation for proposing an m-Marketing success model based on existing models within the information systems domain, being TAM and the IS Success Model. Furthermore, by conducting a comprehensive systematic literature review, the researcher has proposed multichannel m-Marketing as a new concept in the m-Marketing field and has identified candidate success factors for both single-channel and multichannel forms of m-Marketing.

3.3 Mobile Marketing Success Factors

It seems highly unlikely that information system success can be determined by a single factor. Also, as stated in (Meijden, Tange, Troost, & Hasman, 2003), the definition of success can vary for different stakeholders. In the discipline of information systems, academic researchers consider success factors as variables that can influence the process of determining information system success (Ballantine, Levy, & Martin, 1996; Li, 1998; Poon & Wagner, 2001). In this thesis, success factors refer to variables associated with the three m-Marketing processes (development, use and deployment, and impact). When the variables reach a satisfactory level for relevant stakeholder groups m-Marketing can be considered successful. Since the researcher considers SMS marketing as a specifically successful example of single-channel m-Marketing, this thesis presents an empirical investigation of single-channel vs. multichannel m-Marketing success factors. This section identifies and describes m-Marketing success factors as found in the relevant SMS marketing literature. In later Chapters of this thesis, the researcher conducts his own study based on outcomes built on prior work, but particularly with a specific focus on multichannel m-Marketing.

3.3.1 Identifying m-Marketing Success Factors

As outlined in Figure 3.7, m-Marketing has three major processes: m-Marketing development, use and deployment, and impacts. The researcher studied a range of literature sources to examine issues potentially relevant to these three m-Marketing processes.

3.3.1.1 m-Marketing Development Issues

This section examines issues associated with m-Marketing development. A multi-case study gathered empirical data in New Zealand and specifically studied the key success factors for m-Marketing (Scornavacca & McKenzie, 2007). This study reveals that, although *interactivity, mobility*, *costs* and *time*-related *(delivery and response)* factors are important for m-Marketing, *content*, *permission* and *user acceptance & satisfaction* are actually more significant than other factors. The authors also pointed out that *richness* was perceived as an important variable in m-Marketing campaigns that require a high level of interaction. However, Facchetti et al. (2005) argued that *cost* of sending messages and the *frequency* of receiving messages in m-Marketing are unlikely to be less significant than in other conventional marketing approaches – from the consumer perspective, the cost of using an m-Marketing service (e.g., SMS service) is important because consumers are frequently price-driven, especially when they are using a new service (Michael & Salter, 2006); furthermore, marketing messages should not be sent to the same recipient frequently, otherwise the message will become an annoyance or 'spam'.

In another research study, *entertainment* is identified as one of the central acceptance drivers of mobile marketing (Bauer et al., 2005). Facchetti et al. (2005) identified that: 1) user *permission* and *acceptance* of the m-Marketing process are initialised at the point of *user opt-in* through user registration with the campaign. *User opt-in*, *permission* and *acceptance* are important for m-Marketing success, as these factors result in a higher response rate from end users and fewer complaints; 2) the m-Marketing campaign should let the message receivers manage *frequency* of receiving messages and should inform users if an additional *cost* is applied; 3) the campaign should ensure that the marketing messages are correct, valuable, timely, and *personalised*; 4) mobile marketing are *value added* services.

From the above, the researcher outlines a list of 14 potential factors:

- Content
- User Opt-in
- Permission
- Acceptance & satisfaction
- Cost
- Frequency
- Personalisation
- Location Awareness & Mobility
- Richness
- Response time
- Delivery time
- Interactivity
- Value
- Entertainment

3.3.1.2 m-Marketing Use and Deployment Issues

When m-Marketing campaigns are well designed and developed, the next step is to decide how to effectively adopt and deploy m-Marketing services through the campaign. There are eight essential issues related to the use and deployment of m-Marketing as identified from relevant literature.

Consumer information should be analysed in order to avoid an unwanted message being delivered to consumers; consumer information and *accuracy* of the obtained information have to be carefully determined (Berry, 1995). Apart from this, it is preferable to establish a deep and *long-term business-consumer relationship*, which can only be achieved by developing and sustaining sufficient *trust* between brand owners and consumers (Ryals, 2001). Appropriate m-Marketing *response channels* enable *interactions* (e.g., information exchange) between brand owners and consumers (Barnes & Scornavacca, 2006). In the marketing message delivery process, postage and packing affects efficiency of message delivery (Dickinger et al., 2004). From

the consumers' point of view, *privacy* management is a significant concern of relevance to m-Marketing service deployment (Barnes & Scornavacca, 2004). It is necessary to allow consumers to know how their private details are stored and used, and also to allow consumers to manage or control the permission. *Acceptance & satisfaction* and *permission* (Kavassalis, et al., 2003) are said to be the two most important factors in determining whether an m-Marketing message is useful and valuable to the users, or if it is classified as spam.

Further, there are additional issues related to the background, the infrastructure, of m-Marketing communication. *Technical and telecommunication control* is generally thought to be a significant issue behind the scenes. *Security* and *quality of* m-Marketing *service* between different networks, different providers, and different devices are vital to ensure the delivery of marketing messages (Wood, 2003). According to the findings of Barnes and Scornavacca (2004), m-Marketing users expect to use a *cost-effective, timely* and *anywhere* m-Marketing service regardless of their choice of service providers (Barnes & Scornavacca, 2004). There is also a potential issue with *usability* and consumer service *support*, especially when cross-provider problems occur and consumers may not be able to get the right party to resolve their problems competently. Good usability is also essential to obtain user acceptance of new technologies or services, therefore successful m-Marketing service use and deployment should provide a high-standard of usability design (Lindholm, Keinonen & Kiljander, 2003).

From the above m-Marketing use and deployment issues, the researcher outlines a list of 15 potential factors:

- Accuracy
- Interactivity
- Long term relationship
- Trust
- Response channel
- Cost
- Time
- Location Awareness & Mobility
- Privacy
- Acceptance & satisfaction
- Permission
- Security
- Quality of service
- Usability
- Technical support

3.3.1.3 m-Marketing Impacts Issues

The overall goal driving the development, use and deployment of m-Marketing is to achieve user acceptance. Therefore, acceptance has been identified as the factor with the most significant impact on the success of m-Marketing by multiple researchers (Barnes & Scornavacca, 2004; Bauer, et al., 2005; Hanley, Becker, & Martinsen, 2006; Ye, 2007; Zhang & Mao, 2008). As stated previously, m-Marketing acceptance is evaluated in terms of whether the m-Marketing system creates value (benefit) for its users (Mort & Drennan, 2005; Mylonakis, 2004). From the reviewed articles, the researcher has identified seven key success factors that affect m-Marketing acceptance. These factors are:

- User acceptance & satisfaction
- Value
- Brand trust
- Permission
- Control (Network Service Provider)
- Content
- Personalization

3.3.1.4 Summary of m-Marketing Success Factors

In the previous sections the researcher has outlined 14 success factors for m-Marketing development, 15 success factors for m-Marketing use and deployment, and 7 factors for m-Marketing impacts. Factors in the lists clearly overlap. Table 3.3 shows a shortlist process for all potential factors that have been outlined and so 23 m-Marketing success factors are identified; the table also provides references to studies of those factors.

These 23 factors have been identified from a review of SMS Marketing literature, an example of single-channel m-Marketing. Participants in the Delphi study conducted in this thesis are asked to identify success factors for multichannel m-Marketing based on the outcome of this preliminary factor identification process. The identified factors for both approaches are scored, ranked and categorised, as reported in Chapters 4 and 5.

Table 3.3

Identification of m-Marketing Success Factors

Mobile Marketing 23 Success Factors	Development 14 (relevant to 14)	Use-Deployment 15 (relevant to 16)	Impacts 7 (relevant to 8)	Citations
User Acceptance & Satisfaction	X	X	X	(Barnes & Scornavacca, 2004; Bauer, et al., 2005; Hanley, et al., 2006; Leppaniemi & Karjaluoto, 2005; Merisavo, et al., 2007; Rohm & Sultan, 2006; Wehmeyer & Lankenau, 2007)
Permission	X	X	X	(Bamba & Barnes, 2006; Barnes & Scornavacca, 2004; Jayawardhena, et al., 2009; Karjaluot,o et al., 2008; Kavassalis, et al., 2003; Krishnamurthy, 2001; Tanakinjal, et al., 2008)
User Opt-in	X			(Bamba & Barnes, 2006, 2007; Frank & Wuersch, 2006; Newell & Meier, 2007; Ramkumar, 2007; Stuart & Eusebio, 2008)
Brand Trust		X	X	(Jayawardhena, et al., 2009; Karjaluoto, Lehto, et al., 2008; Lee, 2005; Okazaki, 2007; Okazaki, Katsukura, & Nishiyama, 2007; Roussos & Moussouri, 2004)
Value / Profit	X		X	(Facchetti, et al., 2005; Grant & O'Donohoe, 2007; Haghirian, et al., 2005; John, 2004; Lee & Jun, 2007; Mylonakis, 2004; Saxton, 2006; Scornavacca, Prasad, & Lehmann, 2006; Sun, Su, & Ju, 2005; Yang & Jolly, 2006)
Long Term Relationship		X		(Barnes & Scornavacca, 2004; Haghirian, et al., 2005; Haig, 2002; Kavassalis, et al., 2003; Merisavo, et al., 2006)
Interactivity	X	X		(Bauer, et al., 2005; Haghirian, et al., 2005; Kurkovsky & Harihar, 2006; Leppaniemi & Karjaluoto, 2005; Scharl, Dickinger, & Murphy, 2005b; Ursu, et al., 2008)
Content	X		X	(Barnes & Scornavacca, 2004; Bauer, et al., 2005; Carroll, et al., 2005; Haghirian, et al., 2005; Kavassalis, et al., 2003; Pousttchi & Wiedemann, 2006; Rau, et al., 2011)
Accuracy		X		(Carroll, et al., 2005; Haghirian, et al., 2005; Leppaniemi & Karjaluoto, 2005; Maron, Magnus, & Read, 2009; Rao & Minakakis, 2003)
Entertainment	X			(Barutçu, 2007; Haghirian, et al., 2005; Pihlström & Brush, 2008; Pousttchi & Wiedemann, 2006; Scharl, et al., 2005b; Tsang, et al., 2004)

Richness	X			(Jelassi & Enders, 2006; Patricia & Eusebio, 2005; Scornavacca & McKenzie, 2007; Ursu, et al., 2008)
Frequency	X			(Carroll, et al., 2005; Ellis, et al., 2007; Haghirian, et al., 2005; Li & Stoller, 2007; Okazaki, 2007; Scharl, et al., 2005b)
Personalization	X		X	(Bauer, et al., 2005; Haghirian, et al., 2005; Peng, 2006; Scharl, et al., 2005b; Xu, 2006; Xu, et al., 2008)
Location Awareness & Mobility	X	X		(Frank & Wuersch, 2006; Haghirian, et al., 2005; Kurkovsky & Harihar, 2006; Paay & Kjeldskov, 2009; Sarjakoski, Koivula, & Sarjakoski, 2007; Ververidis, 2002)
Privacy		X		(Beatrix, 2007b, 2008; Haghirian, et al., 2005; Merisavo, et al., 2007; Peng, 2006; Roussos & Moussouri, 2004)
Security		X	X (relevant to NSP control)	(Barnes & Scornavacca, 2004; Bauer, et al., 2005; Beatrix, 2007a, 2008; Okazaki, 2005a; Roussos & Moussouri, 2004; Scharl, et al., 2005b)
Usability		X		(Chincholle, et al., 2002; Dickinger, Haghirian, Murphy, & Scharl, 2004; Facchetti, et al., 2005; Haghirian, et al., 2005; Kurkovsky & Harihar, 2006; Scharl, et al., 2005b)
Delivery Time	X	X (relevant to Time)		(Albers & Kahl, 2008; Drossos & Giaglis, 2005; Gidofalvi, Larsen, & Pedersen, 2008b; Kargin, Basoglu, & Daim, 2009; Rau, et al., 2011)
Response Time	X	X (relevant to Time)		(Chincholle, et al., 2002; Key & Dietmar, 2007; Ramkumar, 2007; Reyck & Degraeve, 2003; Scornavacca & McKenzie, 2007)
Response Channel		X		(Jelassi & Enders, 2006; Leppäniemi & Karjaluoto, 2008; Mennecke & Strader, 2003; Merisavo, et al., 2007; Rohs & Gfeller, 2004)
Cost of Service	X	X		(Carroll, et al., 2005; Dickinger, et al., 2004; Pousttchi & Wiedemann, 2006; Rao & Minakakis, 2003; Scharl, et al., 2005b)
Quality of Service		X	X (relevant to NSP control)	(Barnes & Scornavacca, 2004; Haghirian, et al., 2005; Heinonen & Strandvik, 2007; Rao & Minakakis, 2003; Scharl, et al., 2005b)
Technical Support		X		(Barnes & Scornavacca, 2004; Carroll, et al., 2005; Haghirian, et al., 2005; Scharl, et al., 2005b; Tahtinen, 2005)

3.3.2 Understanding m-Marketing Success Factors

This section describes each success factor and explores how these factors could be considered to influence m-Marketing. Table 3.4 provides brief descriptions of the m-Marketing success factors identified in the previous section.

Table 3.4 Description of m-Marketing Success Factors

Factor	Description
User Acceptance & Satisfaction	Consumer satisfaction and profit/value oriented stakeholder's benefits of m-Marketing
Permission	m-Marketing is permission-based marketing (permission is given by consumers and brand owners)
Opt-in	User opt-in allows consumers to register into the database of the m-Marketing campaign
Brand Trust	A trust relationship between consumers and brand owners or m-Marketing service providers
Profit/Value	Profit/value oriented stakeholders (e.g., brand owners and relevant service providers) have the same goal which is to create monetary or non-monetary value that may increase their profit
Relationship	Stakeholders expect to build a long-term relationship with each other e.g., brand owner-consumer relationship
Interactivity	M-Marketing allows brand owner-consumer interaction and applies an interactive marketing approach
Content	Content of the m-Marketing message
Accuracy	Accuracy of the marketing message
Entertainment	Marketing message can be made entertaining
Richness	Marketing message can be in various formats and sent through different media
Frequency	Frequency of sending and receiving the marketing message
Personalization	m-Marketing is a personalised service
Location Awareness & Mobility	Mobile service available anywhere. Specifically m-Marketing may be location-sensitive
Privacy	Managing the privacy of the recipient (e.g., the consumer)
Security	Managing the security of the recipient (e.g., the consumer)
Usability	The m-Marketing system and service are easy to use and user friendly
Response Time	The time taken by an m-Marketing campaign to respond when a consumer sends a request
Delivery Time	The time taken by an m-Marketing campaign to deliver a message when a consumer sends a request
Response Channel	The mobile communication channel or media to make a response
Quality of Service	The quality of the mobile communication service that delivers/ receives information
Cost of Service	Cost to use the m-Marketing service for consumers
Technical Support	m-Marketing system or campaign owner (e.g., m-Marketing service providers) should provide appropriate technical support and instruction to users (consumers and brand owners)

3.3.2.1 User Acceptance and Satisfaction

User acceptance has been identified as one of the most critical variables or factors that influences m-Marketing success (Bauer, et al., 2005; Hanley, et al., 2006; Leppaniemi & Karjaluoto, 2005). In the reviewed m-Marketing literature researchers state that the ultimate goal of developing, deploying and using m-Marketing services is to obtain user acceptance (Barnes & Scornavacca, 2004; Barnes & Scornavacca, 2006; Karjaluoto, et al., 2008). According to the 2nd stage m-Marketing success model presented in Figure 3.9, acceptance has a significant role when determining m-Marketing success, while the concepts of Technology Acceptance from TAM and User satisfaction from the IS Success Model are merged in this new proposed m-Marketing theory. In the model presented in Figure 3.8, m-Marketing acceptance is evaluated by consumer satisfaction and profit/value-based stakeholder benefit; this m-Marketing acceptance model is also considered in terms of three IS success process phases: m-Marketing development, m-Marketing use and deployment, and m-Marketing impact.

3.3.2.2 Permission

User permission is a behavioural factor that ensures the a marketing message can be successfully delivered to consumers; thus it is vital that m-Marketing is permission-based. In m-Marketing, permission influences user willingness (Bamba & Barnes, 2006) and acceptance (Barnes & Scornavacca, 2004). One of the shortcomings of traditional marketing approaches is that brand owners approach consumers without getting their permission; consequently these marketing approaches may not receive the anticipated response rate (Rettie, et al., 2005). As indicated in (A. Dickinger, et al., 2004; Leppaniemi & Karjaluoto, 2005), permission of m-Marketing has a direct impact on consumer response rate. Furthermore, as mentioned in (Pura, 2005), personalisation needs permission because of anti-spam legislation. A marketing campaign that combines push and pull approaches is said to be more welcome than a push-only marketing campaign, and has a comparatively higher response rate when user permission is given (Barwise & Strong, 2003). An interactive m-Marketing approach requires users (brand owners and consumers) to give permission through an opt-in process, and in this way it is more likely that user acceptance can be achieved (Gronroos, 2004). Marketing messages sent without receivers' permission are usually unwelcome or are ignored (Jayawardhena, et al., 2009; Kavassalis, et al., 2003; Maneesoonthorn & Fortin, 2006), no matter what kind of marketing channel is used.

3.3.2.3 User Opt-in

In order to get each user's permission, opt-in is a critical process as it allows consumers to register with the database of an m-Marketing system (Barnes & Scornavacca, 2008). User opt-in can occur via various communication channels, such as SMS opt in, online registration, telephone registration or form filling in a face-to-face context. Once users have completed the opt-in process, the m-Marketing communication and process are permission-based (Newell & Meier, 2007). In some multichannel m-Marketing campaigns such as TXT2GET (TxT2GET, 2011a), double user opt-in is required. Double user opt-in is also known as confirmed opt in, which means that the user requests the subscription and then confirms (Brown, Shipman, & Vetter, 2007). User opt-in is critical to m-Marketing as it ensures and supports permission-based m-Marketing. Also, user opt-in is a service that protects consumer privacy while using m-Marketing (Newell & Meier, 2007). Distinct from user permission, user opt-in is a feature or process offered by an m-Marketing campaign while permission is a user-behavioural factor related to their willingness to use m-Marketing.

3.3.2.4 Brand Trust

Brand owners seek to generate business revenue (e.g., more sales) from m-Marketing (Bamba & Barnes, 2007). On the other hand, consumers seek to receive relevant marketing information, contingent on their permission and acceptance (Carroll, Barnes & Scornavacca, 2005). Performing m-Marketing activities as part of a well-accepted and suitable campaign can lead to a successful marketing strategy (Okazaki, et al., 2007). The trust between brand owners and consumers is a two-way process; trust cannot be established if either of the two sides fails (Karjaluoto, et al., 2008). The process for both sides can be illustrated as follows:

1) Brand owners perform marketing activities (via any available media), such as promoting and selling products and services, creating revenue, obtaining feedback and responses from consumers, creating loyalty, and obtaining consumers' acceptance in a long-term selling-buying relationship.

2) Activities for consumers include awareness (of marketing), buying products and services (for trial), creating value through use (better health, weight loss), observing evidence of effect and providing feedback, maintaining loyalty and accepting further (mobile) marketing to create closer selling-buying relationship.

M-Marketing can build up brand trust when the m-Marketing service provider is a trusted party (Jayawardhena, et al., 2009). M-Marketing inherits attributes from traditional marketing approaches. Although m-Marketing may be an innovative marketing approach, some brand owners have already marketed through traditional approaches and have established brand trust with consumers (Ghodeswar, 2008). Thus, brand trust may also be fully or partially inherited by the m-Marketing campaign. If brand owners already perform marketing activities through traditional marketing strategies and create brand trust with consumers, it is relatively easy to introduce m-Marketing to their consumers because the brand trust already exists (Chaudhuri, 2001). However, there is no strong evidence showing that m-Marketing helps brand owners to create trust. Furthermore, variables such as security or privacy of an m-Marketing system can influence consumers' trust in a particular m-Marketing channel or in regard to particular brand owners (Okazaki, et al., 2007).

3.3.2.5 Profit and Value

All stakeholders involved in m-Marketing have the same high-level goal, that is, to create value either monetary or non-monetary (Yang & Jolly, 2006). M-Marketing has been considered as a value-added service (A. Smith, 2006; S. Y. Sun, et al., 2005; Yang & Jolly, 2006). The following is an example to describe how m-Marketing generates business profit.

According to (Tsirulnik, 2011), Digital Rocket used its SMART (SMS Marketing, Acquisition and Retention Technology) platform to integrate with Mobil1 Lube Express' point-of-sale system. Digital Rocket identified consumers with their license plate number and the communication channel they preferred - text, email or direct mail. After that, Digital Rocket scheduled SMS, email or mailed postcard reminders to be sent to consumers with a coupon for a discounted oil change. More than one in five (22%) consumers who came in for service opted-in to receive future oil change reminders by text message. A total of 2,187 (out of a possible 6,849) consumers opted-in. An additional 558 consumers opted-in and preferred to receive OILCHG email reminders. Overall, 40% of consumers who visited the m-Marketing campaign chose to receive OILCHG text and/or email reminders instead of mailed reminders. The ROI for email marketing was $308 for every $1 spent, or 308:1. The cost to generate each returned consumer (cost per consumer) for email was $0.24. The ROI for text message marketing was $344 for every $1 spent, or 344:1. The cost to generate each returned consumer (cost per consumer) for SMS was $0.20.

Figure 3.10 Mobil1 Lube Express (Tsirulnik, 2011)

Figure 3.10 depicts information related to the Mobile1 Lube Express m-Marketing campaign. It is evident that when consumers use m-Marketing they do not necessarily receive significant monetary value out of it, although the use of an m-Marketing service is not costless. However, consumers appear to be willing to pay for and use m-Marketing systems because they receive benefit that can make up for the cost of use. These benefits are, for instance, reduced emotional effort, time or monetary costs, through their obtaining useful or valuable information about products and services from brand owners (Sun, Su, & Ju, 2005). Receiving timely, accurate and relevant information from pull m-Marketing is a motivational factor for consumers.

M-Marketing generates business revenues or profits for other stakeholders including brand owners, m-Marketing service providers, telecommunication providers, and advertising providers. These stakeholders receive monetary value directly or indirectly while consumers pay for the products and services and use m-Marketing; the circulation of business value therefore ensures feasibility for all participants (Ververidis, 2002).

3.3.2.6 Long Term Relationship

M-Marketing stakeholders may wish to build a long-term relationship with each other. The main reason for this is to decrease the operational cost needed, e.g., in time, effort and monetary value, to form relationships with new entities (Berry, 1995; Duncan, & Moriarty, 1998; Ellis, et al., 2007). Consumers may expect to encounter a steady source of relevant products and services, whereas businesses may expect to retain stable target consumers and to maintain market competitiveness by promoting loyalty and brand performance (Haghirian, et al.,

2008). The long-term relationship therefore contributes to the stability of the m-Marketing value chain by generating positive effects for all m-Marketing stakeholders. As mentioned in (Haghirian, et al., 2005), a high-quality and user-accepted marketing approach emphasises the forming of long-term relationships. M-Marketing is particularly concerned with this as its final goal is to obtain user acceptance. A long-term relationship is also based on user behaviours such as trust, loyalty and acceptance (Pihlström & Brush, 2008; Pura, 2005). In short, as recommended in (Barnes & Scornavacca, 2004), building long-term relationships between brand owners, consumers and other service providers is important to m-Marketing strategy and user acceptance.

3.3.2.7 Interactivity (Business Consumer Interaction)

As one of the three characteristics specific to m-Marketing, this has been addressed previously, in Section 2.3.3.

3.3.2.8 Message Content

Message content is important for consumers when deciding whether to accept marketing messages sent from various campaigns (Mackay & Weidlich, 2007). If message content is not meaningful, relevant, accurate or does not meet consumers' expectation, the messages are easily considered as unwelcome (Green, 2004). In order to attract consumers' interest or intention to receive the marketing message, its content should be designed to match potential consumers' behaviours or meet their expectations (Green, 2004). As explained by Heller (2006), with the use of current 3G or 4G mobile technologies, new dynamic features on mobile services such as multimedia or signage are used extensively. The author also suggests that message content can further deepen consumers' impression and intention (Heller, 2006). Furthermore, accuracy and correctness of the marketing message can be improved by using live verbal and visual communication (Okazaki, et al., 2007). Message content usually contains product and service information, thus it is important to encourage consumers to accept the marketing message by delivering valuable, interesting and attractive message content. As mentioned in (Haghirian, et al., 2005), consumers' attitudes toward advertising via mobile devices and advertising value are strongly related to the content of the advertising message sent via m-Marketing campaigns. Also, message content is of greatest relevance to the perceived advertising value, while a high frequency of message exposure has a negative impact on it.

3.3.2.9 Accuracy

Preliminary analysis of information in the marketing message can prevent unwanted content or inaccurate information being delivered to consumers. If the marketing message does not contain accurate or relevant information, consumer acceptance of and satisfaction with the m-Marketing campaign are negatively influenced. Also, the credibility of marketing and communication media is diminished if the information delivered to consumers is not correct and accurate (Gafni, 2008). While brand owners expect to deliver marketing information to the right target consumer group to ensure positive business outcomes such as sales, consumers also expect that the information they receive is from a credible source and is indeed accurate (Karjaluoto & Alatalo, 2007; Karjaluoto, et al., 2008). Consumers are frequently concerned about the security of communication channels, and inaccuracies may raise their suspicions as to whether the information sent through mobile communication media is secure (Haghirian, et al., 2005). In addition to their concern about how to identify and approach the correct group of consumers, brand owners also need to consider how to obtain accurate information from consumers to carry out marketing activities (Scornavacca, et al., 2006). Location-based m-Marketing services require extremely accurate location information about the user in order to provide a timely, efficient and precise m-Marketing service (Varshney, 2003; Ververidis, 2002).

3.3.2.10-11 Entertainment and Richness of Message

The dynamic nature of m-Marketing enables the m-Marketing service provider to send rich and entertaining marketing messages in real time (Davis & Yung, 2005). Current mobile technology and service have support for multimedia such as animation, flash, and 3D, which can further enhance consumers' experiences and better illustrate the marketing message content. Delivering entertaining information to consumers can increase consumers' interest in brand owners' products or services (Waldburger & Stiller, 2006). As mentioned in (Haghirian, et al., 2005), an entertaining and popular mobile game can provide a well-liked and welcome campaign through which to deliver a marketing message, usually with a positive outcome. Furthermore, richness of message can improve the quality of communication, as well as express the content more clearly. For example, compared to reading a text description of a movie, it may be more interesting to watch a trailer in order to stimulate or retain consumers' interest in watching this movie (Battiato, et al., 2009). According to (Karjaluoto & Alatalo, 2007), SMS marketing lacks richness and entertainment in its marketing messages due to restrictions on message size (as the amount of information that can be transferred through an SMS is limited to 160 characters) and technical limitations of the medium (plain text only on the SMS channel). More recently developed m-Marketing channels, such as mobile MMS or mobile Web, have significantly improved media richness and entertainment.

3.3.2.12 Frequency of Message

Consumers are aware of personalisation while using m-Marketing and expect to have a greater degree of control over how often they receive marketing information (Ellis, et al., 2007). In contrast, conventional approaches such as advertisements on television and newspapers do not allow users to control frequency of message receipt. However, m-Marketing provides an opportunity for businesses to pay attention to the frequency of marketing message reception requested by the consumer (Li & Stoller, 2007). This also provides feedback to brand owners about consumer behaviour and is important for the building of long-term relationships between brand owners and consumers. The research findings reported in (Haghirian, et al., 2005) indicate that consumers' attitudes toward advertising via mobile devices and advertising value are strongly related to the frequency of the advertising message sent via m-Marketing campaigns.

3.3.2.13 Personalization

As another of the three characteristics specific to m-Marketing this has been addressed previously, in Section 2.3.3

3.3.2.14 Location Awareness & Mobility

As the last of the three characteristics specific to m-Marketing this has been addressed previously, in Section 2.3.3

3.3.2.15-16 Security and Privacy

There have been growing concerns about the protection of users' privacy as mobile advertising can become intrusive into intimate personal space. Security and privacy are important issues related in general to electronic marketing satisfaction (Lin, 2003). These two concerns are also critical for obtaining m-Marketing acceptance (Barnes & Scornavacca, 2004; Bauer, et al., 2005). Since mobile communication is highly personalised, brand owners may be storing consumers' contact details such as their mobile phone number, email contact and so on in their own databases or customer relationship management systems, which would allow brand owners or marketing agents to identify target consumers or perform tailored marketing analysis (Roussos & Moussouri, 2004). They are also vulnerable to the theft of these details. Unlike Internet marketing, where it may be very risky to supply personal information to an unrecognised party, mobile marketing campaigns are usually highly regulated and the information storage is usually local, contextual, and with security or privacy control (Okazaki, 2005c). Mobile marketing convention suggests that no further marketing activities should be performed

without getting consumers' permission. As mentioned in (Gauzente, 2004), permission-based marketing itself is a vital process that should help to ensure security and privacy in ethical marketing practice. Furthermore, interactions between brand owners and consumers are also protected by controls put in place by the telecommunication service provider and the security of mobile applications, but even then the extent of protection depends on the level of implementation of security or privacy in the particular m-Marketing campaign (Chen et al., 2006; Miyazaki, & Fernandez, 2000; Roussos & Moussouri, 2004).

3.3.2.17 Usability

Consumers are the main message recipient of the delivered marketing information and they want to obtain accurate information. They also expect a well organised and prioritised m-Marketing service. Usability of a marketing campaign/system is directly associated with the time and effort required to understand or digest the information received by the consumers; it is also related to the level of difficulty encountered when using an m-Marketing campaign (Beatrix, 2007a; Siau & Shen, 2003b). Consumers may feel inconvenienced if the information from the m-Marketing campaign is not accurate, relevant or searchable, or if they cannot obtain the expected marketing information in a short period of time. M-Marketing usability can be influenced by mobile devices (e.g., size of screen, hardware, and functionality), user interface design of the m-Marketing application, the type of mobile communication channel, or compatibility issues (Venkatesh, Ramesh, & Massey, 2003). As summarised in (Scornavacca, et al., 2006), m-Marketing usability is usually significantly associated with users' mobile handheld devices. Resource limitations of the mobile phone can reduce the usability of an m-Marketing system. Poor usability can negatively influence users' intention to use the system, and subsequently impact on the level of acceptance achieved (Ramkumar, 2007).

3.3.2.18-19 Delivery Time and Response Time

The complete process of a marketing information exchange includes at least one round of business to consumer information delivery and consumer to business response. Due to constantly increasing market competition, businesses want to shorten the marketing information exchange process in order to improve its efficiency and interactivity. The delivery time for a marketing message and the response time for consumers' feedback are decisive factors in the marketing operation. Consumers are usually more likely to respond if: 1) the communication channel is immediately available, 2) the communication channel is accessible at low cost, and 3) the communication channel is easy to use (Becker, 2007). According to Haghirian, Madlberger and Tanuskova (2005), delivery time is related to the quality and performance of the

m-Marketing campaign. Consumers should expect some delay in the information delivery process of an m-Marketing campaign; however, consumers' satisfaction can drop if the delay is too long or becomes unacceptable. Usually, mobile communication is delivered in a real-time manner for SMS/MMS marketing campaigns (Doyle, 2001); mobile Web marketing depends significantly on issues such as bandwidth, performance, and coverage of the mobile network and service. The same concerns apply to response time.

3.3.2.20 Response Channel

Various traditional marketing communication methods can now be enacted over mobile networks, applications and devices; as a result, m-Marketing allows business-consumer interaction via various response channels or by using different mobile communication media (Bailey, 2007; Facchetti, et al., 2005). For instance, m-Marketing provides various response channels over mobile communication e.g., mobile voice, mobile messaging, mobile Web, mobile TV; as noted, these communication channels are the mobile/digital forms of traditional marketing channels (Kavassalis, et al., 2003). The m-Marketing process is therefore not a substitute for existing marketing approaches, but rather it uses mobile technology as the communication media (Huang & Symonds, 2009).

Consumers can choose the most comfortable and most preferable m-Marketing communication channel to use, accept or make a response. For single-channel m-Marketing, consumers can only choose the most suitable campaigns; in contrast, in multichannel m-Marketing consumers can also choose to use a preferred response channel.

3.3.2.21 Cost of the Service

Since all stakeholders, including consumers, brand owners and service providers, would like to receive value from m-Marketing, the quantitative (monetary) and qualitative (non-monetary) benefits gained are crucial to achieving satisfaction (Wang, 2007). For m-Marketing service providers, business revenue is usually calculated as a function of the costs associated with m-Marketing campaign development and management, thus the lower the cost for development and management, the higher business revenues are gained (Anil, Ting, et al., 2003). M-Marketing users (brand owners and consumers) are parties who pay to use such services. If brand owners have chosen to use m-Marketing, they are required to participate in the campaign. Cost of their participation may be charged by the m-Marketing campaign owner directly or through marketing agencies. Consumers pay to receive marketing messages from m-Marketing campaigns with a pull marketing strategy. Thus, the cost of any m-Marketing service is important to both brand owners and consumers.

3.3.2.22 Quality of Service

In m-Marketing, quality of service (QoS) refers to the quality of the mobile communication service used to deliver information to users and to receive users' responses (Akter & Kondo, 2007). The quality of service is therefore usually assessed in terms of reliability, security, bandwidth, latency and coverage. Since all activities for m-Marketing are carried out over a mobile communication platform, the quality of service should be an essential consideration of the m-Marketing information system development and deployment. It affects how interested the users are to use the system, as well as their overall satisfaction with m-Marketing (Macias, et al., 2004). In fact, quality of service can influence other performance factors such as delivery time, security and usability.

3.3.2.23 Technical Support

Because m-Marketing operates on top of a technology-based communication platform, its high reliance on communication technology requires efficient and effective technical support throughout the development, use and deployment, and management of m-Marketing activities (Bamba & Barnes, 2006). Technical support is usually considered to be a part of system quality, service quality and information quality. The quality of technical support can therefore enhance the system, information and service quality, all of which have a direct influence on m-Marketing satisfaction and the users' interest to use it.

3.3.3 M-Marketing Success Model

Molla (2001) adapted DeLone and McLean's IS success model to construct the eCommerce success model as depicted in Figure 3.11 (Molla, 2001). This model demonstrates that in this case Trust and Support are the most important success factors or impacts that drive user satisfaction. Molla also believes that consumer satisfaction is indicative of eCommerce success.
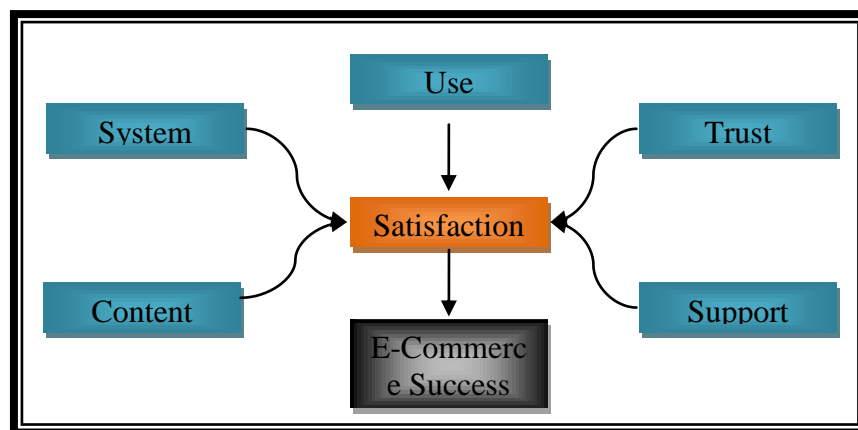
Figure 3.11 eCommerce Success Model from (Molla, 2001)

A similar approach is used in this thesis for the construction of the m-Marketing success model based on the 2nd stage m-Marketing acceptance model (Figure 3.9) in Section 3.2.3. The researcher has found that while no previous study has empirically investigated m-Marketing success, m-Marketing acceptance, which has a direct relationship with m-Marketing success, is driven by a range of variables that have been considered in prior research to be m-Marketing success factors (Mylonakis, 2004; Pousttchi & Wiedemann, 2006). As a result, the researcher has proposed an m-Marketing success model, considering that m-Marketing acceptance is a determinant of m-Marketing success (Figure 3.12).
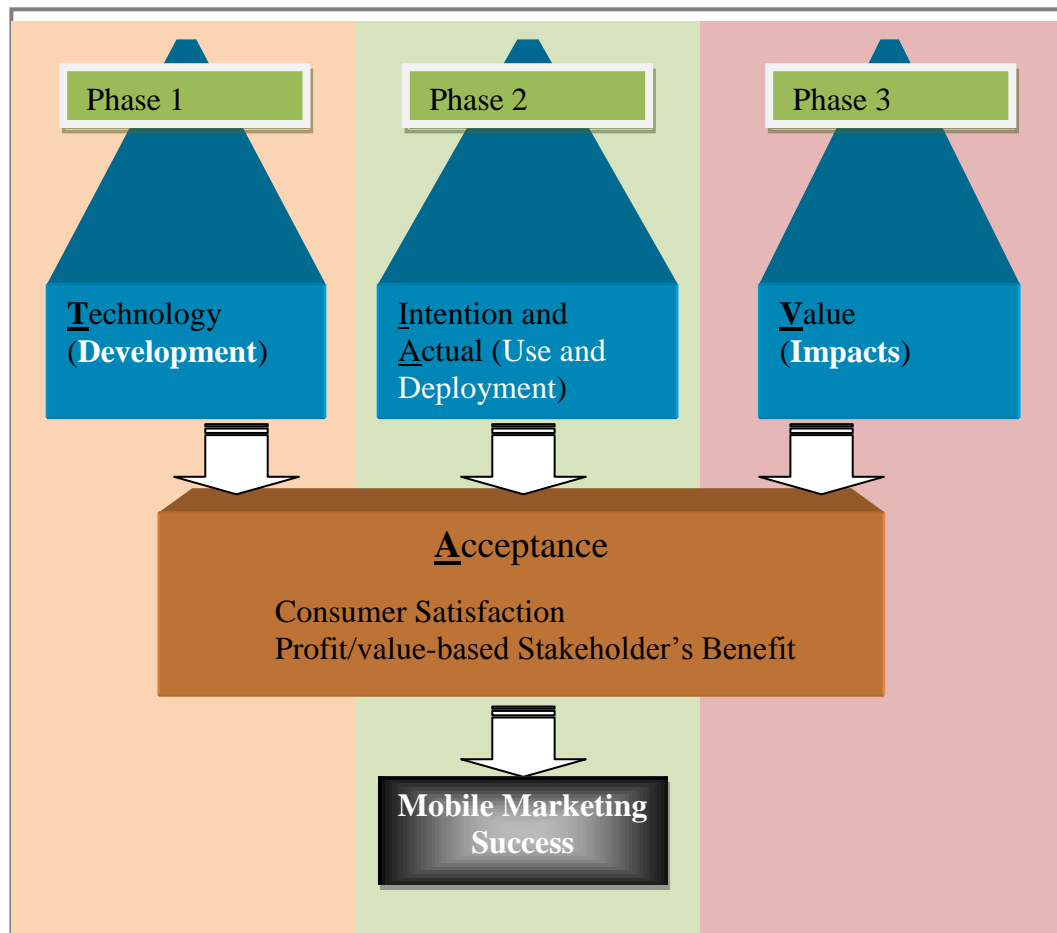
Figure 3.12. M-Marketing Success Model

The m-Marketing success model considers success in relation to the three phases of the IS success model. It also uses consumer satisfaction and profit/value-based stakeholders' benefit to evaluate m-Marketing acceptance.

3.4 Chapter Summary

In this Chapter, the researcher has explored and discussed the role of m-Marketing stakeholders. In addition, theoretical understandings regarding m-Marketing stakeholders, technology acceptance and information system success have been reviewed. Furthermore, the researcher has identified a range of m-Marketing success factors from the SMS marketing literature and has proposed an m-Marketing success model. In Chapters 4, 5 and 6 the researcher reports a multi-round Delphi study and tests the m-Marketing success model for the multichannel m-Marketing approach. Since multichannel m-Marketing campaigns are newly implemented, it is not feasible to gather sufficient data about these campaigns from users. In order to identify the factors that might contribute to multichannel m-Marketing success, a group of experts, including m-Marketing academic researchers, mobile technology professionals and marketing specialists, have been invited and participated in a three-round Delphi study. Quantitative and qualitative data have been gathered from the Delphi panel members to identify, score and categorize the success factors for single-channel and multichannel m-Marketing. An m-Marketing success model has been constructed and proposed based on an extensive literature review and leveraging a theoretical integration of IS success and technology acceptance models. According to the outcomes of the Delphi investigation, the evaluation of multichannel m-Marketing success is examined and discussed.

Chapter 4: Research Design and Methods

In Chapter 3 the researcher identified 23 success factors for single-channel m-Marketing and drew on these and other prior research outcomes and theories to propose an m-Marketing success model. This chapter now describes the research design and methods of a Delphi investigation that focuses on identifying success factors for multichannel m-Marketing. The intent is also to compare success factors for single-channel m-Marketing to those for multichannel m-Marketing. Since multichannel is an innovative m-Marketing approach only now being deployed by industry, little empirical evidence can be found in the literature or industrial reports to prove its success (or otherwise). Given this, a three-round Delphi study is conducted with a group of m-Marketing experts as participants. Data gathered from m-Marketing professionals can be used to predict the level of criticality of the identified success factors and how they influence multichannel m-Marketing success.

4.1 Research Belief, Discipline, Paradigm and Ethics

This PhD thesis explores the empirical reality of and constructs theoretical knowledge regarding m-Marketing. M-Marketing is a specific type of m-Business activity and is considered a multidisciplinary research area. In (Fouskas, et al., 2005), the authors state that m-Business researchers face an overabundance of interdisciplinary research challenges and outline a research road map reflecting two disciplines (Business and Technology) and three dimensions (Service, Value and Technology) for m-Business investigations. Given that m-Marketing is considered a specific type of marketing approach that depends on mobile technology as communication media, the researcher has utilised the TAM and IS success model to theorise and now examine multichannel m-Marketing in this thesis.

A description of the philosophical design of m-Marketing research is provided in this section. Ontology, epistemology and methodology are the keys that can facilitate the discovery and utilisation of knowledge and the generation of academic value (D. L. Morgan, 2007). Ethics in academic research provide guidelines that minimise or prevent any conflict of interest occurring that could negatively influence the research value and outcomes (Walsham, 1996). Those aspects of ontology, epistemology, methodology and ethics that are relevant to this study are therefore considered here.

4.1.1 M-Marketing Ontology

Ontology describes how things exist (or do not exist) in the world, their concepts (e.g. entities, attributes, processes), definitions and inter-relationships (Uscholda & Gruningera, 1996). As a branch of metaphysics, ontology attempts to define suitable categorisations and hierarchical relationships of a set of entities in general, and as such it should help to serve as a basis for research (Zuniga, 2001).

4.1.1.1 Business Discipline

Marketing ontology represents how the concept of marketing exists and its relationships to other entities in the world, as well as its attributes and effects (Grassl, 1999). The main objective of marketing is to establish an exchange relationship between brand owners and consumers and to maintain such a relationship as long as possible (Duncan, & Moriarty, 1998). The benefit from such a relationship for both stakeholder groups (brand owners and consumers) is to receive value that is usually over and above the cost associated with creating and maintaining such a relationship. Although there are many factors that can affect the creation and maintenance of the marketing relationship, there are a variety of approaches that can achieve this objective. The whole concept of marketing could be expressed by *brand trust*, where both connected parties can obtain value by maintaining such trust (Grassl, 1999). Mobile marketing is a specific type of marketing approach that uses mobile technology as communication media for marketing information exchange between consumers and brand owners. Mobile marketing is a value-added service. In order to encourage stakeholders' acceptance, business owners and providers (in m-Marketing, telecommunication and advertising) receive profits/business revenues, whereas consumers receive value from the marketing message/information.

4.1.1.2 Technology Discipline

Mobile technology has expanded to the extent that elements of it overlap with other technology-related disciplines, such as telecommunications, Internet, networking, and computing. The development of mobile technology has greatly changed the behaviour of mobile users (Maneesoonthorn & Fortin, 2006), the most noticeable phenomena being personalisation of the communication end point (Kim & Jun, 2008) and mobility of business services (Kurkovsky & Harihar, 2006). The provision of Internet services on mobile devices has also influenced m-Marketing significantly. As indicated in (Petrova & Huang, 2007), mobile Internet initialised the convergence between stationary Internet and mobile networks, and sped up the development of 4G mobile communication.

Since the beginning of this century the text-writing functionality of mobile devices has been widely adopted by marketing and is now known as SMS marketing (Maneesoonthorn & Fortin, 2006). In fact, the original design of the mobile phone dialling pad allowed more than just quick code dialling. From the outset its digital nature enabled users of the mobile device to compose and send text messages (Haig, 2002). Therefore, even in the original design of mobile phones there was an attempt to combine telephone and messaging facilities together.

4.1.1.3 M-Marketing (Technology and Business)

M-Marketing ontology inherits its attributes and relationships from both the mobile (technology) ontology and the marketing (business) ontology. First, mobile ontology continues to evolve along with the development of mobile technology, thus mobile communication media evolve. Second, the evolution of marketing depends on the evolution of communication media. It has been stated that m-Marketing evolves and is associated with the evolution of mobile communication media (Kavassalis, et al., 2003). Since multichannel mobile communication will be deployed with the next mobile generation, the scope of this PhD thesis includes the investigation of success factors for the future m-Marketing approach, which is *multichannel m-Marketing*.

4.1.2 M-Marketing Epistemology

This thesis reports the conduct of an empirical study that: comprehensively examines m-Marketing success factors (single-channel vs. multichannel); and, based on the participation of a group of m-Marketing experts, tests a proposed model for determining multichannel m-Marketing success (described in Chapter 3). The research questions addressed in this work are outlined and explained in Section 4.3.

A series of research activities and processes are therefore carried out to collect data in order to address the research questions. The analysis of the collected data is expected to lead to insights that form the basis of new theories and knowledge. From an epistemological point of view, a belief is not necessarily the truth. Only when the belief has overlapped with the truth, does it become true, and the overlapping area is knowledge (Guarino, 1995). The outcomes of examining multichannel m-Marketing success factors and determining the success of multichannel m-Marketing are expected to be the major contributions of this PhD thesis. A model that can be applied to evaluate and quantify m-Marketing success has been proposed. This model is expected to benefit m-Marketing service providers in achieving best practice in future multichannel m-Marketing campaign development or service deployment. Another outcome of this study will be the identification of new directions for research in the area of m-Marketing.

In this thesis, the researcher adopts a constructivist research paradigm, by proposing, evaluating and testing a model for multichannel m-Marketing success. Consequently, data is collected from a group of participants who have constructive intention and field expertise to offer informed comment on success factors for multichannel m-Marketing. The participants' profiles and selection procedure are described in Section 4.5. All the chosen participants have a high level of understanding of m-Marketing, and also a certain level of knowledge or expertise in regard to multichannel m-Marketing.

4.1.3 Ethics

Adoption of ethical behaviour is a vital requirement of the research process as it helps to ensure that any impacts of bias or conflict of interest are minimised and so the contribution is robust. Thus, an ethical approach should be maintained throughout the entire research process (Walsham, 1996). Since a group of m-Marketing experts were to participate in this study an application for ethics approval was lodged by the researcher and approved by the University's Ethics Committee (AUTEC) in late 2009. The relevant ethics application and associated materials are provided in Appendix A of this thesis. Often, in order to maintain fairness and ensure an unbiased assessment, it is recommended that research participants are chosen from the general public, not from a specific group of people. As multichannel mobile marketing is a specific and novel research area, participants chosen randomly from the public would not have understood sufficiently the topic and its research questions. As a result, a group of m-Marketing professionals (academic researchers and m-Marketing service providers from industry) were invited to participate in a multi-round Delphi survey investigation. The research method and its specific aspects are now discussed in detail.

4.2 Delphi Survey Approach

The Delphi survey (described variously as a method, study or approach) is a systematic and interactive research process that typically involves a group of experts in a specific area (anonymous to one another, but not to the researcher) who are required to answer a series of questions (Thorsen, 1996). This method is used in order to collect information and derive knowledge from targeted experts, often through post or email, and to synthesise their shared opinions (Okoli & Pawlowski, 2004). Delphi is a popular research approach in information systems investigations (Fu, Bourgeois, Fan, & Pan, 2006; Keil, Tiwana, & Bush, 2002; Lehmann, Kuhn, & Lehner, 2004a). Of particular relevance here, the Delphi approach has been applied in studies investigating future mobile services and technologies (Lehmann, et al., 2004a). As reported in (Xu & Gutierrez, 2008), a Delphi study supported the identification of success factors of mobile commerce. The approach has been used successfully in prior IT/IS-related dissertations as shown in Table 4.1.

Table 4.1
Delphi Method Used in IT/IS Dissertations

Work Title	Reference
Identifying the critical success factors for ERP implementation projects	(Carson, 2005)
Developing a model of how technologies are developing and how they may fit with an organizational strategy	(Gerdsri, 2005)
Identifying emerging IT issues of the 21st century that affect public school board policies	(Birdsall, 2004)
Identifying the criteria for measuring knowledge management efforts	(Anantatmula, 2004)

As is evident in Table 4.1, the Delphi approach has been used for research concerned with success factor identification and modelling, and for determining criteria for the investigation of concepts in IT/IS. In principle, then, it is an appropriate approach that fits the objectives of this study as outlined in Chapter 1. As mentioned in (Powell, 2003), a Delphi investigation requires a high-level of expertise of the participants who make up the expert Delphi panel. Thus, collecting knowledge from an appropriate panel of experts using the Delphi method can be considered as suitable for the investigation of the new area of multichannel m-Marketing.

In order to support the process of research synthesis this study implements a three-round Delphi approach for the investigation of multichannel m-Marketing success factors. All participants are required to answer the same sets of questions, although they do not interact with each other. The researcher acts as a Delphi administrator and collects and analyses data from the various individuals, and then draws upon this at each milestone to summarize the collected data. Since the Delphi panel is in this case made up of experts from all over the world it is not feasible to collect data in a face-to-face manner. Therefore, the survey for this Delphi study is conducted via an interactive web-based data collection form, and is supported by email communication.

A basic principle of Delphi research is to strive for consensus among the participants in the panel (Sumsion, 1998). As summarised in (DeGroot, 1974), the Delphi approach does not encourage a brainstorming process in the early stages of data collection so that individual contributions do not exert unwarranted influence on the outcomes; nevertheless, participants are usually given the opportunity to review the research outcomes at the conclusion of each round. According to (Loe, 1995), Delphi provides an alternative, value-added approach to a conventional survey. Due to its multi-round nature the Delphi approach can gather more relevant data from experts than a conventional survey and can lend support for consensus in the expert panel (Powell, 2003).

In this study, the three-round Delphi approach is supported by follow-up email messages to secure, as far as possible, participants' input for the entire Delphi process. Milestone reviews are conducted at the end of each round; participants have an opportunity to reassess their inputs before the new round starts. As a result of this approach, the researcher's questionnaire in each subsequent round

is increasingly tuned to the research questions since it is derived from the data summary and findings of the prior round(s). Moreover, the questions in subsequent rounds can be used to clarify uncertainties from previous rounds, as well as to gather additional data in order to strengthen previous findings.

There are also some disadvantages in using the Delphi method. For example, the individual experts may express *very* different views in their responses; thus a well-organised Delphi administration process is needed to apply appropriate techniques to analyze the individual opinions, in addition to working towards group consensus (Clayton, 1997). Furthermore, since good results cannot be achieved without everyone's involvement in the multi-round Delphi study it is important to monitor participants' satisfaction and to retain their interest in participation (Rotondi & Gustafson, 1996). Despite these shortcomings, the Delphi method has been widely accepted and considered as a suitable forecasting tool in business and IS research (Okoli & Pawlowski, 2004; Sumsion, 1998). Table 4.2 summarises a range of research studies that have used the Delphi method to forecast future trends in relevant topic areas. This PhD thesis investigates success factors of multichannel m-Marketing, which is considered here as a future m-Marketing approach to be applied with the next mobile generation.

Table 4.2.
Delphi Method Used for Forecasts

Aim of investigation	References
Future of Mobile Technology	(Lehmann, Kuhn, & Lehner, 2004b)
Future of Mobile Multimedia	(Lind et al., 1999)
Future of Marketing & Advertising	(Tahtinen, 2005)
Future of the Wireless Application Protocols	(Viehland & Hughes, 2002)
Future of Mobile Commerce	(Han, et al., 2002)
Future of Telecommunications	(Pelton, 1981)
Future IS for Road Transportation	(Svidén, 1988)
Future Mobile Business Model for Communication	(Pynnönen & Hallikas, 2006)

As recommended in (Dalkey, 1969), Delphi can be used as a scoring or ranking tool through which the Delphi administrator collects and corroborates individual expert responses. In (Ferri et al., 2005), the authors point out that the essence of Delphi consensus is usually obtaining quantitative estimates through qualitative assessment of evidence. In the Delphi survey conducted here, some qualitative data is gathered as a form of validation, based on whether the participants agree or disagree with the findings and analysis from each round. All participants are encouraged to strive for consensus with the final outcomes of the Delphi study.

The notion of consensus requires some further explanation here. According to (Dalkey & Helmer, 1963) "A device for helping to assure this [consensus] is to feed in only such data as have been asked for by at least one respondent and are obtainable from reliable sources, and to suggest only such theoretical assumptions as seem to represent a consensus of a majority of respondents" (p.459). Definitions of consensus within Delphi studies extend from 'true'

consensus to 'majority rules' (Williams & Webb, 1994). As discussed in Robinson (1957), Kendall's coefficient of concordance (W), a non-parametric statistic measuring the convergence of answers towards agreement, can be used in a Delphi context: strong agreement (consensus) is evidenced by $W > 0.7$, it is considered reasonable if W falls between 0.5 and 0.7, and it is said to be weak if $W < 0.5$. This research considers $W > 0.5$ to indicate a positive level of consensus for the group of m-Marketing professionals.

The next section presents the research questions and their rationale drawing on the thesis objectives stated in Chapter 1. Detailed research guidelines and the design approach are presented in Section 4.4.

4.3 Research Questions

This section formulates the research questions for this thesis based on the research objectives stated in Chapter 1.

4.3.1 Research Question 1: Success Factors Identification

What are the success factors for m-Marketing?

There are two sub questions relevant here that pertain to single and multichannel m-Marketing, respectively. Participants in the Delphi study are asked to identify new success factors apart from the 23 factors identified from the literature review in Chapter 3.

4.3.2 Research Question 2: Success Factors (Single vs. Multichannel)

What are the differences between success factors for single-channel and multichannel m-Marketing?

This comprises 4 sub-questions that need to be answered by applying appropriate statistical analysis methods (explained in section 4.8.2):

- What success factors are critical to single-channel but not critical to multichannel m-Marketing?
- What success factors are critical to multichannel but not critical to single-channel m-Marketing?
- What factors are more critical for multichannel m-Marketing than for single-channel m-Marketing?
- What factors are less critical for multichannel m-Marketing than for single-channel m-Marketing?

4.3.3 Research Question 3: The Most/Very Critical Success Factors

What are the most/very critical success factors for m-Marketing?

There are two sub questions that each pertain to single-channel or multichannel m-Marketing. This question is to be answered through applying statistical analysis methods to the collected data (explained in section 4.8.2).

4.3.4 Research Question 4: Correlations among Success Factors

What are the correlations among single-channel and multichannel m-Marketing success factors?

Apart from identifying correlations among success factors, the research also investigates whether factors are related to acceptance for both single-channel and multichannel m-Marketing (explained in section 4.8.2). There are four sub-questions related to this question:

- What pairs of factors are always correlated?
- What pairs of factors are correlated in single-channel but not in multichannel m-Marketing?
- What pairs of factors are correlated in multichannel but not in single-channel m-Marketing?
- What factors are correlated with user acceptance?

4.3.5 Research Question 5: Categorisation

How to categorise multichannel m-Marketing success factors?

Participants are first requested to categorise multichannel m-Marketing success factors based on the three-phase IS success model presented in Figure 3.3 (development, use and deployment, and impact). There are three sub-questions:

- What success factors are relevant and critical to multichannel m-Marketing development?
- What success factors are relevant and critical to multichannel m-Marketing use and deployment?
- What success factors are relevant and critical to multichannel m-Marketing impacts?

Second, categorisation of the multichannel m-Marketing success factors is performed with a factor analysis approach, explained in section 4.8.2.

4.3.6 Research Question 6: Determining m-Marketing Success

What is the role of m-Marketing acceptance in m-Marketing success?

M-Marketing acceptance is a high level of acceptance that reflects that an m-Marketing campaign meets all requirements of m-Marketing development, use and deployment, and impacts, as well as the satisfaction of m-Marketing stakeholders. The researcher aims to ask m-Marketing experts to identify, explain and justify the role of m-Marketing acceptance and its relationship to m-Marketing success.

4.3.7 Research Question 7: Drive to multichannel m-Marketing Acceptance

How to encourage multichannel m-Marketing acceptance by determining the satisfaction of both consumers and profit/value-oriented stakeholders?

This research question has three sub questions. Participants are requested to determine for each success factor whether it is critical or relevant to consumer satisfaction, to profit/value-oriented stakeholders' benefit, or to both. Statistical analysis methods are used in addressing this research question (explained in section 4.8.2).

- What success factors are critical only to consumer satisfaction for multichannel m-Marketing?
- What success factors are critical only to profit/value-oriented stakeholders' benefit for multichannel m-Marketing?
- What success factors are critical to both consumer satisfaction and profit/value-oriented stakeholders' benefit for multichannel m-Marketing?
  - ✧ equally critical to both;
  - ✧ more critical to consumer satisfaction;
  - ✧ more critical to profit/value oriented stakeholders' benefits.

Table 4.3 summarises the seven research questions and their rationale.

Table 4.3
Summary of Research Questions and Rationale

Research Questions	Motivation and Rationale
1. What are the success factors for m-Marketing (single-channel & multichannel)	Review and revisit success factors for single-channel m-Marketing; ask the experts to work out success factors for multichannel m-Marketing; (No previous study investigates success factors for multichannel m-Marketing)
2. What are the differences between single and multichannel m-Marketing success factors?	According to the literature review, multichannel mobile communication will be used for future m-Marketing service; therefore it is valuable to examine the trend of transition from single- to multichannel m-Marketing, by comparing the perceived level of criticality of success factors. Moreover, factors that are considered to be more critical for multichannel m-Marketing are likely to be given more attention for future multichannel m-Marketing development and deployment; in contrast, factors that are thought to be less critical will be likely to require less attention. (No previous study investigates single- vs. multichannel m-Marketing)
3. What are the most/very critical success factors for m-Marketing?	The most critical success factors for multichannel m-Marketing are likely to be focused on when designing or developing m-Marketing campaigns or deploying m-Marketing services. Industry players may have strong interest in the outcome.
4. What are the correlations among single-channel and multichannel m-Marketing success factors?	After identifying, scoring and ranking all m-Marketing success factors, it is valuable to take a further step and investigate the relationships between the factors. Since m-Marketing acceptance is a subject of, and a core factor for, m-Marketing success, it is essential to find out what factors are correlated with acceptance for both single-channel and multichannel m-Marketing.
5. How to categorize multichannel m-Marketing success factors?	The researcher seeks to categorise the identified m-Marketing success factors by applying an adapted IS success model which is a ground theory for the m-Marketing research conducted here. Alternatively, m-Marketing success factors can be categorised by applying factor analysis. (There is no previous m-Marketing study that applies the IS success model for categorising success factors)
6. What is the role of acceptance to m-Marketing success?	There are many uncertainties concerning the role of acceptance in m-Marketing success. Therefore, a group of experts are recruited to clarify these terms.
7. How to encourage multichannel m-Marketing acceptance by determining the satisfaction of both consumers and profit/value-oriented stakeholders'?	The researcher integrates the technology acceptance model and satisfaction of m-Marketing stakeholders, in order to determine the level of criticality of each success factor to satisfaction. (There is no previous m-Marketing study that integrates TAM with satisfaction.)

4.4 Research Design Guidelines

This section considers research design guidelines and examines previous Delphi studies to determine how to choose a suitable number of rounds and participants. Table 4.4 outlines some IS/IT research studies that have used the Delphi survey as a research method.

Table 4.4
IS/IT Delphi Research Studies with Numbers of Rounds and Participants

Work Title	Citations	Number of Rounds	Number of Participants
Information systems management issues for the 1990s	(Niederman, Brancheau, & Wetherbe, 1991)	3	114/126/104
Capturing flexibility of information technology infrastructure: A study of resource characteristics and their measure	(Duncan, 1995)	2	21/19
Key issues in information systems management:1994-95 SIM Delphi results	(Brancheau, Janz, & Wetherbe, 1996)	3	78/87/76
Organisational mechanisms for enhancing user innovation in information technology	(Nambisan, Agarwal, & Tanniru, 1999)	2	11/11
Critical technology management issues of new product development in high-tech companies	(Scott, 2000)	3	20/19/17
Reconciling user and project manager perceptions of IT project risk: A Delphi study	(Keil, Tiwana, & Bush, 2002)	3	15/15/10
Identification of legal issues for computer forensics	(Brungs & Jamieson, 2005)	3	11/11/10
Identifying research priorities and needs in mobile learning technologies for distance education: A Delphi study	(Kurubacak, 2007)	3	72/72/72

As is evident from Table 4.4, most Delphi investigations are accomplished with either 2 or 3 rounds, which is also supported in (Delbeq, Ven, & Gustafson, 1975). This research utilises a three-round Delphi study.

In terms of numbers of participants, as seen in Table 4.4, this ranges between 11 and 126 in the prior studies reviewed. As mentioned in (Delbeq et al., 1975), there are two types of Delphi samples: heterogeneous and homogeneous. When the Delphi panel is homogeneous, working with 10 to 15 participants may yield sufficient results. On the other hand, if disparate groups are involved, then a larger sample will likely be required and several hundred people might need to be recruited. Since this PhD thesis targets a group of m-Marketing experts to join the Delphi panel, in the initial design phase the researcher aims to have

between 24 and 36 participants to complete the first round. Also, Table 4.4 shows that the number of participants in later rounds of a Delphi study often decreases and some participants who have completed some round(s) might not complete the entire Delphi study. The researcher intends to have at least 16 participants who can complete the final round, in order to gather sufficiently rich data for the analysis phase.

Table 4.5 presents the Delphi study research design guidelines adopted from literature. The research conducted in this work follows these guidelines throughout the three rounds in order to ensure validity of the research study.

Table 4.5

Research Design Guidelines to Ensure Validity of Delphi Study

Terms	Descriptions	Citations
Participants & Researchers	After formulating research question(s), the researcher selects an appropriate group of experts who are qualified to answer the Delphi questions. The researcher then administers and analyses their responses.	(Okoli & Pawlowski, 2004)
Interpretation	In addition to what is required of a survey, the Delphi method can employ further construct validation by asking experts to validate the researcher's interpretation and categorization of variables.	(Hasson, Keeney, & McKenna, 2000)
Anonymity	Respondents are anonymous to each other throughout the whole process of the study; however they are never anonymous to the researcher.	(Okoli & Pawlowski, 2004)
Richness of data	In order to address the lack of data richness issue of traditional surveys, Delphi studies inherently provide richer data because of their multiple iterations and their response revision due to feedback.	(Rosemann & Bruin, 2005)
Retain Interest of Participation	In order to retain participants' research interest, an online data collection form is created using the e-Delphi approach, which saves both the researcher's and the participants' time and effort in the data collection process.	(Worth, Nurmatov, & Sheikh, 2010)
Reach Consensus	Participants provide comments for each round outcome, by indicating either agreement or disagreement. Participants' inputs are always assessable and modifiable before the new round starts during the whole data collection process.	(Ferri, et al., 2005; Worth, et al., 2010)

According to (Powell, 2003), the Delphi methodology does not expect the participants in the expert panels to be representative samples for statistical purposes. Thus, a large number of participants is not essential; however, the participants should have expertise in the research field and consensus of the Delphi panel should be achieved. Furthermore, according to the nature of the Delphi approach discussed in (Dalkey, 1969), participants should always be able to revise their comments and feedback and build toward group consensus; consequently, any Delphi study should consist of at least two rounds.

The next section describes the process of selecting participants.

4.5 Participant Selection Procedure

The researcher has followed a 4-step participant selection procedure adopted from (Okoli & Pawlowski, 2004), in order to target a group of m-Marketing experts as prospective participants in the Delphi study.

Step1	• Prepare Knowledge Resource Nomination Worksheet (KRNW)
Step2	• Populate KRNW with Names
Step3	• Rank Experts
Step4	• Invite Experts
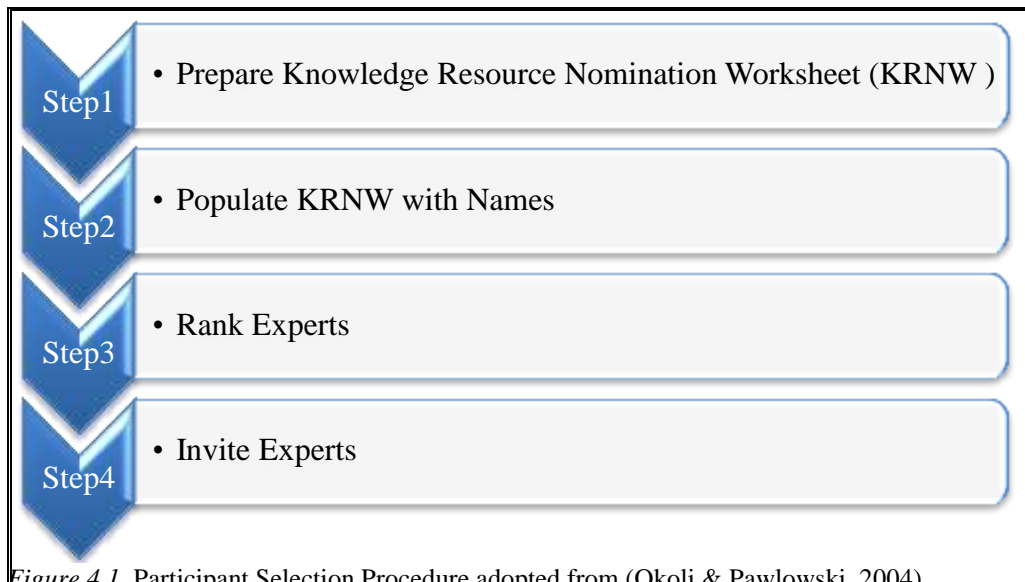
Figure 4.1 Participant Selection Procedure adopted from (Okoli & Pawlowski, 2004)

4.5.1 Prepare Knowledge Resource Nomination Worksheet

The researcher prepares a knowledge resource nomination worksheet (KRNW), and identifies what kind of experts would be potentially suitable participants in this Delphi study. Two groups of prospective participants have been identified:

- Academic researchers in m-Marketing or in other areas relevant to the topic;
- M-Marketing professionals or business managers who have launched m-Marketing campaigns.

There are two main reasons for choosing the above groups to participate. First, multichannel mobile communication is a future trend of m-Business and m-Marketing, so the chosen target groups need to have essential knowledge and expertise in this research area. Second, they should be the potential audiences or users of this thesis. The research outcomes should provide preliminary guidelines for future m-Marketing campaign development and service deployment, which may attract the interest of industrial players (e.g. m-Marketing service providers). Also, the outcomes of this study are likely to help identify new directions for m-Business and m-Marketing research.

4.5.2 Populate the KRNW

1) Write in names of known individuals in relevant research disciplines or with appropriate academic skills;
2) Write in names of known individuals in relevant m-Marketing business or with appropriate industrial skills;
3) Write in names of individuals drawn from academic and practitioner literature.

4.5.3 Rank Experts

1) Create sub-lists, one for each group outlined in the previous step;
2) Categorize the experts according to the lists;
3) Rank experts within each list based on relevance. For example, for academic researchers, the judgement is made by the qualification, research area or number of m-Marketing related publications; for m-Marketing professionals, the judgement is made by position, size of organization and experience in multichannel m-Marketing.

4.5.4 Invite Experts

The researcher sent 64 invitations to the most appropriate participants identified from a range of international sources – academic literature, industry websites and literature, business directories and listings. Of the 64 invitees, 31 (48%) accepted the invitation to participate in the first round of the Delphi study. As only participants who have completed previous round(s) can continue with the next round, the researcher sent 31 invitations for the second round of the study. The researcher received a 70% response rate for Round 2 and 22 participants completed the questionnaire. Nine participants withdrew from the process, because of the following two main reasons: *Busy with own study or work* or *Lost contact.* In the third round of the study the researcher sent 22 invitations and received 19 responses, so the response rate was 86%, while contact was lost with three participants.

No explicit participant rejection or exclusion criterion was put in place; unless the invited professionals chose to no longer take part their responses were welcomed. As noted above, during the Delphi process some participants dropped out with the main reason being the time commitment required in Round 1. No participants left the Delphi process because they were lacking interest or strongly disagreed with the process or its outcomes. In order to maintain participants' interest and maximise their retention through Rounds 2 and 3, the researcher shortened the tasks and participation time and also re-sent a summarised outcome report, a new round introduction report and a new round invitation to the participants.

4.5.5 The Delphi Panel

Table 4.6 shows the country and position of all 31 experts on the Delphi panel. The panel includes 12 m-Marketing researchers and 19 m-Marketing providers or practitioners. Due to the research design, participants remain anonymous and their identities are not disclosed.

Table 4.6
Delphi Panel – Role and Location

Industry Professionals		
Participant	**Position**	**Country**
1	General Manager m-Marketing (Telecommunication)	New Zealand
2	Marketing Manager (Telecommunication)	New Zealand
3	Technical Executive (Wi-Fi based m-Marketing business)	New Zealand
4	E-Marketing specialist (Software Development Project Manager)	New Zealand
5	M-Marketing strategist (Worldwide Brand)	New Zealand
6	M-Marketing business manager	New Zealand
7	Marketing Manager (Telecommunication)	Australia
8	Technical Manager m-Marketing provider	Australia
9	City Branch Executive China Mobile	China, HK, Taiwan
10	Telecom China Major City Branch Marketing Executive	China, HK, Taiwan
11	HK Senior Business Analyst (Telecommunication)	China, HK, Taiwan
12	M-Marketing Officer (Telecommunication)	USA
13	M-Marketing Strategist (Telecommunication)	USA
14	General Manager / Location-based m-Marketing Firm	USA
15	Branch Technical Manager (Telecommunication)	UK
16	Information System Manager / m-Marketing firm	UK
17	National Mobile Project – Technical Officer	Singapore
18	Business Manager - Web & Mobile Marketing	Japan
19	Technical Officer – m-Marketing provider	Germany
Academic Professionals		
Participant	**Research Area / University**	**Country**
20	Senior ICT Researcher (m-Marketing)	New Zealand
21	Integrated Marketing Communication Researcher	New Zealand
22	Mobile Business Researcher	New Zealand
23	Experienced m-Marketing Strategist	New Zealand
24	Recent PhD graduate (m-Marketing)	New Zealand
25	Senior ICT Researcher (m-Marketing)	Australia
26	Mobile Business Researcher	Australia
27	Mobile Business and Advertising Researcher	Australia
28	International Researcher in m-Marketing	USA
29	E-Business & M-Business Researcher / Lecturer	China, HK, Taiwan
30	Mobile Advertising Researcher	Greece
31	Mobile Advertising Researcher	Finland

To summarise, two groups of experts were invited: mobile marketing researchers and industry professionals. Members on this Delphi panel should be working in the mobile marketing field and have a willingness to work together to evaluate multichannel mobile marketing success. As with any study that relies on a sample, the results are contingent on those involved. Participants with different knowledge backgrounds or even from different countries may have different perspectives on multichannel mobile marketing success, thus it is acknowledged that a different group of participants could provide alternative research findings, especially if they represent particular industry interests or experiences, or are from countries with more or less advanced mobile industries. Through this study, the researcher hopes that the research outcomes driven by the chosen group's insights represent the views of a useful first sample of experts who could provide informed comment, but other deeper and/or more specific analyses should follow in the near future.

4.6 The e-Delphi Process

An interactive web-based data collection form is used for data collection and analysis in this Delphi study. The e-Delphi approach employed in this study is similar to the approach outlined in recent literature (Worth, et al., 2010); see Figure 4.2.

Based on the findings of the literature review the researcher first identified success factors for SMS marketing and considered how multichannel mobile communication would impact m-Marketing. In doing so the differences between single-channel and multichannel m-Marketing success factors were examined.

In order to establish consensus about these outcomes the researcher uses a Delphi survey. Typically the Delphi approach involves circulating a set of statements, assumptions, solutions or options to be anonymously scored by participants, thereby minimising the risk of actual or perceived peer pressure influencing participants' responses (Worth, et al., 2010). Scoring for importance, mean comparison and percentage agreements on the statements are some common analysis approaches in Delphi studies, as shown in (Dickson, et al., 1984; Hagen et al., 2008; Worth, et al., 2010). The outcomes are then circulated to the participants who have the right to re-score them.

The e-Delphi study involves undertaking this consensus-building work through e-mail or via an online data collection form rather than in face-to-face meetings, thereby enabling the researcher to engage with a geographically dispersed expert panel in an efficient and cost-effective way (Granello & Wheaton, 2004). The e-Delphi questionnaire for each round is piloted with two non-participants (supervisors or researcher's colleagues) to test and refine the usability of the data collection form, to proof-read the questionnaire content, and to estimate the participation time required.
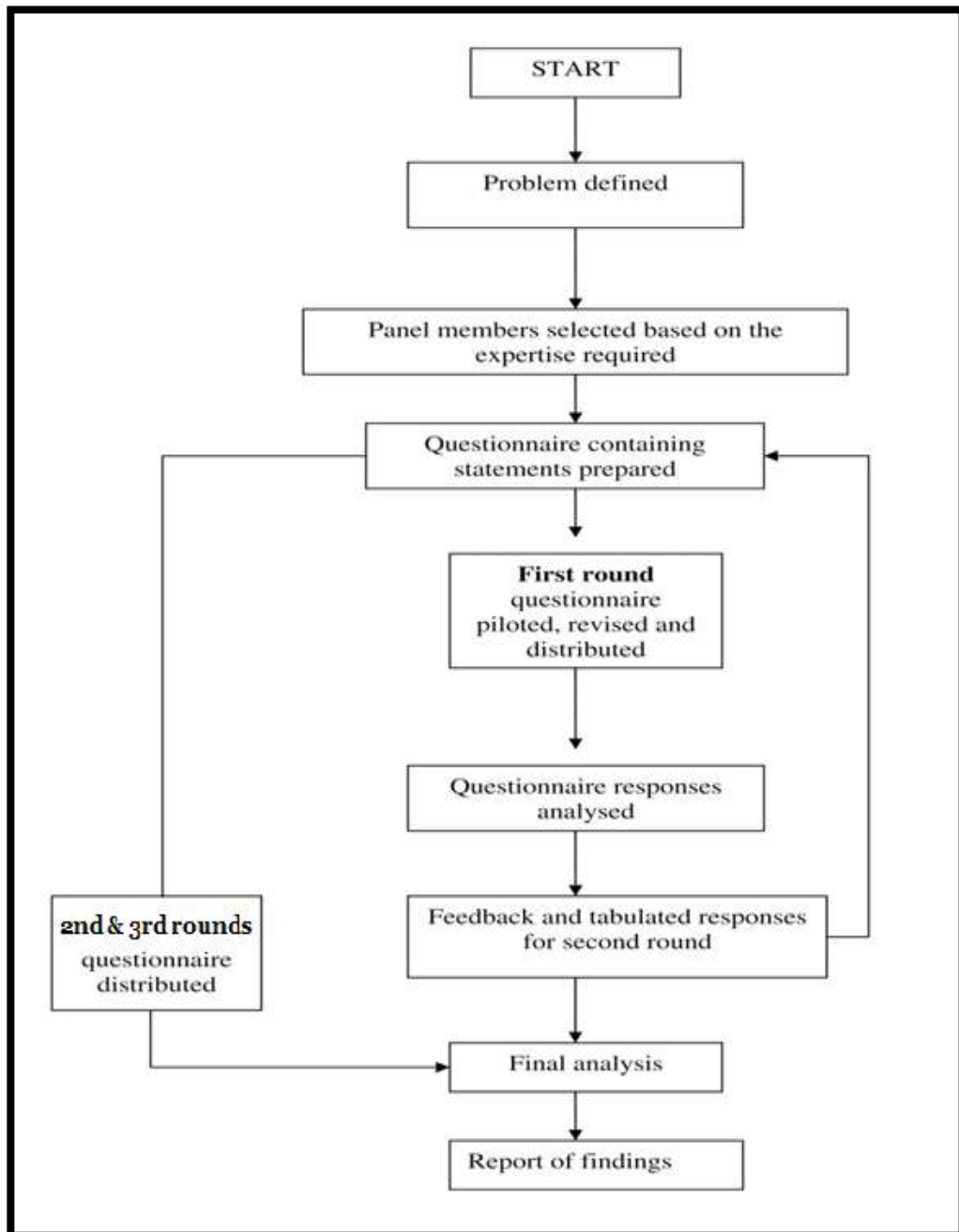
Figure 4.2. Flowchart for e-Delphi study (Worth, et al., 2010)

In the first round, participants are given a list describing the 23 single-channel m-Marketing success factors derived from the literature. Their first task is to assign a score to each factor according to how relatively critical they perceive the factor to be for single-channel m-Marketing. Participants work on an online data collection form which provides them with a digital scale ranging from 0 to 1000, with only the five endpoints explicitly visible on the screen (see Figure 4.3); the scoring system used by participants is shown in Table 4.7.

Figure 4.3. Five-point Likert Scale

The maximum score on the scale is 1000 and the minimum score is 0. There are four score ranges shown in Table 4.7. If a success factor is given a score between 0 to 249, it is considered least critical to the form of m-Marketing being considered; a score between 250 to 499 means the factor is not critical; a score between 500 to 749 means it is critical; and a score more than 750 means it is very critical. In the data analysis conducted in this thesis, if a factor receives a mean score less than 500, this is taken to indicate that this factor is perceived as not critical to the form of m-Marketing being considered.

Table 4.7
Five-point Likert Scale and Score Range

Description	Score or Range
Maximum (Most Critical)	1000
Minimum (Not critical at all)	0
The Five Points	0 (Least), 250 (Less), 500 (Average), 750 (Very), 1000 (Most)
Least Critical	0 - 249
Not Critical	250 - 499
Critical	500 – 749
Very Critical	750 – 1000

The score range 0 to 1000 and 5-point Likert scale represent a popular tool for participants' scoring particular statements by indicating their relative importance (Endacott, Clifford, & Tripp, 1999; Rockwell, Furgason, & Marx, 2000; Worth, et al., 2010). The digital scale design employing a visual slider supports the capture of experts' scores reflective of their immediate initial impression of factors rather than asking them to provide an exact, and overly precise, assessment value (Baumgartner & Steenkamp, 2001). Next, the experts are asked to indicate whether, in their opinion, each one of the factors is critical to multichannel m-Marketing, and if so, to provide a score for the multichannel approach. Experts are also requested to identify any new factors that they think may be relevant and meet the requirements for a successful m-Marketing campaign. They are also invited to provide further comments on their scoring. Finally experts are requested to indicate the process category each factor most likely belongs to (of m-Marketing development, use and deployment, and impact), according to the m-Marketing success model (shown as Figure 3.11).

The outcomes for the first round are then summarised and sent to the Delphi panel where participants are free to revisit and modify their input. Free text comments are encouraged in order to capture the reasons for participants' opinions in the first round or for any amendments made. In this particular design, "0" is the minimum score given on the digital scale. When a factor is considered *not relevant* by a participant, a zero score is automatically assigned. All zero scores are included in later data analysis. In Chapter 5, both analysis approaches (including and excluding the zero scores) are presented; however the discussions of findings are based on analyses that include all zero scores.

In the second round of the Delphi study the newly identified factors from round one are examined in greater detail. First, participants are asked to indicate whether each of the new factors is critical to both single-channel m-Marketing and multichannel m-Marketing. Second, for each new factor perceived as critical for single-channel and multichannel m-Marketing, each expert is asked to assign a score on the same five-point digital scale (from 0 to 1000). If a participant considers that a particular factor is not relevant to either single-channel m-Marketing or multichannel m-Marketing the factor is automatically assigned a zero score. Finally, experts are requested to indicate the category to which the new factor most likely belongs (m-Marketing development, deployment and impact) according to the m-Marketing success model. In the very last section of the second round questionnaire, all participants are given a question that requires them to indicate if a relationship exists between m-Marketing acceptance and m-Marketing success. Comments and feedback are invited to support their choice. The outcomes from the second round are summarised and sent to the Delphi panel, and participants are free to revisit and modify their input. Free text comments are again encouraged in order to capture the reasons for participants' opinions expressed in that round.

In the third round of the Delphi study, the 23 m-Marketing success factors found in the literature review in Chapter 3 plus the newly identified factors are all examined, with the purpose of assessing how they relate to and encourage m-Marketing acceptance. Participants are asked to indicate whether the m-Marketing success factors are critical and related to user satisfaction, to profit/value-oriented stakeholders' benefit, or to both. The outcomes from the third round and the overall outcomes are summarised and sent to the Delphi panel in a follow up email, where free text comments from participants are again encouraged in order to capture further the reasons for their opinions in that round.

In order to obtain a quantitative assessment of the level of criticality of each factor, an average score is calculated for each factor for both single- and multichannel m-Marketing. Consensus on the average scores across the Delphi Panel is achieved at the end of the first round (existing factors) and the second round (new factors). In terms of categorization (into development, use and deployment, and impacts), the researcher chooses the most relevant category for each factor according to the majority of the voting results.

For any newly identified factor, if more than 50% of the participants agree that it is critical to m-Marketing, this factor is added to the list and becomes an m-Marketing success factor in the study. The average scores are used to rank factors according to the following ranking scale (outlined in Table 4.7): any factor that has an average score above 750 is considered as 'very critical' for the respective type of m-Marketing; and any factor that has an average score below 500 is considered as 'not critical' for the respective type of m-Marketing. Furthermore, by comparing scores for single-channel and multichannel m-Marketing success factors, any factor with a significant difference (positive or negative) in score is considered as a 'more critical' or 'less critical' factor for multichannel m-Marketing. All data analysis techniques and methods used are described in Section 4.8.

4.7 Delphi Data Collection

This section describes the data collection process and provides details of the web-based data collection form and the survey questionnaires.

4.7.1 Toward Delphi Consensus

Participants need to spend 30-45 minutes on average to complete the questionnaire for each round; therefore the researcher communicates interactively with the participants through the entire data collection process, with the purpose of retaining their interest in and commitment to the process. Email is used for communication between participants and the researcher. For example: 1) All participants receive emails with the analysed outcomes for each round and are given opportunities to revise their input as their own participating form remains unlocked until each round is completed. 2) A follow-up email that contains overall research outcomes is sent to participants after the completion of the three-round Delphi study. The online data collection form collects quantitative data into an XML file and exports qualitative information to a text file. When a new round starts, the data from the previous round is locked in the XML file; however, the text file is always open for comments or feedback. During the data collection process and email communication participants would provide qualitative feedback in regard to the summary or outcomes for each round rather than making a change to the already given scores.

4.7.2 Data Collection Tool

In order to provide a communication platform for interaction between the researcher and participants, an online data collection form was built and provided on a personally hosted website. The website (Figure 4.4) also contains the following information:

- Information about the research project (available to participants);
- Information about the researcher (available to participants);
- Contacts details of the researcher and supervisors (available to participants);
- Information about research ethics (available to participants);
- Success factor management console – this enables the researcher to add or remove success factors, and edit the description of those factors (only available to researcher);
- Participant management console – this consists of participants' contact details, URL to questionnaires and response status (only available to researcher);
- Statistics – the website performs some calculations and statistical analysis for the collected data (only available to researcher).

Figure 4.4. Screenshot of the Online Data Collection Form (Participant's Page)

The online data collection form not only saves administrative effort for data collection in the Delphi study, but also supports the analysis of the research data (e.g. calculating the average scores, calculating the changes in % rating, rankings and so on).

4.7.3 Questionnaires

The data collection took place through three separate questionnaires administered over a period of 9 months in 2010 and 2011.

4.7.3.1 Background Information

In each round, participants are given the following background information about the research study, also shown in the screenshot in Figure 4.5:

- Information about this round, including number of questions, type of questions and description of the tasks;
- Description of scores and ranges (same as Table 4.7);
- Definition of single-channel and multichannel m-Marketing;
- Research outcomes summary for previous round(s);
- Description of m-Marketing success factors.
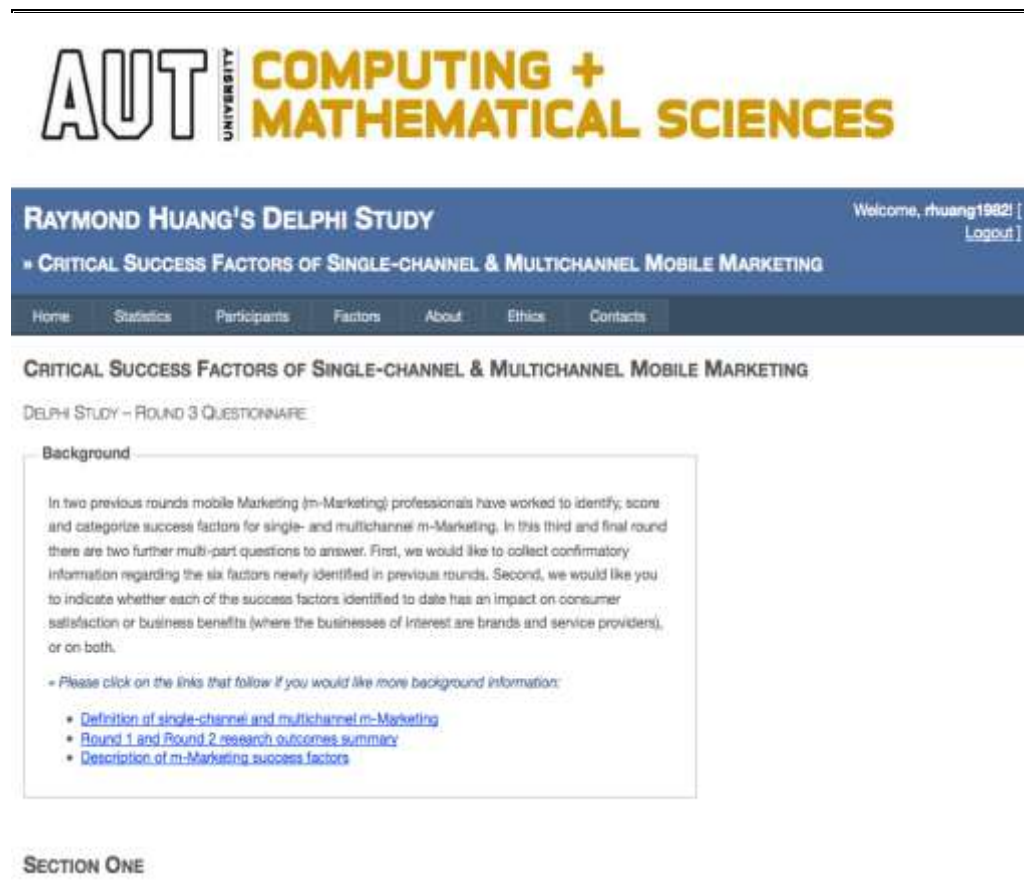
Figure 4.5. Screenshot of the Background Information provided to participants

4.7.3.2 Questionnaire for Round 1

In the first round participants are asked to identify, score and categorize success factors of single-channel and multichannel m-Marketing. The following activities are required for each individual question, and each question is related to an m-Marketing success factor. In this round, the researcher collects mainly quantitative data. Figure 4.6 provides an example of a round one question.

Figure 4.6. Example of round one questionnaire

Participants are asked to:

1. Give a score to this factor (for single-channel m-Marketing) according to its perceived level of criticality;
2. Indicate whether this factor is relevant to multichannel m-Marketing, by selecting **YES** or **NO.**

Note: Any factor that receives at least a 50% Agreement rate from all participants is added to the multichannel m-Marketing list of factors.

3. If '**YES**' is selected in Step 2, then give a score to this factor (for multichannel m-Marketing) according to its perceived level of criticality; if '**NO**' is selected in Step 2, then go directly to Step 4.
4. Select a category from (m-Marketing development, m-Marketing use and deployment, and impacts of m-Marketing) for this multichannel m-Marketing success factor according to the m-Marketing success model presented in Figure 3.11.

Finally, there is a separate last question to identify new m-Marketing success factors apart from the 23 listed, as shown in Figure 4.7.

Figure 4.7. Last question in First Round

4.7.3.3 Questionnaire for Round 2

Average scores computed for the initial 23 success factors are considered for consensus by all participants via email and these constitute the outcomes from first round. Next, the invitation and URL for the second round questionnaires are generated, while the online form for the first round is closed to participants. In the second round, participants are asked to confirm, score and categorize the new m-Marketing success factors that were identified from the last question of the first round. Any factor that received at least a 50% Agreement rate from all participants was added to the final list (of single-channel and multichannel m-Marketing factors). In this case the researcher collects both quantitative and qualitative data.

There are three groups of questions that serve to verify some of the findings from the first round; participants are requested to place comments in the form (as qualitative data), as shown in Figure 4.8.

3. Comparing to single-channel mobile marketing, the following factors become much more critical for multichannel mobile marketing:

Factor 1: Profit / Value

▫ Please comment:

Value is always important - doesn't matter how many channels you're using!

Factor 2: Usability

▫ Please comment:

Usability is also always important - doesn't matter how many channels you're using!

Figure 4.8. Screenshot of Comments Collection Form in the second round.

Comments are also requested regarding the factors for which ratings are different between single-channel and multichannel m-Marketing. Finally, participants are asked to choose between two statements regarding m-Marketing success reflecting one of the two figures as follows:

a. Successful m-Marketing development, successful m-Marketing use & deployment, and successful m-Marketing impacts mean m-Marketing success.
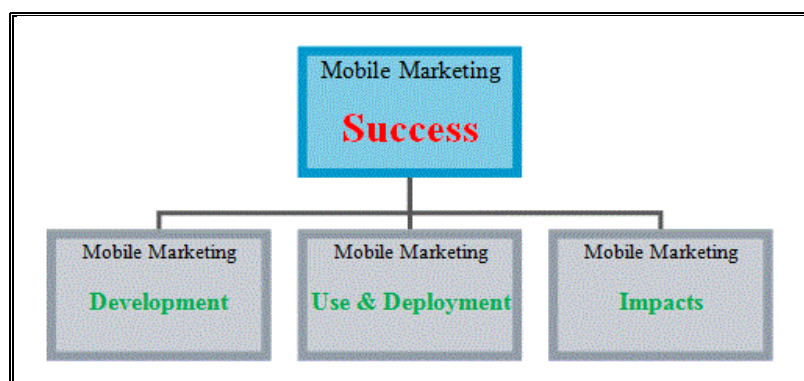
b. Successful m-Marketing development, successful m-Marketing use & deployment, and successful m-Marketing impacts can drive to m-Marketing acceptance (driven by consumer satisfaction and profit oriented stakeholder's benefit), and mean m-Marketing success.
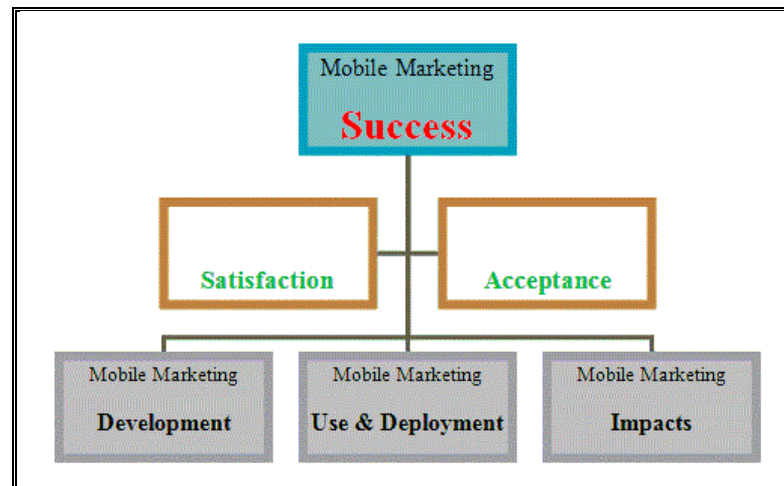
4.7.3.4 Questionnaire for Round 3

In the two previous rounds mobile Marketing professionals worked to identify, score and categorize success factors for single- and multichannel m-Marketing. An overall summary of participants' qualitative comments and the result of the last section of the Round 2 questionnaire (addressing the role of acceptance), presented as the outcomes from the second round, are considered for consensus by all participants via email. This is followed by generation of invitations and URLs for the third round questionnaire, while the online form for the second round was closed to participants.

In m-Marketing, the consumer is considered to be a stakeholder who does not receive direct commercial benefit from m-Marketing, even though ultimately they may save money as a result of acting on an m-Marketing message. In contrast, brand owners and other service providers are considered to be profit/value-oriented stakeholders. As outlined in Chapter 3, in order to drive m-Marketing acceptance and m-Marketing success, achieving both consumer satisfaction and profit/value-oriented stakeholder benefits is believed to be important. In the third round, the researcher asks the participants to indicate whether each of the success factors identified to date has an impact on consumer satisfaction or on business benefits (where the businesses of interest are brands and service providers), or on both (see Figure 4.9).

Figure 4.9. Screenshot of Questionnaire for the third round

The questionnaire includes further statements that serve to verify some of the findings from the second round regarding differences in factor criticality and the potential combination of factors.

4.7.3.5 Final Follow-up email

An overall summary of the entire Delphi study, including all findings and outcomes, is sent to all participants.

4.8 Delphi Survey Data Analysis Methods

The researcher has collected both quantitative and qualitative data from the three-round Delphi study. This section describes the data analysis methodologies used for analysing the primary data in the study. The researcher compares single-channel m-Marketing and multichannel m-Marketing in terms of their success factors; in addition, reported levels of criticality of those success factors are examined. Finally, the research data are used to test the theoretical m-Marketing success model proposed in Chapter 3, and are then applied to evaluate multichannel m-Marketing success.

4.8.1 Basic Analysis from the Interactive Website

The e-Delphi website provides the following basic statistical analysis of the gathered research data:

- Number of Invitations, Total Number of Respondents, Response Rate;
- Average Score of success factors (single-channel and multichannel);
- Relevance of success factors for multichannel m-Marketing;
- Overall result for categorising the success factors (Rounds 1 & 2);
- Overall result for role of m-Marketing acceptance (Round 2);
- Overall result for success factors and their relevance to m-Marketing acceptance (Round 3);
- Qualitative data viewer;
- XML to CSV or TEXT exporter.

4.8.2 Statistical Analysis Methods

In order to achieve the research objectives and answer the research questions in a reliable way the researcher needs to use systematic and robust statistical methods to analyse the collected data. Chapter 5 presents the detailed data analysis and findings. The analysis uses both quantitative and qualitative approaches, similar to the approach presented in (Worth, et al., 2010). As noted, this Delphi study has three rounds. Since each round has different objectives the analysis for each round can, and should, be different. Below is a summary of the analysis methods used in this research and the intentions underpinning the use of each. In this study, the researcher has used SPSS as the main statistical analysis tool. SPSS has been a widely used tool in previous m-Marketing investigations (Barnes & Scornavacca, 2008; Barutçu, 2007; Suher & İsper, 2011).

Note that in Round 1 of the study, if a participant indicates that in their opinion a factor is 'not relevant to multichannel m-Marketing', a zero score (the lowest score) is assigned automatically to this factor. This is explained to participants in the data collection screen. Thus, it is suggested that participants are unlikely to select 'not relevant' when they consider the criticality and relevance of such a factor even if it is not strongly related to the multichannel approach; however, once 'not relevant' is selected, a zero score is given. As a result, the zero scores are treated as participants' genuine input rather than a missing score, and as a result they are included in all statistical analyses, unless otherwise stated.

4.8.2.1 Descriptive Statistics

The researcher has generated a statistical summary of the collected data in order to understand the general features and characteristics of the dataset. The descriptive statistics such as mean and median can give an indication of the success factors that are considered *Not* critical to m-Marketing (with mean score less than 500) and *Very* critical (with mean score over 750) for single-channel and multichannel approaches. Moreover, descriptive statistics also indicate the skewness and kurtosis of the data i.e., specific characteristics of the data distributions. Due to the small sample size of the dataset, and the high factor ratings expected (based on prior research findings), it is highly likely that the data will not be normally distributed. It is critical to take this into consideration when selecting statistical methods in order to ensure that the results are reliable (Joanes & Gill, 1998; Liu, Parelius, & Singh, 1999). Many commonly used statistical tests assume that data follow a normal distribution. However, when the distribution of the data is not normal, non-parametric statistical tests need to be used. Non-parametric techniques do not rely on data belonging to any particular distribution and do not assume that the structure of a model is fixed. In contrast to parametric statistics, non-parametric models are usually distribution-free models, which do not rely on assumptions that data are drawn from a given probability distribution.

4.8.2.2 Test of Difference

This research study also considers differences between success factor ratings for single-channel and multichannel m-Marketing, mainly to find out what success factors are considered to have become more critical with the emergence of multichannel m-Marketing. There are various candidate methods to test the difference between two related samples, depending on the sample characteristics. If the data are normally distributed, the researcher can use a two-sample t-test for paired-samples mean comparison; if the data distributions are not normal, the researcher should use non-parametric alternatives such as the sign test and the Wilcoxon matched-pairs Signed-Rank Test (Conover & Iman, 1981; Mundry, 1998).

The two-sample t-statistic is defined as:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - 0}{SE_{(\bar{x}_1 - \bar{x}_2)}}$$

or

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$$

where $\bar{x}_1$ and $\bar{x}_2$ are the means of the two samples, and $\sigma_{\bar{x}_1 - \bar{x}_2}$ is a measure of the variability of the differences between the sample means.

The Wilcoxon Signed-Rank Test is named after Frank Wilcoxon who first proposed this method (Wilcoxon, 1945). The main aim of this test is to rank the absolute value of the difference between two samples, then restore the signs, and finally calculate whether the sum of ranks with positive signs equals the sum of ranks with negative signs. The null hypothesis of this test is that the distribution of differences is symmetric about zero.

The researcher uses paired-sample tests to check if the success factor ratings for single-channel and multichannel m-marketing are different based on the normality of the sample (Baldi & Long, 2001). From the result of the test, specific questions such as which factor is more critical to single-channel or multichannel m-Marketing can also be answered.

Based on the assumption stated in (Gardner & Altman, 1986), if the test statistic is significant at the 5% level, then the means of the two samples may be considered to be statistically different. In statistical significance testing, the p value is the probability of obtaining a test statistic at least as extreme as the one that was actually observed, assuming that the null hypothesis is true. One often rejects the null hypothesis when the p-value is less than the significance level, which is typically set at 0.05 or 0.01. In this thesis, significance at the 0.01 (1%) or 0.05 (5%) levels signify 99% or 95% confidence of the significant difference. As a consequence, the researcher only discusses factor differences with p values less than or equal to 0.05.

The intent of the initial research rounds was to identify success factors that were rated significantly differently for the single-channel and multichannel approaches; thus a 2-tailed Wilcoxon Signed-Rank Test was considered to be suitable. However, using this approach the direction of the change in rating cannot be identified i.e. whether the importance of a given factor has increased or decreased given the emergence of multichannel m-Marketing. Subsequently, a one-tailed Wilcoxon Signed-Rank Test was conducted. When using a one-tailed test, the possibility of a rating change in one direction can be tested.

Given the focus of this thesis on multichannel approaches, factors that are considered as being more or less critical for multichannel m-Marketing are considered major findings and so qualitative data from participants are sought specifically in relation to these factors.

4.8.2.3 Correlation Analysis

While this research has identified multiple success factors for both single-channel and multichannel m-Marketing, it is highly likely that some factors are inter-correlated and so can be reduced or combined to produce a smaller number of factors. In terms of the latter, it may be beneficial to run a factor analysis, a mathematical procedure that uses orthogonal transformation to convert these correlated factors into a smaller set of values of uncorrelated factors. The benefit of this test is to reduce the number of factors and find the most critical success factors for single and multi-channel m-Marketing (Muthen & Kaplan, 1985). The outcome of this test can help answer research question four as to how best to categorize the success factors for multichannel m-Marketing (DiStefano, 2002). Based on the description of (Kim & Mueller, 1978), the principal component method of factor analysis is used in this thesis; this method seeks values of the loadings that bring the estimate of the total communality as close as possible to the total observed variances. Communality is the part of the variance explained by the factors and the larger the communality the more successful the factor model can be said to be in explaining the variables.

In the factor analysis conducted here (explained below), the number of factors and their nature are hypothesized in advance; in some situations the factors are clear and easy to interpret, in other cases the number of factors involved and their meanings may not be clear. Therefore, there can be a degree of subjectivity in explaining the results of factor analysis. Given the small sample size available in this study, in addition to factor analysis the researcher also runs a correlation test on the success factors for single- and multichannel m-Marketing to check the interdependence of the success factors. The correlation coefficient **r** is a scalar quantity in the interval between +1 and -1, and it is defined as the ratio of the covariance of the sample population to the product of their standard deviations.

$$Correlation = r = \frac{\text{cov}(X,Y)}{\sigma_X \sigma_Y}$$

The correlation coefficient is a direct measure of the relationship between two factors or samples. If **r** is +1 this indicates a perfect fit of a positive linear relationship and it means the two factors are perfectly correlated, therefore potentially explaining the same characteristic. On the other hand, if a negative value is obtained, it means the two factors are negatively correlated, implying that as the value of one factor rises the value of the other factor decreases. A

value of **r** close to zero indicates a poor linear relationship and the two factors are likely to be unrelated in this way. The outcome of correlation tests helps the researcher to identify relationships among m-Marketing success factors for both single-channel and multichannel approaches, and also to answer the relevant research question about the correlations between m-Marketing success factors and outcome factors such as user acceptance.

In statistics, Spearman's rank correlation coefficient or Spearman's rho, named after Charles Spearman and often denoted by the Greek letter ρ (rho) or as *r*, is a non-parametric measure of statistical association between two variables. It assesses how well the relationship between two variables can be described using a monotonic function. If there are no repeated data values, a perfect Spearman correlation of +1 or −1 occurs when each of the variables is a perfect monotone function of the other. The *n* raw scores X_i, Y_i are converted to ranks x_i, y_i, and ρ is computed from these:

$$\rho = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2 \sum_i (y_i - \bar{y})^2}}.$$

The strength of the relationship is indicated by the value of the correlation coefficient. The significance of the relationship is again expressed in probability levels p (e.g., significant at p = 0.05 or at 5% level). This shows how unlikely it is that a given correlation coefficient will occur given no relationship in the population. In this thesis, a coefficient value that is higher than 0.7 (i.e. r^2 is greater than or equal to 0.49) is considered as having a usefully strong correlation; in addition, a coefficient value that is higher than 0.5 (r^2 is greater than or equal to 0.25) is considered as having some useful correlation (Gabriel, et al., 2002; Springer et al., 1999). In Chapter 5, the researcher highlights relationships that meet the following three conditions:

1) Pairs of factors that are correlated across single-channel and multichannel approaches; (examine factors with strong correlations only)
2) Pairs of factors that have a significant difference between single-channel and multichannel m-Marketing approaches; (examine factors with strong correlations only)
3) Factors correlated with user acceptance (if no factor has strong or some correlation with user acceptance, the researcher will investigate the factors with r value close to 0.5).

An additional condition is also applied to all of the analysed and discussed correlated factors, namely that their correlation is significant at the p=0.01 level (due to the high number of pairs of correlated factors only those that are significant at the p=0.01 level are discussed in detail). Moreover, only those pairs of factors that are strongly correlated will be analysed and discussed in detail in Chapters 5 and 6, since these represent the most substantive associations and contribute most to answering the research questions.

4.8.2.4 Factor Analysis

Factor analysis is based on the correlation matrix of the variables involved. Such an analysis of correlations usually needs a large sample size. Tabachnick and Fidell (2001) advise on this issue: 50 cases is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good and 1000 or more is excellent (Tabachnick & Fidell, 2001). As a rule of thumb, a bare minimum of 10 observations per variable is necessary to avoid computational difficulties. For the purpose of this analysis, the researcher has replaced missing values with mean scores so as to ensure that there are 22-31 observations per variable, which meets this minimum rule of thumb requirement for factor analysis. In this thesis, the researcher has conducted a factor analysis with the purpose of categorising m-Marketing success factors for single-channel and multichannel approaches. Chapter 6 discusses the outcomes of the factor analysis and their comparison with participants' input. However, given the emphasis of the thesis on multichannel m-Marketing, the researcher focuses on the categorisation of multichannel m-Marketing success factors only in further discussion.

4.8.2.5 Consensus of a Majority

The researcher has followed the rule previously described at the end of Section 4.2 to build toward consensus through a majority of indication, selection and voting at certain stages of this Delphi study, as shown in Table 4.8.

4.8.2.6 Frequency Analysis

In the third Delphi round the researcher collects data concerning participants' indications of the level of criticality and relevance of each m-Marketing success factor as they relate to consumer satisfaction and stakeholders' benefits. The frequency of each selection (from six in total) is counted for analysis and discussion.

Table 4.8
Tasks and Outcomes for Activities Related to Consensus of a Majority

Round	Task	Outcome
1	Participants are asked to indicate whether a factor from the previously identified 23 single-channel factors is critical and relevant to multichannel m-Marketing.	If more than 50% agree that a factor is critical and relevant to multichannel m-Marketing, this factor is confirmed as a success factor for multichannel m-Marketing.
1	Participants are asked to choose the most appropriate category for the 23 previously identified success factors.	A category with the highest percentage or multiple categories that have similar percentages of participants' selections are considered the most appropriate category/ies for this m-Marketing success factor.
2	Participants are asked to indicate whether a newly identified factor is critical and relevant to single- and multichannel m-Marketing.	If more than 50% of participants agree that this factor is critical and relevant to single-channel m-Marketing, this newly identified factor becomes a success factor for single-channel m-Marketing; this is also applied to the multichannel approach.
2	Participants are asked to choose the most appropriate category for the newly identified m-Marketing success factors.	The category with a majority of participants' selections is considered the most appropriate category for each m-Marketing success factor.
2	Participants are asked to vote for the most appropriate description and model that reflect the role of m-Marketing acceptance in m-Marketing success.	The option that receives a majority of the vote is considered the best answer for subsequent discussion.

4.8.3 Qualitative Data Analysis

The researcher collects a range of qualitative data through the course of the Delphi study. Most of these qualitative data are used to support participants' agreement or disagreement with some particular findings and to justify their opinions or inputs. The qualitative data gathered are related to the areas shown in Table 4.9.

In this study, statistical analysis of the quantitative data is the major technique employed whereas the qualitative data is used to highlight or emphasise participants' opinions and arguments. The intent of the latter is to be illustrative rather than exhaustive. As a result the research uses selected descriptive statements to clarify or exemplify results and outcomes already identified from the quantitative analysis.

Table 4.9
Qualitative Data and Comments for the Delphi Study

Round	Tasks and Descriptions
1	Descriptions of newly identified m-Marketing success factors
2 & 3	Comments re Not Critical success factors for multichannel m-Marketing
2	Comments re More Critical success factors for multichannel m-Marketing
3	Comments re Not Critical success factors for single-channel m-Marketing
2 & 3	Comments re Very Critical success factors for single- & multichannel m-Marketing
2	Justification for selection of last question in Round 2, to describe the role of acceptance in m-Marketing success
3	Comments re overall Round 1 & Round 2 outcomes

4.9 Chapter Summary

This Chapter presents the research questions, describes the Delphi research method and explains the conducted e-Delphi approach. The data collection tool, questionnaires, and data analysis methods are also described. The Delphi data collection and analysis approach follows a procedure summarised in Table 4.10; in addition, the relationships between the Delphi questionnaire, outcomes and findings, and the research questions are also shown.

Table 4.10.
Delphi Procedures (Data Collection, Analysis and Findings)

Round/ Activity	Data Collection Activity Description	Data Collection Activity Outcomes	Analysis Technique	Research Findings	Research Questions
1/a	Score the 23 factors for single-channel m-Marketing	Scores for 23 single-channel m-Marketing factors are collected	Descriptive Statistics, Mean Score	N/A	N/A
1/b	Indicate whether the 23 factors are relevant to multichannel m-Marketing	Multichannel m-Marketing success factors are determined	Consensus of a Majority Determination	N/A	N/A
1/c	Score the 23 factors for multichannel m-Marketing	Scores for 23 multichannel m-Marketing factors are collected	Descriptive Statistics, Mean score	N/A	N/A
1/d	Select the most relevant category for multichannel m-Marketing for the 23 factors	The 23 multichannel m-Marketing factors are categorized	Consensus of a Majority Selection Correlation & Factor Analysis	N/A	N/A
1/e	Identify new m-Marketing success factors	New m-Marketing success factors are identified	Qualitative Analysis	N/A	N/A
2/a	Determine whether the newly identified factors are relevant to single- / multichannel m-Marketing	With the outcome of 1/b, a (close to) complete list of m-Marketing success factors	Consensus of a Majority Determination Descriptive Statistics	Full lists of m-Marketing success factors (single-channel and multichannel) are outlined	RQ1 is answered
2/b	Score the newly identified factors for both single- & multichannel m-Marketing	With the outcomes of 1/a and 1/c, full lists of success factors have scores for both single- and multichannel m-Marketing	Test of Difference Descriptive Statistics Correlation Analysis	Work out the more or less critical multichannel m-Marketing success factors Work out the most critical (single- & multi channel) m-Marketing success factors Work out the correlations among m-Marketing success factors	RQ2 is answered RQ3 is answered RQ4 is answered

2/c	Select the most relevant category for multichannel m-Marketing for any new factors	With the outcome of 1/d, the full list of multichannel m-Marketing success factors are categorised	Consensus of a Majority Selection Factor Analysis	Categorization of multichannel m-Marketing success factors is completed according to the 3-phase I/S success model and a factor analysis	RQ5 is answered
2/d	Choose the most relevant model and description regarding the role of m-Marketing acceptance, provide further comments to justify the answer	Identify the role of m-Marketing acceptance and its relationship to m-Marketing success	Consensus of a Majority Selection Qualitative Analysis	M-Marketing acceptance is considered in relation to m-Marketing success; may provide support to the proposed m-Marketing success model	RQ6 is answered
3/a	Indicate whether each multichannel m-Marketing success factor is relevant and critical to user satisfaction, profit oriented stakeholders' benefit, or to both	The multichannel m-Marketing success factors are assigned into groups based on satisfaction of stakeholders	Consensus of a Majority Selection Qualitative Analysis	The multichannel m-Marketing success factors are categorized based on satisfaction of m-Marketing stakeholders	RQ7 is answered

In next Chapter, the researcher follows the Delphi procedures presented in Table 4.8 to conduct data collection and analysis, to derive research findings and to obtain answers to all research questions.

Chapter 5: Primary Data, Analysis and Findings

Chapter 4 describes the Delphi approach and sets out the data collection process and data analysis methodologies employed in this thesis. As described, the Delphi study conducted here consists of three rounds; in Round 1, 31 respondents took part, of these 22 respondents participated in Round 2, and 19 in Round 3. This chapter describes the primary research data collected, it presents the analysis of that data, and it states the research findings based on the Delphi study. In this chapter only the results and findings are presented, as a detailed discussion of the outcomes follows in Chapter 6. Similarly, while participants' comments are included in this chapter there is minimal discussion and interpretation provided. Rather, the researcher has numbered each comment here and refers to some of them in the discussion in Chapter 6.

5.1 Round 1: Data Analysis and Findings

In the Round 1 data collection, 23 factors said to be related to single-channel m-Marketing were presented to participants. According to their perceived levels of criticality, participants were asked to give a score to each factor for both single-channel m-Marketing and multichannel m-Marketing, the latter only if they first agreed that the factor was relevant and critical to multichannel m-Marketing. Furthermore, participants selected the most relevant category (from m-Marketing development, m-Marketing use and deployment, and m-Marketing impacts) for each individual m-Marketing success factor. (Note that in Sections 5.1.1 and 5.1.2 data analysis is reported in two versions – one that includes zero scores and one that excludes zero scores (as per Section 4.8.2) – and the outcomes are compared.)

5.1.1 Descriptive Statistics (23 m-Marketing Success Factors)

Tables 5.1 and 5.2 present the statistics obtained for the 23 success factors of single-channel (S-) and multichannel (m-) m-Marketing originally derived from prior literature. In observing Table 5.1 (which excludes 0 scores) and Table 5.2 (which includes 0 scores) it is evident that the standard deviation for all factors is relatively large and the skewness statistics are generally different from zero. This means the data are not normally distributed (because the normal distribution has a zero skewness value). Negative skewness means the left tail is longer and the distribution is left skewed, while positive skewness reflects a longer right tail and the distribution is right skewed. Furthermore, kurtosis is a measure of the peakedness of the distribution; higher kurtosis normally means more of the variance is the result of infrequent extreme

deviations. The normal distribution has a kurtosis of zero and, as seen in Tables 5.1 and 5.2, the kurtosis results for both single- (S-) and multichannel (m-) success factors are all different from zero. Based on the standard deviation, skewness and kurtosis results, the researcher concludes that the data sets for both single-channel and multichannel m-Marketing success factors are generally not normally distributed, thus any statistical tests used need to be appropriate to such non-normal datasets.

The levels of criticality of the various factors are based on the descriptions of scores and ranges set out in Chapter 4 (in Table 4.7). Any factor with a mean score higher than 750 is considered *Very Critical*; a factor with a mean score between 500 and 749 is considered *Critical*; and factors with scores less than 500 are considered *Not Critical*. In terms of identifying the *Very Critical* m-Marketing success factors, analysis both including and excluding zero scores produced the same results. User acceptance & satisfaction and permission are perceived to be *Very critical* for single-channel m-Marketing; User acceptance & satisfaction, profit/value, and usability are considered *Very critical* for multichannel m-Marketing. However, from Table 5.1, only three *Not critical* factors for multichannel m-Marketing are found, namely entertainment, frequency, and brand trust. From Table 5.2, three more factors are noted as *Not Critical* to multichannel m-Marketing when the 0 scores are included - location awareness & mobility, response time, and technical support. More detailed discussion of these results is presented in Chapter 6.

In order to confirm that the data are generally not normally distributed, normality tests for both single- and multichannel m-Marketing success factors were conducted, and the results are presented in Table 5.3. Two sets of tests for normality were run (for the single-channel and multichannel variable lists). Since the dataset comprises fewer than 2000 elements, Shapiro-Wilks is a suitable test.

Table 5.3 indicates that the scores for single-channel m-Marketing are generally normally distributed except for permission and entertainment, whereas the scores for most of the multichannel m-Marketing success factors are not normally distributed. Based on the standard deviation, skewness, and kurtosis statistics and the Shapiro-Wilks test results, the researcher concludes that there is sufficient evidence to indicate that the datasets may not be normally distributed, and so therefore the most appropriate (i.e., conservative) approach to take is to presume non-normality and use statistical tests that are suitable for non-normal datasets, when comparing single-channel and multichannel scores.

Table 5.1

Descriptive Statistics for the 23 m-Marketing Success Factors Ordered by Mean Score (Excludes 0 Scores)

	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
m-Brand trust	31	112	675	429.37	149.98	-0.439	.421	-.501	.821
m-Frequency	31	188	679	470.19	123.29	-0.346	.421	.058	.821
m-Entertainment	31	153	787	479.60	160.79	0.025	.421	-.604	.821
S-Relationship	31	346	722	502.16	102.795	.111	.421	-.917	.821
m-Location awareness & Mobility	31	192	800	505.23	139.97	-0.265	.427	.178	.821
S-Response Channel	31	136	841	505.32	188.631	.165	.421	-.838	.821
S-Richness	31	64	759	508.06	163.025	-.644	.421	.464	.821
S-Entertainment	31	132	745	508.81	168.428	-.658	.421	-.367	.821
S-Frequency	31	51	841	511.81	175.156	-.368	.421	.294	.821
S-Response time	31	217	729	513.58	120.636	-.563	.421	.107	.821
m-Response time	31	203	749	533.79	126.54	-.597	.421	1.196	.821
m-Technical support	31	156	729	533.89	144.00	-1.171	.421	.89	.821
m-richness	31	102	858	550.79	156.20	-0.843	.421	1.375	.821
S-Brand Trust	31	212	780	517.97	138.445	-.066	.421	-.189	.821
S-Location awareness & Mobility	31	183	954	524.03	204.831	.273	.421	-.619	.821
m-Relationship	31	149	836	533.74	154.559	-.813	.421	.490	.821
S-Interactivity	31	303	761	540.94	127.940	-.071	.421	-.539	.821
S-Technical support	31	156	905	553.87	188.843	-.049	.421	-.465	.821
S-Delivery time	31	207	853	564.81	159.592	-.399	.421	-.104	.821
m-User opt in	31	254	929	581.45	188.972	-.054	.421	-.880	.821
m-Interactivity	31	286	866	604.37	142.63	-0.491	.421	-0.296	.821
S-User opt in	31	275	978	596.45	192.686	.114	.421	-.825	.821
m-Delivery time	31	242	934	629.07	150.04	-0.561	.421	0.698	.821
S-Profit/Value	31	461	846	643.32	115.547	.133	.421	-1.246	.821
S-Quality of service	31	273	1000	649.35	183.958	-.020	.421	-.681	.821
m-Response channel	31	451	929	654.03	117.584	.481	.421	-.114	.821
m- Accuracy	31	458	968	657.26	123.73	.509	.421	.136	.821
m-Quality of service	31	515	1000	660.32	102.070	1.376	.421	3.232	.821
S-Usability	31	273	950	665.61	172.736	-.458	.421	-.065	.821
m-Permission	31	405	1000	667.61	118.471	-.572	.421	1.283	.821
m-Personalization	31	514	1000	668.97	108.428	1.092	.421	1.396	.821
S- Accuracy	31	493	892	693.19	113.269	-.035	.421	-.844	.821
S-Privacy	31	392	1000	699.61	167.930	.332	.421	-.422	.821
m-Content	31	390	939	699.93	132.69	-0.228	.421	-.233	.821
S-Cost of service	31	268	1000	708.39	174.732	-.327	.421	-.061	.821
m-Privacy	31	380	1000	713.58	152.706	.054	.421	-.384	.821
m-Cost of Service	31	483	1000	719.35	120.042	.268	.421	.000	.821
S-Security	31	276	1000	728.32	175.133	-.527	.421	.199	.821
m-Security	31	164	1000	733.06	161.204	-1.331	.421	4.150	.821
S-Content	31	508	1000	736.16	127.950	-.008	.421	-.538	.821
m-Profit/Value	31	507	1000	760.03	140.048	-.133	.421	-.593	.821
S-User Acceptance & Satisfaction	31	503	909	766.87	108.70	-0.620	.421	-.356	.821
m-User Acceptance & Satisfaction	31	580	966	768.19	99.049	.065	.421	-.518	.821
m-Usability	31	420	1000	780.00	145.91	-0.407	.421	.027	.821
S-Permission	31	453	986	786.81	133.98	-0.963	.421	.780	.821

S- Single-channel m-Marketing success factors
m- Multichannel m-Marketing success factors

Table 5.2

Descriptive Statistics for the 23 m-Marketing Success Factors Ordered by Mean Score (Includes 0 Scores)

	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
m-Location awareness & Mobility	31	0	800	370.50	256.565	-.439	.427	-1.208	.821
m-Entertainment	31	0	787	386.77	240.381	-.390	.421	-.835	.821
m-Frequency	31	0	679	409.52	197.098	-.988	.421	.296	.821
m-Response time	31	0	749	413.26	252.482	-.762	.421	-.819	.821
m-Brand trust	31	0	675	415.52	166.408	-.654	.421	-.023	.821
m-Technical support	31	0	729	482.23	210.735	-1.270	.421	.656	.821
S-Relationship	31	346	722	502.16	102.795	.111	.421	-.917	.821
S-Response Channel	31	136	841	505.32	188.631	.165	.421	-.838	.821
S-Richness	31	64	759	508.06	163.025	-.644	.421	.464	.821
S-Entertainment	31	132	745	508.81	168.428	-.658	.421	-.367	.821
S-Frequency	31	51	841	511.81	175.156	-.368	.421	.294	.821
S-Response time	31	217	729	513.58	120.636	-.563	.421	.107	.821
m-richness	31	0	858	515.26	204.184	-1.186	.421	1.310	.821
S-Brand Trust	31	212	780	517.97	138.445	-.066	.421	-.189	.821
S-Location awareness & Mobility	31	183	954	524.03	204.831	.273	.421	-.619	.821
m-Relationship	31	149	836	533.74	154.559	-.813	.421	.490	.821
S-Interactivity	31	303	761	540.94	127.940	-.071	.421	-.539	.821
S-Technical support	31	156	905	553.87	188.843	-.049	.421	-.465	.821
S-Delivery time	31	207	853	564.81	159.592	-.399	.421	-.104	.821
m- Accuracy	31	0	968	572.45	251.860	-1.359	.421	1.462	.821
m-User opt in	31	254	929	581.45	188.972	-.054	.421	-.880	.821
m-Interactivity	31	0	866	584.87	177.333	-1.303	.421	2.647	.821
S-User opt in	31	275	978	596.45	192.686	.114	.421	-.825	.821
m-Delivery time	31	0	934	608.77	185.811	-1.316	.421	2.927	.821
m-Content	31	0	939	609.61	268.609	-1.425	.421	1.307	.821
m-Permission	31	0	1000	622.61	103.351	-.272	.421	1.033	.821
S-Profit/Value	31	461	846	643.32	115.547	.133	.421	-1.246	.821
S-Quality of service	31	273	1000	649.35	183.958	-.020	.421	-.681	.821
m-Response channel	31	451	929	654.03	117.584	.481	.421	-.114	.821
m-Quality of service	31	515	1000	660.32	102.070	1.376	.421	3.232	.821
S-Usability	31	273	950	665.61	172.736	-.458	.421	-.065	.821
m-Personalization	31	514	1000	668.97	108.428	1.092	.421	1.396	.821
S- Accuracy	31	493	892	693.19	113.269	-.035	.421	-.844	.821
S-Privacy	31	392	1000	699.61	167.930	.332	.421	-.422	.821
S-Cost of service	31	268	1000	708.39	174.732	-.327	.421	-.061	.821
m-Privacy	31	380	1000	713.58	152.706	.054	.421	-.384	.821
m-Cost of Service	31	483	1000	719.35	120.042	.268	.421	.000	.821
S-Security	31	276	1000	728.32	175.133	-.527	.421	.199	.821
m-Security	31	164	1000	733.06	161.204	-1.331	.421	4.150	.821
S-Content	31	508	1000	736.16	127.950	-.008	.421	-.538	.821
m-Usability	31	0	1000	754.84	200.514	-1.844	.421	5.732	.821
m-Profit/Value	31	507	1000	760.03	140.048	-.133	.421	-.593	.821
S-User Acceptance & Satisfaction	31	503	909	766.87	108.701	-.620	.421	-.356	.821
m-User Acceptance & Satisfaction	31	580	966	768.19	99.049	.065	.421	-.518	.821
S-Permission	31	453	986	786.81	133.981	-.963	.421	.780	.821

S- Single-channel m-Marketing success factors
m- Multichannel m-Marketing success factors

Table 5.3
Normality test for m-Marketing Factor Scores (23 Factors, Includes 0 Scores)

	Shapiro-Wilks		
	Statistic	N	Significance
S-User Acceptance & Satisfaction	0.941	31	0.090
S-Permission	0.925	31	0.032*
S-User Opt-in	0.971	31	0.541
S-Brand trust	0.987	31	0.959
S-Profit / Value	0.946	31	0.117
S-Relationship	0.947	31	0.129
S-Interactivity	0.964	31	0.380
S-Content	0.975	31	0.675
S-Accuracy	0.971	31	0.553
S-Entertainment	0.931	31	0.045*
S-Richness	0.961	31	0.318
S-Frequency	0.979	31	0.791
S-Personalization	0.969	31	0.503
S-Location Awareness & Mobility	0.973	31	0.596
S-Privacy	0.951	31	0.167
S-Security	0.967	31	0.434
S-Usability	0.962	31	0.333
S-Delivery time	0.971	31	0.540
S-Response time	0.942	31	0.096
S-Response channel	0.964	31	0.366
S-Cost of service	0.978	31	0.745
S-Quality of service	0.984	31	0.903
S-Technical support	0.988	31	0.973
m--User Acceptance & Satisfaction	0.984	31	0.911
m-Permission	0.720	31	0.000**
m-User option	0.967	31	0.433
m-Brand trust	0.958	31	0.257
m-Profit / Value	0.968	31	0.474
m-Relationship	0.931	31	0.048*
m-Interactivity	0.915	31	0.017*
m-Content	0.809	31	0.000**
m-Accuracy	0.822	31	0.000**
m-Entertainment	0.922	31	0.027*
m-Richness	0.891	31	0.004**
m-Frequency	0.882	31	0.003**
m-Personalization	0.920	31	0.023*
m-Location Awareness & Mobility	0.863	31	0.001**
m-Privacy	0.982	31	0.867
m-Security	0.911	31	0.014*
m-Usability	0.850	31	0.001**
m-Delivery time	0.912	31	0.015*
m-Response time	0.834	31	0.000**
m-Response channel	0.973	31	0.608
m-Cost of service	0.985	31	0.936
m-Quality of service	0.902	31	0.008**
m-Technical support	0.831	31	0.000**

*Significant at 5% level / ** Significant at 1% level*
S- single-channel m-Marketing factors / m- Multichannel m-Marketing factors

5.1.2 Median Difference Comparison (23 m-Marketing Success Factors)

The Wilcoxon signed-rank test is a non-parametric statistical test used when comparing two related samples, or repeated dimensions on a single sample, to assess whether the population medians are different. The Wilcoxon signed-rank test can be used as an alternative to the paired samples t-test when the population cannot be assumed to be normally distributed or the data is on the ordinal scale. Since the dataset for this thesis research is considered not to be normally distributed, the researcher uses the Wilcoxon signed-rank test to test if median scores for single-channel and multichannel m-Marketing success factors are different.

Table 5.4
Wilcoxon Signed-Rank Test Results for 23 m-Marketing Success Factors (Excludes 0 Scores)

Success Factors	Z	P Asymp. Sig. (2-tailed)	Observed Changes
m-User Acceptance & Satisfaction – S-User Acceptance & Satisfaction	-0.059	0.953	Not significant
m-Permission – S-Permission	-3.517	0.000	Significant at 1% level
m-User opt in – S-User opt in	-1.235	0.217	Not significant
m-Brand Trust – S-Brand Trust	-3.075	0.502	Not significant
m-Profit/Value – S- Profit/Value	-4.409	0.000	Significant at 1% level
m-Relationship – S- Relationship	-1.401	0.161	Not significant
m-Interactivity – S-Interactivity	-2.201	0.028	Significant at 5% level
m-Content – S-content	-1.105	0.269	Not significant
m-Accuracy – S-Accuracy	-1.057	0.290	Not significant
m-Entertainment – S-Entertainment	-0.767	0.443	Not significant
m-Richness – S-Richness	-1.275	0.202	Not significant
m-Frequency – S-Frequency	-1.499	0.134	Not significant
m-Personalization – S-Personalization	-0.333	0.739	Not significant
m-LocationA – S-LocationA	-1.790	0.073	Significant at 10% level
m-Privacy – S-Privacy	-0.946	0.344	Not significant
m-Security – S-Security	-0.647	0.518	Not significant
m-Usability – S-Usability	-1.946	0.052	Significant at 5% level
m-Delivery time – S-Delivery time	-0.229	0.819	Not significant
m-Response time – S-Response time	-3.404	0.001	Significant at 1% level
m-Response channel – S-Response channel	-0.127	0.899	Not significant
m-Cost of service – S-Cost of service	-0.151	0.880	Not significant
m-Quality of service – S-quality of service	-0.592	0.554	Not significant
m-Technical support – S-Technical support	-1.352	0.247	Not significant

S- Single-channel m-Marketing success factors
m- Multichannel m-Marketing success factors

Table 5.5
Wilcoxon Signed-Rank Test Results for 23 m-Marketing Success Factors (Includes 0 Scores)

Success Factors	Z	P Asymp. Sig. (2-tailed)	Observed Changes
m-User Acceptance & Satisfaction – S-User Acceptance & Satisfaction	-.059	0.953	Not significant
m-Permission – S-Permission	-3.655	0.000	Significant at 1% level
m-User opt in – S-User opt in	-1.235	0.217	Not significant
m-Brand Trust – S-Brand Trust	-1.234	0.101	Not significant
m-Profit/Value – S- Profit/Value	-4.409	0.000	Significant at 1% level
m-Relationship – S- Relationship	-1.401	0.161	Not significant
m-Interactivity – S-Interactivity	-1.793	0.073	Not significant
m-Content – S-content	-2.058	0.040	Significant at 5% level
m-Accuracy – S-Accuracy	-2.019	0.044	Significant at 5% level
m-Entertainment – S-Entertainment	-2.234	0.025	Not significant
m-Richness – S-Richness	-.566	0.572	Not significant
m-Frequency – S-Frequency	-2.386	0.067	Not significant
m-Personalization – S-Personalization	-.333	0.739	Not significant
m-LocationA – S-LocationA	-1.168	0.102	Not significant
m-Privacy – S-Privacy	-.946	0.344	Not significant
m-Security – S-Security	-.647	0.518	Not significant
m-Usability – S-Usability	-2.869	0.004	Significant at 1% level
m-Delivery time – S-Delivery time	-1.563	0.118	Not significant
m-Response time – S-Response time	-1.744	0.081	Significant at 5% level
m-Response channel – S-Response channel	-3.404	0.001	Significant at 1% level
m-Cost of service – S-Cost of service	-.127	0.899	Not significant
m-Quality of service – S-quality of service	-.151	0.880	Not significant
m-Technical support – S-Technical support	-1.274	0.203	Not significant

S- Single-channel m-Marketing success factors
m- Multichannel m-Marketing success factors

From the results presented in Table 5.4 (with the 0 scores excluded) it is evident that the median scores for success factors permission, profit/value, interactivity, usability and response time are significantly different (at the 5% significance level) between single-channel and multichannel m-Marketing. From the results presented in Table 5.5 (with the 0 scores included), a few further factors are found to be significantly different between single-channel and multichannel m-Marketing. These factors are:

Factors with significance at 1% level

- Permission
- Profit/Value
- Usability
- Response channel

Factors with significance at 5% level

- Content
- Accuracy
- Response time

As pointed out in Chapter 4, although the 2-tailed Wilcoxon signed-rank test provides evidence of a difference between medians it does not indicate the direction of the difference. In order to identify the factors that are either more or less critical for multichannel m-Marketing when compared to single-channel m-Marketing, an additional 1-tailed Wilcoxon test was performed and the results are presented in Table 5.6.

Table 5.6
1-tailed Wilcoxon Signed-Rank Test Results for 23 m-Marketing Success Factors (Includes 0 Scores)

Factor	Significant at	Alternative	Result
m-Permission – S-Permission	1%	Less	Permission considered less critical for multichannel m-Marketing
m-Profit/Value- S-Profit/Value	1%	Greater	Profit/Value considered more critical for multichannel m-Marketing
m-Usability- S-Usability	1%	Greater	Usability considered more critical for multichannel m-Marketing
m-Response Channel- S-Response Channel	1%	Greater	Response Channel considered more critical for multichannel m-Marketing
m-Content- S-Content	5%	Less	Content considered less critical for multichannel m-Marketing
m-Accuracy- S-Accuracy	5%	Less	Accuracy considered less critical for multichannel m-Marketing
m-Response Time- S-Response Time	5%	Less	Reponses Time considered less critical for multichannel m-Marketing

Given the focus of this thesis, factors that are considered to be more critical for multichannel m-Marketing when compared to single-channel m-Marketing are considered major findings, and qualitative data were then sought from participants to enable further analysis and understanding of these findings. In contrast, those factors found to be seen as less critical for multichannel m-Marketing are considered minor findings, without the support of qualitative data, and they are discussed in Chapter 6.

5.1.3 Correlation Analysis (23 m-Marketing Success Factors)

The 23 factors considered in the Round 1 analysis were gathered from a variety of sources in the literature, and as a result it is likely that some of the factors are in fact correlated. This means that it is possible that more than one factor may represent the same underlying issue or closely related phenomena. Therefore, in the interests of parsimonious modelling it is worthwhile to identify whether factors are indeed correlated. The researcher uses Spearman's rank correlation coefficient to test the correlation among the 23 success factors for both single-channel and multichannel m-Marketing. Spearman's rank correlation coefficient is a non-parametric measure of statistical association between two variables. Tables 5.7 and 5.8 show the results of the Spearman's rank correlation coefficient analysis.

From the observations presented in these two tables it is clear that there are some success factors for single-channel m-Marketing with strong, significant inter-correlation, as follows.

- *Accuracy* and message *content* have a very high *r value* (correlation coefficient), of 0.88; this may suggest that this pair of factors explains related (or similar) variations in the dataset. Accuracy reflects the accuracy of a marketing message, whereas content is concerned with the actual content of a marketing message; thus Accuracy is an expressive term for message content. They are slightly different concepts but are naturally strongly correlated.
- Likewise, *security* and *privacy* have an *r value* of 0.86, as these two factors express similar issues in m-Marketing (e.g. advanced security can offer better privacy).

In Table 5.8, these same pairs of factors are also highly correlated for multichannel m-Marketing: *Accuracy* and *content* have an *r value of* 0.87; and *privacy* and *security* have an *r value of* 0.76.

- Furthermore, the researcher finds that *permission* and *user opt-in* are correlated for both single-channel and multichannel m-Marketing, with *r* values of 0.69 for single-channel and 0.73 for multichannel, respectively. From the factor descriptions, opt-in is a feature offered by m-Marketing campaigns to obtain user permission, thus it is not unexpected that these factors might be related. (Since 0.69 is very close to 0.7 this finding is included in this discussion.)

By comparing the results shown in Tables 5.7 and 5.8 there are evidently some pairs of factors that are correlated but show different *r* values for single-channel and multichannel m-Marketing. For example:

- *Delivery time* and *response time* have a significant *r* value of 0.72 for single-channel m-Marketing but they have an *r* value of only 0.33 for multichannel m-Marketing. Similarly, *richness* and *entertainment* have an *r* value of 0.73 for single-channel m-Marketing but only 0.28 for multichannel m-Marketing. This signifies that these two pairs of factors are highly correlated in single-channel m-Marketing but are less so in multichannel m-Marketing.

When considering the degree of correlation between success factors and user acceptance & satisfaction no strong correlations are evident for either the single-channel or multichannel approach. However, for multichannel m-Marketing, permission, accuracy, content, long term relationship, frequency and personalization are fairly correlated with user acceptance & satisfaction (that is, they have *r* values of more than 0.4).

Summarising the findings from the correlation tests it is found that: there are three pairs of factors that are highly correlated for both single-channel and multichannel m-Marketing:1) Accuracy and message content; 2) security and privacy; and 3) permission and user opt-in. However, correlations between some success factors differ for single- and multichannel m-Marketing, presumably due to the difference in marketing channels and communication techniques. Furthermore, factors that are more closely correlated to user acceptance & satisfaction for multichannel m-Marketing are identified. This and other aspects of the findings are discussed further in Chapter 6.

Table 5.7

Correlation Matrix for Single-channel m-Marketing (23 Success Factors) **Correlation is significant at the 0.01 level*   *Correlation is significant at the 0.05 level*

	User Acceptance	Permission	User Opt-in	Brand Trust	Profit/ Value	Relationship	Interactivity	Content	Accuracy	Entertainment	Richness	Frequency	Personalization	Location	Privacy	Security	Usability	Delivery Time	Response Time	Response Channel	Cost of Service	Quality of Service	Support
User Acceptance	1.00	0.17	-0.12	-0.02	-0.05	0.05	-0.01	0.01	0.02	-0.11	0.01	0.09	0.14	0.20	0.16	0.06	0.20	0.10	0.06	0.25	-0.16	-0.05	0.14
Permission	0.17	1.00	0.69**	0.12	0.16	0.32	0.37*	0.13	0.24	-0.06	-0.07	-0.05	0.31	0.11	0.34	0.26	0.43*	-0.09	-0.15	0.19	-0.21	0.16	0.24
User Opt-in	-0.12	0.69**	1.00	0.17	-0.19	0.26	0.57**	-0.08	0.03	0.21	-0.02	0.03	0.32	0.35	0.40*	0.41*	0.36*	-0.18	-0.32	0.39*	0.12	0.17	0.29
Brand Trust	-0.02	0.12	0.17	1.00	0.16	0.29	0.25	0.30	0.32	0.25	0.12	0.34	0.46**	0.36*	0.44*	0.25	0.47**	0.22	0.06	0.34	0.14	0.36*	0.49**
Profit / Value	-0.05	0.16	-0.19	0.16	1.00	0.21	0.19	0.17	0.15	-0.17	0.05	-0.21	-0.05	0.14	0.17	0.15	0.14	-0.23	0.11	-0.16	-0.16	-0.09	0.07
Relationship	0.05	0.32	0.26	0.29	0.21	1.00	0.15	-0.11	-0.05	0.38*	0.51**	0.14	0.22	0.43*	0.37*	0.27	-0.03	0.13	0.18	0.36*	0.08	0.04	0.42*
Interactivity	-0.01	0.37*	0.57**	0.25	0.19	0.15	1.00	0.00	0.08	0.27	0.01	0.26	0.30	0.35	0.34	0.37*	0.53**	-0.03	-0.09	0.27	-0.10	0.26	0.35
Content	0.01	0.13	-0.08	0.30	0.17	-0.11	0.00	1.00	0.88**	-0.31	-0.24	0.06	0.03	0.13	0.04	-0.01	0.08	0.18	0.04	-0.23	0.07	0.09	0.16
Accuracy	0.02	0.24	0.03	0.32	0.15	-0.05	0.08	0.88**	1.00	-0.21	-0.23	0.17	0.17	0.27	0.13	0.05	0.24	0.17	0.08	-0.12	0.07	0.15	0.26
Entertainment	-0.11	-0.06	0.21	0.25	-0.17	0.38*	0.27	-0.31	-0.21	1.00	0.73**	0.59**	0.08	0.23	0.32	0.19	-0.04	0.31	-0.02	0.53	-0.01	0.04	0.30
Richness	0.01	-0.07	-0.02	0.12	0.05	0.51**	0.01	-0.24	-0.23	0.73**	1.00	0.43*	-0.14	0.13	0.22	0.07	-0.28	0.16	0.02	0.31	-0.19	-0.05	0.20
Frequency	0.09	-0.05	0.03	0.34	-0.21	0.34	0.26	0.06	0.17	0.59**	0.43*	1.00	0.30	0.33	0.35	0.25	0.03	0.60**	0.25	0.46**	0.12	0.11	0.44*
Personalization	0.14	0.31	0.32	0.46**	-0.05	0.22	0.30	0.03	0.17	0.08	-0.14	0.30	1.00	0.20	0.49**	0.53**	0.54**	0.39*	0.23	0.53**	0.26	0.49**	0.63**
Location awareness & Mobility	0.20	0.11	0.35	0.36*	0.14	0.43	0.35	0.13	0.27	0.23	0.13	0.33	0.20	1.00	0.35	0.18	0.16	-0.09	-0.10	0.30	0.16	-0.04	0.40*
Privacy	0.16	0.34	0.40*	0.44*	0.17	0.37	0.34	0.04	0.13	0.32	0.22	0.35	0.49**	0.35	1.00	0.86**	0.40*	0.33	0.27	0.55**	0.21	0.31	0.54**
Security	0.06	0.26	0.41*	0.25	0.15	0.27	0.37*	-0.01	0.05	0.19	0.07	0.25	0.53**	0.18	0.86**	1.00	0.36*	0.32	0.34	0.59**	0.29	0.30	0.48**
Usability	0.20	0.43*	0.36*	0.47**	0.14	-0.03	0.53	0.08	0.24	-0.04	-0.28	0.03	0.54**	0.16	0.40*	0.36*	1.00	-0.07	-0.08	0.24	-0.05	0.56**	0.45*
Delivery Time	0.10	-0.09	-0.18	0.22	-0.23	0.13	-0.03	0.18	0.17	0.31	0.16	0.60**	0.39*	-0.09	0.33	0.32	-0.07	1.00	0.72**	0.45*	0.15	0.15	0.43*
Response Time	0.06	-0.15	-0.32	0.06	0.11	0.18	-0.09	0.04	0.08	-0.02	0.02	0.25	0.23	-0.10	0.27	0.34	-0.08	0.72**	1.00	0.28	0.00	0.10	0.37*
Response Channel	0.25	0.19	0.39*	0.34	-0.16	0.36*	0.27	-0.23	-0.12	0.53**	0.31	0.46**	0.53**	0.30	0.55**	0.59**	0.24	0.45*	0.28	1.00	0.11	0.09	0.53**
Cost of Service	-0.16	-0.21	0.12	0.14	-0.16	0.08	-0.10	0.07	0.07	-0.01	-0.19	0.12	0.26	0.16	0.21	0.29	-0.05	0.15	0.00	0.11	1.00	-0.09	-0.14
Quality of Service	-0.05	0.16	0.17	0.36*	-0.09	0.04	0.26	0.09	0.15	0.04	-0.05	0.11	0.49**	-0.04	0.31	0.30	0.56**	0.15	0.10	0.09	-0.09	1.00	0.62**
Tech Support	0.14	0.24	0.29	0.49**	0.07	0.42*	0.35	0.16	0.26	0.30	0.20	0.44*	0.63**	0.40*	0.54**	0.48*	0.45*	0.43*	0.37*	0.53**	-0.14	0.62**	1.00

Table 5.8
Correlation Matrix for Multichannel m-Marketing (23 Success Factors) **Correlation is significant at the 0.01 level *Correlation is significant at the 0.05 level*

	User Acceptance	Permission	User Opt in	Brand Trust	Profit/ Value	Relationship	Interactivity	Content	Accuracy	Entertainment	Richness	Frequency	Personalization	Location	Privacy	Security	Usability	Delivery Time	Response Time	Response Channel	Cost of Service	Quality of Service	Support
User Acceptance	1.00	0.59**	-0.12	-0.32	0.18	0.43*	-0.32	0.43*	0.51**	0.05	-0.03	0.41*	0.41*	0.06	-0.14	-0.05	0.00	-0.20	-0.20	0.33	0.14	-0.01	-0.10
Permission	0.59**	1.00	0.73**	0.05	0.21	-0.25	-0.22	-0.18	-0.04	-0.01	0.02	-0.17	-0.12	0.45*	-0.05	0.01	0.16	-0.11	-0.13	0.32	-0.04	-0.05	-0.13
User Opt-in	-0.12	0.73**	1.00	0.23	-0.09	0.26	0.46*	0.17	0.13	0.24	0.12	-0.13	0.08	0.41	0.16	0.17	0.26	-0.03	0.18	-0.05	-0.03	-0.05	-0.28
Brand Trust	-0.32	0.05	0.23	1.00	0.40*	0.32	0.25	0.24	0.26	0.30	0.38	0.44	0.31	0.01	0.26	0.09	0.30	0.10	0.50	-0.23	0.07	0.25	0.06
Profit / Value	0.18	0.21	-0.09	0.40	1.00	0.20	0.18	-0.08	-0.09	0.05	0.18	0.07	-0.14	-0.15	0.22	0.18	0.32	0.14	0.22	-0.13	-0.15	0.30	-0.10
Relationship	0.43*	-0.25	0.26	0.32	0.20	1.00	0.37*	0.03	0.01	0.35	0.42*	0.50**	0.22	-0.04	0.02	0.06	0.33	0.14	0.24	-0.23	0.14	0.02	-0.14
Interactivity	-0.32	-0.22	0.46*	0.25	0.18	0.37*	1.00	0.22	0.16	0.46*	0.04	0.28	-0.08	0.15	0.08	0.16	0.37*	0.43*	0.25	-0.27	-0.16	0.12	-0.04
Content	0.43*	-0.18	0.17	0.24	-0.08	0.03	0.22	1.00	0.87**	0.04	-0.17	-0.03	0.11	0.26	0.12	-0.11	-0.01	-0.02	0.38	-0.07	-0.01	0.09	0.20
Accuracy	0.51**	-0.04	0.13	0.26	-0.09	0.01	0.16	0.87**	1.00	0.05	-0.15	0.02	0.24	0.47*	0.26	0.01	-0.15	0.08	0.31	-0.06	0.03	-0.08	0.13
Entertainment	0.05	-0.01	0.24	0.30	0.05	0.35	0.46*	0.04	0.05	1.00	0.28	0.42*	0.21	0.37	0.13	0.22	0.13	0.34	0.47*	-0.01	0.23	0.12	0.02
Richness	-0.03	0.02	0.12	0.38*	0.18	0.42*	0.04	-0.17	-0.15	0.28	1.00	0.23	-0.26	-0.07	-0.30	-0.31	0.02	-0.19	0.00	-0.05	0.23	-0.08	-0.21
Frequency	0.41*	-0.17	-0.13	0.44*	0.07	0.50**	0.28	-0.03	0.02	0.42*	0.23	1.00	0.38	0.28	0.16	0.21	0.21	0.22	0.29	-0.23	-0.04	-0.08	0.19
Personalization	0.41*	-0.12	0.08	0.31	-0.14	0.22	-0.08	0.11	0.24	0.21	-0.26	0.38	1.00	0.07	0.47**	0.31	-0.13	0.19	0.36	-0.14	-0.16	-0.04	0.05
Location awareness & Mobility	0.06	0.45*	0.41	0.01	-0.15	-0.04	0.15	0.26	0.47*	0.37	-0.07	0.28	0.07	1.00	0.17	0.35	0.10	-0.11	0.19	0.09	0.17	-0.06	0.08
Privacy	-0.14	-0.05	0.16	0.26	0.22	0.02	0.08	0.12	0.26	0.13	-0.30	0.16	0.47*	0.17	1.00	0.76**	-0.12	0.00	0.39	0.12	-0.09	0.19	0.28
Security	-0.05	0.01	0.17	0.09	0.18	0.06	0.16	-0.11	0.01	0.22	-0.31	0.21	0.31	0.35	0.76**	1.00	0.12	-0.09	0.21	0.11	0.03	0.15	0.19
Usability	0.00	0.16	0.26	0.30	0.32	0.33	0.37*	-0.01	-0.15	0.13	0.02	0.21	-0.13	0.10	-0.12	0.12	1.00	0.13	0.20	-0.24	-0.23	0.14	-0.10
Delivery Time	-0.20	-0.11	-0.03	0.10	0.14	0.14	0.43*	-0.02	0.08	0.34	-0.19	0.22	0.19	-0.11	0.00	-0.09	0.13	1.00	0.33	-0.24	-0.08	0.20	0.14
Response Time	-0.20	-0.13	0.18	0.50*	0.22	0.24	0.25	0.38	0.31	0.47*	0.00	0.29	0.36	0.19	0.39	0.21	0.20	0.33	1.00	0.02	0.13	0.43*	0.09
Response Channel	0.33	0.32	-0.05	-0.23	-0.13	-0.23	-0.27	-0.07	-0.06	-0.01	-0.05	-0.23	-0.14	0.09	0.12	0.11	-0.24	-0.24	0.02	1.00	0.04	0.12	0.00
Cost of Service	0.14	-0.04	-0.03	0.07	-0.15	0.14	-0.16	-0.01	0.03	0.23	0.23	-0.04	-0.16	0.17	-0.09	0.03	-0.23	-0.08	0.13	0.04	1.00	0.12	0.20
Quality of Service	-0.01	-0.05	-0.05	0.25	0.30	0.02	0.12	0.09	-0.08	0.12	-0.08	-0.08	-0.04	-0.06	0.19	0.15	0.14	0.20	0.43*	0.12	0.12	1.00	0.09
Tech Support	-0.10	-0.13	-0.28	0.06	-0.10	-0.14	-0.04	0.20	0.13	0.02	-0.21	0.19	0.05	0.08	0.28	0.19	-0.10	0.14	0.09	0.00	0.20	0.09	1.00

5.1.4 Factor Analysis (23 m-Marketing Success Factors)

This section describes a factor analysis for the observations on the 23 m-Marketing success factors presented to the expert panel. Prior to doing so it is important to test whether the dataset meets the requirements for factor analysis. According to (Bagby, Parker, & Taylor, 1994), the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy test varies between 0 and 1, and values closer to 1 are better. A value of 0.6 is a suggested minimum. As seen in Table 5.9 and Table 5.10, the Kaiser-Meyer-Olkin test result for the panel samples is 0.517 for the single-channel dataset and 0.392 for the multichannel dataset, i.e., both are less than the suggested minimum. In this case, the Bartlett's test statistic for the single-channel dataset is significant with $p < 0.01$ or at the 1% level; therefore, there is evidence to refute the null hypothesis that the single-channel correlation matrix is an identity matrix. However, the Bartlett's test statistic for the multichannel dataset is not significant with $p > 0.05$ indicating there is no evidence to refute the null hypothesis that the correlation matrix is an identity matrix.

Overall, the sample adequacy tests show that the sample size for both single-channel and multichannel m-Marketing data sets are not adequate and do not meet the requirements of the Kaiser-Meyer-Olkin Test and Bartlett's Test of Sphericity. However, the single-channel dataset does meet the requirement of Bartlett's test, and since there are more than 10 observations in each of the datasets, there are no computational difficulties in this case. As a result, factor analysis can still be performed but it is acknowledged that the test results may not be reliable due to the small sample size.

Table 5.9
KMO and Bartlett's Test of the Single-channel m-Marketing Data Set (23 Success Factors)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.517
Bartlett's Test of Sphericity	Approx. Chi-Square	452.194
	Df	253
	Sig.	.000

Table 5.10
KMO and Bartlett's Test of the Multichannel m-Marketing Data Set (23 Success Factors)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.392
Bartlett's Test of Sphericity	Approx. Chi-Square	165.843
	Df	253
	Sig.	1.000

The researcher therefore decided to carry out factor analysis as it is a commonly used method in factor-based marketing research, in spite of the acknowledged sample limitations. The success factors in this study are based on the proposed m-Marketing success model (Figure 3.11), which has three phases (development of m-Marketing, use and deployment of m-Marketing, and impacts of m-Marketing), for categorising the m-Marketing success factors. Based on this model, the researcher uses the 3 phases to inform the initial choice of the number of principal component factors in the extraction. The determination of the number of components to extract is adapted from DeLone and McLean's (1992) IS success theory, presented as an m-Marketing success model in this thesis. However, other numbers of factors are also considered until it is clear which number yields the most reasonable results. The output of this factor analysis consists of the total variance explained by the extracted components, a scree plot, a factor matrix, and a rotated factor matrix. In order to properly categorize these m-Marketing success factors, participants were asked to group all m-Marketing success factors according to the above three process phases. Chapter 6 discusses in detail the outcomes from the participants' input along with the outcomes from the data analysis.

5.1.4.1 Factor Analysis for Single-Channel m-Marketing (23 Factors)

Table 5.11 shows the total variance explained by the three initially extracted components for the single-channel data set. Although there are 23 factors in this dataset, the extraction indicates that the three principal components can explain 49.9% of the total variation in the data. The rotation loadings represent the distribution of the variances after varimax rotation. Varimax rotation aims to maximize the variances of each factor so that the total amount of variance accounted for is redistributed over the three extracted components.

Figure 5.1 presents the scree plot of the eigenvalues against the factor numbers. From this plot it can be observed that the line linking the first few components is very steep but then the line flattens out, which means that after the inclusion of the first few components each successive component is accounting for increasingly smaller amounts of the total variance. In general, a model should only keep factors with eigenvalues greater than 1 as an eigenvalue of less than 1 represents a factor that accounts for less variance than did the original variable (and hence is of little contribution to the model). The factor matrix in Table 5.13 contains the un-rotated factor loadings, which are the correlations between factors and the components; to make it easier to read, the researcher configured SPSS to print only the correlations that are greater than 0.3.
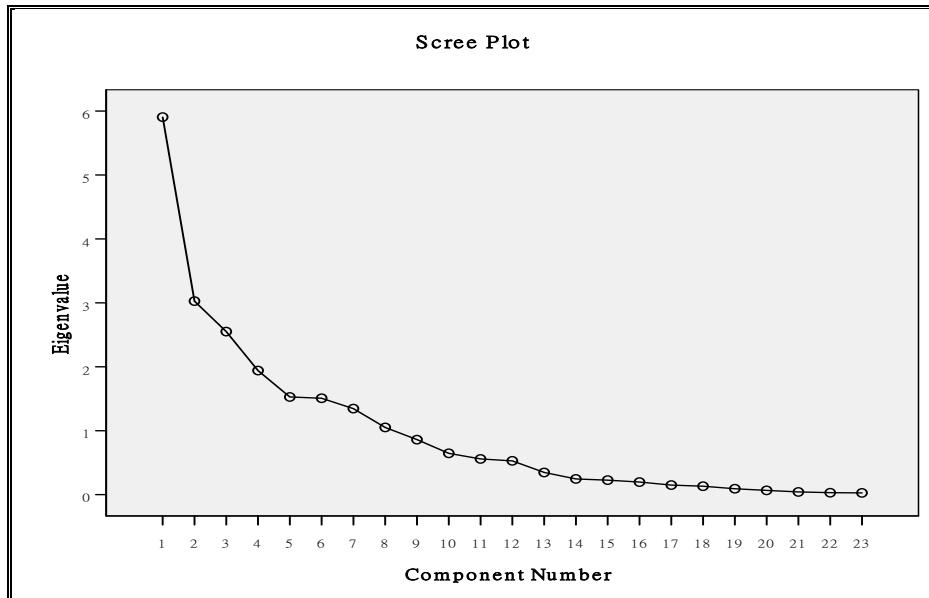
*Figure 5.1.*Scree Plot of Factor Analysis for Single-Channel m-Marketing (23 Success Factors)

From Table 5.13 it is possible to identify which factors are correlated with which components, and this can be helpful in grouping the individual success factors into the fewer aggregated categories. Also, the rotated factor matrix in Table 5.14 contains the rotated factor loadings; this shows the correlation between each success factor and each group factor:

    1) The first component is most closely correlated with response channel, delivery time, frequency, technical support, privacy, security, entertainment, response time, personalisation, brand trust, long term relationship, location awareness & mobility and richness.

    2) The second component is most closely correlated with delivery time, technical support, privacy, response time, user opt-in, permission, interactivity, usability, location awareness & Mobility and quality of service.

    3) The third component is most closely correlated with entertainment, personalisation, brand trust, long term relationship, usability, Accuracy, content, richness and quality of service.

There is no significant correlation between user acceptance & satisfaction, cost of service, and profit/value and any of the three components extracted. From the rotated component matrix it is evident that there are component overlaps for some factors. From the three extracted components and their correlations with individual success factors, the first factor appears to be related to the *service* of an m-Marketing campaign as it incorporates delivery time, technical support, security, and response time. The second factor is more related to *customisation* of an m-Marketing campaign, and the third factor is more related to *content* of an m-Marketing campaign. (The researcher needs to identify each component and interpret the output.) Chapter 6 presents further discussion of these results.

Table 5.11
Total Variance Explained by Single-channel m-Marketing (23 Success Factors)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.905	25.673	25.673	5.905	25.673	25.673	5.313	23.098	23.098
2	3.027	13.159	38.832	3.027	13.159	38.832	3.206	13.939	37.038
3	2.550	11.087	49.919	2.550	11.087	49.919	2.963	12.881	49.919
4	1.940	8.437	58.356						
5	1.528	6.643	64.998						
6	1.507	6.553	71.552						
7	1.345	5.849	77.401						
8	1.051	4.568	81.969						
9	.860	3.740	85.709						
10	.646	2.810	88.518						
11	.558	2.428	90.946						
12	.528	2.296	93.242						
13	.347	1.507	94.749						
14	.246	1.068	95.817						
15	.227	.986	96.803						
16	.196	.854	97.657						
17	.150	.650	98.307						
18	.132	.573	98.880						
19	.092	.401	99.281						
20	.066	.289	99.569						
21	.042	.183	99.752						
22	.030	.131	99.883						
23	.027	.117	100.000						

Extraction Method: Principal Component Analysis.

Table 5.12
Total Variance Explained by Multichannel m-Marketing (23 Success Factors)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.065	22.022	22.022	5.065	22.022	22.022	4.361	18.961	18.961
2	2.679	11.649	33.671	2.679	11.649	33.671	3.029	13.172	32.132
3	2.351	10.223	43.894	2.351	10.223	43.894	2.705	11.762	43.894
4	2.283	9.926	53.820						
5	1.677	7.292	61.113						
6	1.348	5.861	66.974						
7	1.176	5.113	72.087						
8	1.077	4.685	76.771						
9	1.020	4.435	81.207						
10	.854	3.713	84.919						
11	.779	3.388	88.307						
12	.562	2.442	90.748						
13	.493	2.143	92.891						
14	.345	1.499	94.391						
15	.283	1.231	95.621						
16	.251	1.089	96.711						
17	.220	.956	97.667						
18	.182	.793	98.460						
19	.136	.592	99.051						
20	.093	.404	99.455						
21	.069	.301	99.756						
22	.031	.134	99.890						
23	.025	.110	100.000						

Extraction Method: Principal Component Analysis.

Table 5.13

Component Matrix for Single-Channel m-Marketing (Success 23 Factors)

	Principal Component		
	1	2	3
Technical Support	.819		
Privacy	.800		
Response Channel	.772		
Security	.726		
Personalization	.706		
Brand Trust	.609		
Frequency	.579	-.459	
Interactivity	.509		-.345
Long-term relationship	.491	-.314	
Location Awareness & Mobility	.478		
Quality of Service	.451	.416	
Richness	.374	-.689	
Entertainment	.418	-.671	
Usability	.466	.626	
Profit / Value			
Response Time	.344	-.380	.642
Delivery Time	.555	-.417	.592
Content		.381	.547
Permission		.344	-.542
User opt-in	.485	.367	-.526
Accuracy		.450	.478
Cost of Service			.306
User Acceptance & Satisfaction			

Extraction Method: Principal Component Analysis.
3 components extracted.

5.1.4.2 Factor Analysis for Multichannel m-Marketing (23 Factors)

Table 5.12 shows the total variance explained by the three initially extracted components for the multichannel data set. The cumulative variance explained by the extracted factors is 43.9%, which is a little less than that for single-channel m-Marketing (49.9%). This means that the three extracted components explain less than half of the variation in the dataset. Figure 5.2 shows the associated scree plot, and the factor matrix in Table 5.15 contains the un-rotated factor loadings, which are the correlations between extracted components and the factors; again to make it easier to follow, the researcher set SPSS to print only correlations that are greater than 0.3.

Table 5.14
Rotated Component Matrix Single-Channel m-Marketing (23 Success Factors)

	Principal Component		
	1	2	3
Response Channel	.788		
Delivery Time	.774	-.447	
Frequency	.721		
Technical support	.719	.319	
Privacy	.680	.362	
Security	.623		
Entertainment	.602		-.577
Response time	.579	-.547	
Personalization	.570		.467
Brand Trust	.525		.394
Long term Relationship	.518		-.304
User opt-in		.781	
Permission		.699	
Interactivity		.595	
Usability		.587	.503
Location Awareness & Mobility	.319	.466	
User Acceptance & Satisfaction			
Accuracy			.681
Content			.651
Richness	.565		-.617
Quality of Service		.310	.479
Cost of Service			
Profit / Value			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
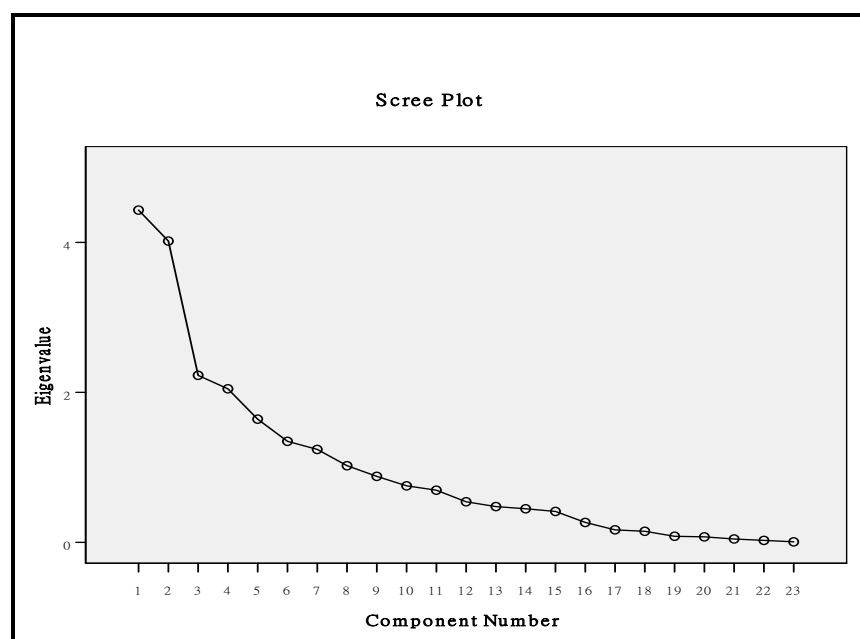
Figure 5.2. Scree Plot of Factor Analysis for Multichannel m-Marketing (23 Success Factors)

The rotated component matrix shown in Table 5.16 includes three extracted principal components (as requested when running the analysis). The three extracted components are described as follows:

1) The first component is correlated with long-term relationship, brand trust, frequency, entertainment, interactivity, usability, response time, profit/value, response channel, delivery time, user opt-in, richness, quality of service, and user acceptance & satisfaction.

2) The second component is correlated with response time, privacy, security, richness, personalization, quality of service, and location awareness & mobility.

3) The third component is correlated with response channel, personalisation, user acceptance & satisfaction, permission, message content, accuracy, and location awareness & mobility.

There is no component correlated with cost of service and technical support. From the rotated component matrix it is evident that there are component overlaps for some factors. The three extracted components and their correlations with individual success factors are not straightforward to interpret.

Table 5.15
Component Matrix for Multichannel m-Marketing (23 Success Factors)

	Principal Component		
	1	2	3
Brand Trust	.736		
Long Term Relationship	.719		
Response Time	.713		
Interactivity	.662		
Frequency	.619		
User Acceptance & Satisfaction	-.553	.479	.497
Entertainment	.542		.485
Personalization	.537		-.421
Quality of Service	.469	.404	
Delivery Time	.467		
Usability	.462		.357
Content	.443	-.343	-.380
User opt-in	.392		
Profit / Value	.351		.343
Security	.344	.742	
Privacy	.456	.588	-.401
Permission		.535	.483
Response Channel	-.349	.462	
Location Awareness & Mobility		.406	
Richness		-.510	.553
Accuracy	.348		-.422
Cost of Service			.326
Technical Support			

Extraction Method: Principal Component Analysis.
3 components extracted.

Table 5.16.
Rotated Component Matrix for Multichannel m-Marketing (23 Success Factors)

	Principal Component		
	1	2	3
Long Term Relationship	.793		
Brand Trust	.741		
Frequency	.695		
Entertainment	.686		
Interactivity	.659		
Usability	.558		
Response Time	.547	.458	
Profit / Value	.435		
Response Channel	-.409		.334
Delivery Time	.398		
User opt-in	.335		
Privacy		.835	
Security		.806	
Richness	.333	-.663	
Personalization		.604	-.337
Quality of Service	.305	.538	
User Acceptance & Satisfaction	-.323		.820
Permission			.724
Content			-.620
Accuracy			-.530
Location Awareness & Mobility		.320	.345
Cost of Service			
Technical Support			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

5.1.5 Participants' Categorization (23 m-Marketing Success Factors)

In Round 1 of the Delphi study the 31 participants were asked to choose the most relevant of three categories for each of the 23 m-Marketing success factors. In performing this categorisation there is no separation according to single-channel or multichannel m-Marketing approaches as this should have no impact on the categorisation outcome. As shown previously in Figure 3.11, the proposed m-Marketing success model incorporates the following three categories: m-Marketing development, m-Marketing use and deployment, and m-Marketing impacts. Table 5.17 shows the extent to which each success factor was allocated to the three categories by the 31 participants.

Table 5.17
Participants' Categorization for m-Marketing (23 Success Factors)

	m-Marketing Categories		
	Development	**Use and Deployment**	**Impacts**
User Acceptance & Satisfaction	0	6.45%	93.55%
Permission	12.91%	83.87%	3.22%
User Opt -in	45.17%	45.17%	9.66%
Brand Trust	3.22%	6.45%	90.33%
Profit / Value	0	29.03%	70.97%
Long Term Relationship	3.22%	22.59%	74.19%
Interactivity	74.19%	9.68%	16.13%
Content	80.65%	12.90%	6.45%
Accuracy	74.19%	19.36%	6.45%
Entertainment	19.37%	70.97%	9.66%
Richness	80.65%	6.45%	12.90%
Frequency	16.15%	74.19%	9.66%
Location Awareness & Mobility	74.19%	22.59%	3.22%
Personalization	16.13%	67.74%	16.13%
Security	77.42%	16.13%	6.45%
Privacy	77.42%	16.13%	6.45%
Usability	80.65%	19.35%	0
Delivery Time	45.16%	54.84%	0
Response Time	51.61%	48.39%	0
Response Channel	45.16%	45.16%	9.67%
Cost of Service	0	45.16%	54.84%
Quality of Service	74.19%	22.59%	3.22%
Technical Support	12.92%	77.42%	9.66%

Categories that receive higher or similar percentages of participants' selections are recorded and shown in Table 5.17. The most relevant category for each of the 23 m-Marketing success factors is identified where this is clearly discernible. However, some categories receive similar percentages from participants for the same factor. For instance:

- User opt-in, delivery time, response time, and response channel are assigned to both the development and use & deployment categories by around 50% of participants;

- Cost of service is assigned to both the use & deployment and impacts categories by around 50% of participants.

Chapter 6 presents further discussion of this result.

5.1.6 Qualitative Data and Analysis (Round 1)

Apart from the quantitative data gathered, the Round 1 study also collected qualitative data regarding the following two issues:

- When participants identify a factor as *Not critical* to multichannel m-Marketing in Round 1 they can also provide comments to clarify their opinion.
- Participants are asked to identify any new success factors (that is, in addition to those on the suggested list of 23 factors) that they consider critical and relevant to m-Marketing.

5.1.6.1 Comments Related to Not Critical Factors for Multichannel m-Marketing

Table 5.18 presents participants' comments that explain why some factors are considered as *Not Critical* for multichannel m-Marketing. Note that not all participants provided data in this field. Note also that comments in Table 5.18 were given by participants if they considered that certain factor(s) were not critical to multichannel m-Marketing while making responses to the Round 1 questionnaire. This does not mean that they are necessarily considered as Not Critical for the Round 2 analysis.

Table 5.18
Comments Related to *Not Critical* Factors for Multichannel m-Marketing in Round 1

Success factors	Comments
Interactivity	1a) Multichannel m-Marketing does not necessarily involve interactive approach between users and business; 1b) More interoperability issues for network, device and application must be considered.
Response Time	2a) Response time is not important factor for multichannel marketing e.g. TV broadcasting; 2b) The actual value obtained from m-Marketing is not time-related, it should be the value from the message content; 2c) It is not important to understand how an electronic message time response can have a significant impact on-Marketing process; time is not a critical factor for m-Marketing success; 2d) Response time should not matter as long as messages are delivered to consumers through the chosen communication channel.
Location Awareness & Mobility	3a) Location awareness is not as vital as other factors for m-Marketing e.g. content, security and privacy; 3b) While customer expects relevant, anticipated and personalized marketing messages, this does not necessary indicate that they would like their location to be known.
Brand Trust	4a) Because users know where the message comes from.
Entertainment	5a) The message doesn't always have to be 'entertaining'; 5b) Most people prefer actually 'business like' communication - brief, to the point, no 'extras'; 5c) The value that can differentiate from other marketing campaign is more important; 5d) Mobile usage, the nature of its ubiquity, delivers information and entertainment as the two key modes in the communication process, but not necessary in the multichannel strategy.
Technical Support	6a) To m-Marketing, there should be no need for support; 6b) Technical Support should not be needed. If the system doesn't work (as far as the consumer is concerned) or is not intuitive/easy to use - then the customers will not require Technical Support but will walk away; 6c) It is not difficult to try and fix any issues while using m-Marketing.

5.1.6.2 Comments Related to New Critical Factors

Table 5.19 presents the original qualitative data provided by participants when they identified new factors that they considered to be relevant and critical to m-Marketing. These new factors were then reviewed by the panel as part of the Round 2 investigation.

Table 5.19
Comments to New m-Marketing Success Factors in Round 1

New Success factor / Keywords	Comments
Campaign Popularity	Users would like to be on a mobile network that people or friends are on.
Campaign Promotion	Quality of promotion of the service and how to let users know about the m-Marketing campaign and service.
Informal Channels	Sometimes messages can be effectively passed onto consumers through informal channels such as word of mouth. e.g. Apple iPhone limited release.
Interoperability	Interoperability issues between various mobile communication channels, such as complementation, accessibility, quality control.
Reach Factor	Mass at the same time personalized messages.
Clutter on Mobile Medium	Clutter on mobile medium.
Public/Private Response	It is critical to determine whether it is a personal channel (such as SMS, mail) or if it is a public channel (such as mobile internet or mobile TV).
Customisation - The Short Code	Integration of short codes becomes part of the branding strategy. Look at the example of m-Marketing used in the Obama election campaigns.
User Power	The power of influence to m-Marketing operation and service deployment, also has a direct link to user satisfaction and acceptance.

In reviewing the comments the researcher therefore identified 13 keywords and descriptions from this last question in Round 1. In the role of Delphi administrator, the researcher considered some to be repeated instances of the already identified 23 m-Marketing success factors. Thus, justifications for short-listing the new factors are presented in Table 5.20.

Table 5.20
Newly Identified Factors - Shortlist Analysis

Factors	Actions	Justifications
Campaign Popularity	Used	N/A
Campaign Promotion	Used	N/A
Informal Channels	Not used	Considered within Response Channel
Interoperability	Used	N/A
Reach Factor	Not used	Considered within Personalization
Clutter on Mobile Medium	Used	N/A
Public/Private Response	Not used	Considered within Response Channel
Customisation	Used	N/A
User Power	Used	N/A

The researcher then sent emails to the participants who had provided new keywords and comments in the last question of Round 1. The actions described in Table 5.20, e.g., discard due to similarity to an existing factor, were all confirmed by these new-factor contributors. At the end of this process, six new m-Marketing success factors with descriptions had been identified and confirmed by the new-factor contributors, and are presented in Table 5.21.

Table 5.21
Newly-Identified m-Marketing Success Factors with Descriptions (Six New Factors)

Factors	Confirmed Descriptions
Campaign Popularity	Whether the m-Marketing campaign is running on a mobile network that most of consumers are on
Campaign Promotion	Promotion quality and strategy of the m-Marketing campaign and service; whether the campaign is targeting the right audiences or users
Interoperability	Integrated and compatible m-Marketing communication, such as a coherent message can be sent through all media, including device, channel, and platform variation
User Power	Level of power owned by m-Marketing users (the consumers) that is capable of influencing m-Marketing campaign development, use and deployment, service operation and management
Clutter on Mobile Medium	The *Media Clutter* can influence the quality of service and efficiency of mobile communication between message sender and recipient
Customization	M-Marketing service can be customised by the m-Marketing service provider, e.g. Integration of short codes becomes part of the branding strategy

These six newly-identified m-Marketing success factors were then put to the Delphi panel as part of the Round 2 data collection process.

5.1.7 Summary of Findings from Round 1

In Round 1 the participants considered the relevance and criticality of 23 m-Marketing success factors previously identified from the literature. Table 5.22 briefly summarises the findings from this round of data collection.

Table 5.22
Round 1 Findings Summary

Fs	Techniques	Descriptions
1	Descriptive Statistics (Mean Value)	Two *Very Critical* single-channel m-Marketing success factors (user acceptance & satisfaction and permission) and three *Very Critical* multichannel m-Marketing success factors (user acceptance & satisfaction, permission, usability, profit/value) were identified; Six factors (location awareness & mobility, response time, entertainment, frequency, brand trust, technical support) were considered by some panel members to be *Not Critical* success factors to multichannel m-Marketing.
2	Median Difference Comparison	Three factors (profit/value, usability, response channel) were considered to be more critical to multichannel than to single-channel m-Marketing, with significance levels of 5% or less; Four factors (permission, response time, content, and accuracy) were considered to be less critical to multichannel than to single-channel m-Marketing, with significance levels of 5% or less.
3	Correlation Test	Three pairs of factors (content and accuracy; security and privacy; permission and opt-in) that are correlated whether for single-channel or multichannel m-Marketing were identified; Six factors (permission, Accuracy, content, long term relationship, frequency and personalisation) were found to be correlated to user acceptance & satisfaction in multichannel m-Marketing but less so in single-channel m-Marketing; Two pairs of factors (delivery time and response time; richness and entertainment) were found to be correlated in single-channel m-Marketing but less so in multichannel m-Marketing.
4	Factor Analysis	The 23 success factors were categorized using a factor analysis approach with the extraction of three components accounting for close to 50% of the single-channel data set variation.
5	Participants' Categorization by Majority of Selection	The 23 success factors were assigned to the three categories of development, use and deployment, and impacts of m-Marketing, by 31 participants, with most falling primarily into one of the three categories.
6	Qualitative Analysis (Descriptive & Explanatory)	Supportive qualitative data were gathered from participants to explain why some success factors were considered not relevant to multichannel m-Marketing.
7	Qualitative Data; Majority of Determination; Interactive Email; Shortlist	Six new m-Marketing success factors (campaign promotion, campaign popularity, interoperability, user power, clutter on mobile medium, customization) were identified; The descriptions of these newly-identified factors were verified by the new-factor contributors.

5.2 Round 2: Data Analysis and Findings

There were three parts to the Round 2 phase of the Delphi study. First, the researcher followed the same analysis approach as used in Round 1 (with the 23 m-Marketing success factors) to have the panel examine – and potentially confirm – the six new factors identified at the end of that round. Second, three questions were asked of the participants in order to verify some of the findings from Round 1 about the difference in the trend from single-channel to multichannel m-Marketing (relating to factors considered by some as not critical, and factors considered to be more or less critical). Finally, participants were asked to answer a question about the role of m-Marketing acceptance and its relationship to m-Marketing success.

5.2.1 Confirm Newly-Identified m-Marketing Success Factors

At the beginning of Round 2 participants were asked to indicate whether they agreed that the six new factors identified in Round 1 were indeed relevant and critical to m-Marketing. Table 5.23 presents the confirmation rate for these new factors. It is evident that there were participants who did not confirm some factors or agree with the descriptions provided for the factors. However, in accordance with the research design, any factor that received more than 50% confirmation rate was to be added to the list of m-Marketing success factors. In terms of the factor descriptions, these were negotiated and some altered via email communication with participants who disagreed with the descriptions provided (as described below).

Table 5.23
Confirmation Rates for Six New m-Marketing Success Factors

Factors	Factor Confirmation Rate	Description Confirmation Rate
Campaign Popularity	77.27%	77.27%
Campaign Promotion	95.45%	90.91%
Interoperability	86.36%	77.27%
User Power	95.45%	95.45%
Clutter on Mobile Medium	72.72%	72.72%
Customization	86.36%	86.36%

From the confirmation rates presented it can be seen that most participants in Round 2 agreed with the addition of these six new factors to the m-Marketing success factor list. *Campaign Popularity* and *Clutter on Mobile Medium* received comparably lower confirmation rates (less than 80%) than the other factors due to the following:

- some participants believed campaign popularity to be a consequence of campaign promotion; thus they did not vote for inclusion of this factor;
- some participants were uncertain about the description of mobile clutter, and therefore they did not support the inclusion of this factor.

One participant did not agree with the description provided for *campaign promotion* although they did agree with the inclusion of this factor. Similarly, there were two participants who did not agree with the description of interoperability provided, although they did agree with the inclusion of this factor. The researcher emailed these participants to explain and negotiate the issue in order to successfully achieve final consensus regarding the new factor descriptions. Further discussion regarding the newly identified success factors is presented in Chapter 6, Section 6.1.

As noted previously, some participants in Round 1 withdrew from further involvement in the survey so some observed differences in results may be due in part to this. The fewer responses in Rounds 2 and 3 also would inherently make it more difficult to find statistically significant results.

5.2.2 Descriptive Statistics (Six Newly- Identified Factors)

In Round 2 participants scored the six newly-identified factors and assigned them to the three categories of m-Marketing success factors. Similar to the approach adopted in Round 1, any factor with a mean score of more than 750 (on the 0-1000 point scale) is considered to be a *Very Critical* m-Marketing success factor; a factor achieving a mean score falling between 500 and 749 is considered *Critical*; and a factor with a mean score less than 500 is considered *Not Critical*.

Tables 5.24 and 5.25 show the summaries of descriptive statistics for the six new factors for single-channel and multichannel m-Marketing, respectively. The statistics indicate that campaign promotion is considered to be *Very critical* for multichannel m-Marketing, with a mean score of 757, and for single-channel m-Marketing, achieving a mean score of 751. The other five factors are considered *Critical* for multichannel m-Marketing as well as for single-channel m-Marketing apart from *interoperability,* which is perceived as *Not critical* for single-channel m-Marketing. Interoperability is defined in Table 5.18 as *Integrated and compatible m-Marketing communication, such as a coherent message can be sent through all media, including device, channel, and platform variation.* This result is reasonable then, since there is clearly only one channel in single-channel m-Marketing; interoperability is sensibly of less concern in such a limited context. In contrast, the interoperability between different mobile communication channels is understandably critical for multichannel m-Marketing.

Table 5.24
Summary of Descriptive Statistics for Multichannel m-Marketing (Six New Success Factors)

Success factors	Mean	STDEV	Median	Skew	Kurtosis	Criticality
Campaign Popularity	573.09	155.69	565.00	0.01	-0.59	Critical
Campaign Promotion	757.36	69.23	760.50	-0.08	-0.59	Very Critical
Interoperability	767.45	80.96	749.00	0.31	-0.65	Very Critical
User Power	639.09	146.75	688.50	-0.72	0.05	Critical
Clutter on Mobile Medium	519.27	127.36	527.50	-0.38	-0.85	Critical
Customization	575.64	127.08	623.00	-0.82	0.48	Critical

Table 5.25
Summary of Descriptive Statistics for Single-channel m-Marketing (Six New Success Factors)

Success factors	Mean	STDEV	Median	Skew	Kurtosis	Criticality
Campaign Popularity	603.26	122.37	616.00	-0.42	0.61	Critical
Campaign Promotion	751.37	77.45	756.00	-1.03	3.03	Very Critical
Interoperability	485.26	163.69	507.00	0.17	-1.01	Not Critical
User Power	570.74	100.87	596.00	-0.69	0.04	Critical
Clutter on Mobile Medium	559.26	84.76	567.00	-0.61	0.16	Critical
Customization	589.89	116.46	580.00	-0.42	0.23	Critical

From Tables 5.24 and 5.25 it can be seen that the skewness values for *campaign popularity* and *campaign promotion* for multichannel marketing are very small and close to zero, indicating it is likely that the scores of these two factors have a normal distribution. However, the kurtosis values are quite large indicating there is some extreme peakedness in the scores. Based on the skewness and kurtosis statistics it can be concluded that the distributions of the scores of the new factors is generally not normal. In scoring the six newly-identified factors the researcher received 22 responses for the multichannel approach and 19 responses for the single-channel approach. Both sample sizes are small which explains in part why the scores of these new factors for both single-channel and multichannel m-Marketing may not be normally distributed.

Table 5.26
Shapiro-Wilks Tests of Normality for Single-channel m-Marketing (Six New Factors)

Success factors	Shapiro-Wilks		
	Statistic	N	Significance
Campaign Popularity	.978	22	.882
Campaign Promotion	.988	22	.991
Interoperability	.965	22	.605
User Power	.933	22	.143
Clutter on Mobile Medium	.948	22	.292
Customization	.940	22	.195

Table 5.27
Shapiro-Wilks Tests of Normality for Multichannel m-Marketing (Six New Factors)

	Shapiro-Wilks		
	Statistic	N	Significance
Campaign Popularity	.966	19	.704
Campaign Promotion	.922	19	.124
Interoperability	.952	19	.434
User Power	.934	19	.204
Clutter on Mobile Medium	.945	19	.329
Customization	.946	19	.342

Since the numbers of observations are low (22 and 19, respectively) the Shapiro-Wilks test is run to formally assess whether the datasets are normally distributed. The results, presented in Tables 5.26 and 5.27, show no evidence to refute the null hypothesis that the underlying distribution is normal for both single-channel and multichannel m-Marketing datasets. However, when considering the standard deviation, skewness and kurtosis statistics, as well as the small sample sizes, the researcher can still use the more conservative non-parametric tests for the difference in order to compare these results with the Round 1 analysis results. Furthermore, the median is often considered a better measure of central tendency than the mean for smaller sample sizes with relatively large standard deviations.

5.2.3 Median Difference Comparison (Six Newly-Identified Factors)

As in the analysis conducted in Round 1 of the study the researcher needs to test for differences in medians between single-channel (S-) and multichannel (m-) m-Marketing ratings for the six newly added success factors. The Wilcoxon signed-rank test is used for this analysis.

Table 5.28
Wilcoxon Signed-Rank Test Results for the Six New m-Marketing Success Factors

Success Factors	Z	P Asymp. Sig. (2-tailed)	Observed Changes
m-Campaign Popularity- S-Campaign Popularity	-0.684(a)	0.494	Not significant
m-Campaign Promotion – S-Campaign Promotion	-0.765(b)	0.445	Not significant
m-Interoperability – S-Interoperability	-3.702(b)	0.000	Significant at 1% level
m-User Power – S-User Power	-1.268(b)	0.205	Not significant
m-Clutter on Mobile Medium – S-Clutter on Mobile Medium	-0.402(a)	0.687	Not significant
m-Customization – S-Customization	-0.161(a)	0.872	Not significant

S- Single-channel m-Marketing success factors
m- Multichannel m-Marketing success factors

Table 5.28 shows the results of these tests. These results indicate that only the test for interoperability is significant (at the 1% level) meaning that the median criticality scores for interoperability between single-channel and multichannel m-Marketing are significantly different, with 99% confidence. For the other five new success factors the evidence suggests that the scores for single-channel and multichannel m-Marketing are not significantly different. In order to determine the direction of the difference for interoperability, a 1-tailed Wilcoxon Signed-Rank Test was conducted and the multichannel criticality scoring was found to be higher. As a result, interoperability is considered to be a factor that is significantly more critical for multichannel than single-channel m-Marketing.

5.2.4 Correlation Analysis (Six Newly-Identified Factors)

In Round 1 the researcher undertook correlation analysis for the originally identified 23 success factors. This analysis is now extended to investigate the correlations among the six new success factors as well as the correlation between these factors and user acceptance & satisfaction. As in Round 1, the researcher uses the Spearman's rank correlation coefficient to perform these tests. Tables 4.29 and 4.30 show the results for Spearman's rho.

By following the same approach as for the data analysis in Round 1, the researcher finds (Table 5.29 and Table 5.30) that campaign popularity is positively correlated with user acceptance & satisfaction for single-channel m-Marketing, with an r value of 0.59; however this value in the corresponding multichannel analysis is -0.26, meaning that campaign popularity is negatively associated with user acceptance & satisfaction in the multichannel m-Marketing context. More about this finding is discussed in Chapter 6.

Table 5.29
Correlation Analysis for Single-channel m-Marketing (Six new Success Factors)

Success factors	User Acceptance	Campaign Popularity	Campaign Promotion	Interoperability	User Power	Clutter on m-Medium	Customization
User Acceptance	1.00	0.59**	0.26	0.09	0.06	0.01	0.10
Campaign Popularity	0.59**	1.00	0.35	0.03	0.27	-0.11	0.46*
Campaign Promotion	0.26	0.35	1.00	0.13	0.06	0.26	0.10
Interoperability	0.09	0.03	0.13	1.00	-0.24	0.40*	0.39*
User Power	0.06	0.27	0.06	-0.24	1.00	-0.52	-0.01
Clutter on m-Medium	0.01	-0.11	0.26	0.40*	-0.52	1.00	0.19
Customization	0.10	0.46*	0.10	0.39*	-0.01	0.19	1.00

Correlation significant at 5% level.
**Correlation significant at 1% level.*

Table 5.30
Correlation Analysis for Multichannel m-Marketing (Six New Success Factors)

Success Factors	User Acceptance	Campaign Popularity	Campaign Promotion	Interoperability	User Power	Clutter on m-Medium	Customization
User Acceptance	1.00	-0.26	-0.15	0.08	-0.23	-0.14	0.00
Campaign Popularity	-0.26	1.00	0.06	0.12	0.28	0.04	0.03
Campaign promotion	-0.15	0.06	1.00	-0.10	0.27	-0.18	0.10
Interoperability	0.08	0.12	-0.10	1.00	-0.07	0.20	-0.04
User power	-0.23	0.28	0.27	-0.07	1.00	-0.50	0.12
Clutter on mobile medium	-0.14	0.04	-0.18	0.20	-0.50	1.00	0.06
Customization	0.00	0.03	0.10	-0.04	0.12	0.06	1.00

* Correlation significant at 5% level.*
** Correlation significant at 1% level.*

5.2.5 Factor Analysis (Incorporating the Six Newly-Identified Factors)

This section revisits the factor analysis conducted in Round 1 but considers all 29 success factors for both single-channel and multichannel m-Marketing (that is, including the six new factors). Sampling adequacy tests again indicate that the two data sets available are not well-suited for factor analysis, with the tests failing to reach the recommended thresholds for the Kaiser-Meyer-Olkin test or Bartlett's test. This is likely to be due to the inclusion of additional factors but the availability of only a small number of observations (19) for each new factor.

KMO measures the Sampling Adequacy. The test statistic varies between 0 and 1, and values closer to 1 are better, while the suggested minimum is 0.6. From the results presented in Tables 5.31 and 5.32, the KMO statistics are 0.089 for single-channel m-Marketing factors and 0.207 for multichannel m-Marketing factors. Both statistics are smaller than the suggested minimum. Moreover, neither of the Bartlett's test statistics for single-channel and multichannel m-Marketing factors are significant with p value equal to 1. This means there is no evidence to refute the null hypothesis that the correlation matrix is an identity matrix. After adding the six new factors, the Bartlett's test becomes insignificant for single-channel datasets.

Overall, the data sets cannot pass the sample adequacy tests.

Table 5.31
KMO and Bartlett's Test for Single-channel m-Marketing (29 Success Factors)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.089
Bartlett's Test of Sphericity	Approx. Chi-Square	298.183
	Df	406
	Sig.	1.000

Table 5.32
KMO and Bartlett's Test for Multichannel m-Marketing (29 Success Factors)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.207
Bartlett's Test of Sphericity	Approx. Chi-Square	76.150
	Df	406
	Sig.	1.000

In the interests of completeness the factor analysis has been re-run but it is important to acknowledge that the results may not be reliable in terms of model adequacy or robustness. Of particular note are the following comparative results arising from the single-channel analysis:

- The component comprising the factors privacy, security, technical support, response time and so on remains largely intact, and none of the additional six factors is considered part of this component
- In contrast, five of the six additional factors are found to comprise a single component − clutter on mobile medium, customisation, campaign promotion, interoperability, and user power are all included in a component along with interactivity, user opt-in, permission, richness and other factors
- Campaign popularity features in a component along with personalisation, brand trust, long term relationship and other factors.

When considering these results in relation to the DeLone and McLean (1992) framework, it appears that the first component is correlated with factors related to the market *development* phase, while the second component is more related to the marketing *use and deployment* phase, and the third to the *content, quality and impact* of the marketing.

5.2.6 Participants' Categorization (Six Newly-Identified Factors)

The twenty-two participants who took part in Round 2 of the Delphi study were asked to identify the most relevant category of m-Marketing success factor (from Figure 3.11) for the six newly-identified m-Marketing success factors. The outcomes are presented in Table 5.33, indicating the percentage of votes for the most relevant category.

Table 5.33
Participants' Categorization for the 6 Newly-Identified m-Marketing Success Factors

Success factors	m-Marketing Categories		
	Development	Use and Deployment	Impacts
Campaign Popularity	4.55%	77.27%	18.18%
Campaign Promotion	0	77.27%	22.73%
Interoperability	81.82%	13.63%	4.55%
User Power	4.55%	45.45%	50.00%
Clutter on Mobile Medium	18.18%	13.64%	68.18%
Customization	0	95.45%	4.55%

Categories chosen by the highest percentage of participants are recorded and highlighted in Table 5.33. The most preferred category from the three options for each of the six newly-identified m-Marketing success factors is therefore indicated. Note that *Clutter on mobile medium* received mixed responses, with 68.18% of the votes assigned to the m-Marketing impacts group. Furthermore, *User power* received approximately 50% of the votes for each of the use and deployment and impacts categories. By combining the research outcomes from Round 1 with the findings for the new six factors, all 29 m-Marketing success factors and their categorization by the participants to each of the three categories can be seen in Table 5.34.

Table 5.34

Participants' Categorization for 29 m-Marketing Success Factors

	m-Marketing Categories		
	Development	Use and Deployment	Impacts
User Acceptance & Satisfaction	0	6.45%	93.55%
Permission	12.91%	83.87%	3.22%
User Opt -in	45.17%	45.17%	9.66%
Brand Trust	3.22%	6.45%	90.33%
Profit / Value	0	29.03%	70.97%
Long Term Relationship	3.22%	22.59%	74.19%
Interactivity	74.19%	9.68%	16.13%
Content	80.65%	12.90%	6.45%
Accuracy	74.19%	19.36%	6.45%
Entertainment	19.37%	70.97%	9.66%
Richness	80.65%	6.45%	12.90%
Frequency	16.15%	74.19%	9.66%
Location Awareness & Mobility	74.19%	22.59%	3.22%
Personalization	16.13%	67.74%	16.13%
Security	77.42%	16.13%	6.45%
Privacy	77.42%	16.13%	6.45%
Usability	80.65%	19.35%	0
Delivery Time	45.16%	54.84%	0
Response Time	51.61%	48.39%	0
Response Channel	45.16%	45.16%	9.67%
Cost of Service	0	45.16%	54.84%
Quality of Service	74.19%	22.59%	3.22%
Technical Support	12.92%	77.42%	9.66%
Campaign Popularity	4.55%	77.27%	18.18%
Campaign Promotion	0	77.27%	22.73%
Interoperability	81.82%	13.63%	4.55%
User Power	4.55%	45.45%	50.00%
Clutter on Mobile Medium	18.18%	13.64%	68.18%
Customization	0	95.45%	4.55%

As six of the 29 factors were considered to be *Not critical* for multichannel m-Marketing, the discussion of participants' categorizations for the multichannel m-Marketing success factors presented in Chapter 6 excludes these six factors.

5.2.7 The Role of m-Marketing Acceptance in m-Marketing Success

The last question included in the survey for Round 2 asked participants to choose between two statements and models (see Section 4.7.3.3) regarding m-Marketing success. Option B, shown in Figure 5.3, received a 95% confirmation rate (21 votes out of 22) from the participants in Round 2 (and the remaining m-Marketing expert did not vote in this activity). The participants therefore strongly supported the following statement/model:

Figure 5.3. The Role of m-Marketing Acceptance in m-Marketing Success

Note, however, that the statement and diagram presented in Figure 5.3, which have been supported by the Delphi panel, represent only part of the proposed m-Marketing success model of this thesis. Table 5.35 reports the qualitative comments given by participants when choosing Option B in the last question of the Round 2 study.

Table 5.35
Comments regarding the Evaluation of m-Marketing Success

	Comments
1	It depends on the objective of the campaign - mobile can be used either to drive satisfaction &acceptance or to have a direct impact.
2	Development, Use & Deployment and Impacts might be successful but unless the user is satisfied and accepts these, the campaign may not be successful.
3	The consumer is king for m-Marketing, consumer satisfaction and acceptance means success.
4	It seems to me that success cannot be assessed directly as shown in a).
5	I think it is critical that if the right marketing strategy hits the right audience.
6	M-Marketing campaign needs to be operated and supported by stakeholders in value-chain, without them, m-Marketing cannot be operated or deployed.
7	I see satisfaction and acceptance by All parties, brand, agency and Customer as essential to success. To not assess and or monitor success for each of the parties (at all stages) would be a missed opportunity for evaluation to be able to be compared against future campaigns.
8	M-Marketing will only be successful through consumers' acceptance regardless of what service providers may develop and/or deploy in their strategic planning.
9	Both satisfaction and acceptance should apply to all 3 phases of m-Marketing development, use and impacts.
10	Statement B is much closer to the user-driven nature of m-Marketing. Effective evaluation of m-Marketing success cannot be only message-delivery based. Since mobile is primarily a user-defined experience, m-Marketing evaluation must be initiated at the user level based on qualitative and subjective assessment of usability and acceptance issues.

Chapter 6 presents further discussion of these results.

5.2.8 Qualitative Data and Analysis (Round 2)

Apart from the quantitative data gathered, Round 2 of the Delphi study also collected qualitative data relating to the following two issues:

- When in Round 1 of the study a factor is considered to be *Not critical* for multichannel m-Marketing, participants were asked to provide a comment to justify (or otherwise argue against) the result.
- When in Round 1 a factor is identified as *more or less critical* for multichannel m-Marketing than for single-channel m-Marketing, participants are asked to provide a comment to justify (or otherwise argue against) the result.

5.2.8.1 Comments Related to Not Critical Factors for Multichannel

m-Marketing

Table 5.36 presents the comments provided by participants concerning the Round 1 findings related to the success factors considered to be *Not Critical* for multichannel m-Marketing. In the Round 1 data analysis, any factor that achieved a mean score of less than 500 was considered to be *Not Critical* for multichannel m-Marketing: *Note:* More comments to support this analysis can be found in Table 5.18. The factors in question were:

- Brand Trust
- Entertainment
- Location Awareness & Mobility
- Response Time
- Frequency
- Technical Support

Table 5.36
Comments Related to *Not Critical* Factors for Multichannel m-Marketing

	Comments Regarding Brand Trust as not critical for multichannel m-Marketing
1	Brand trust requires brand awareness; it is not a variable that m-Marketing campaign builds;
2	Brand trust is not important for multichannel m-Marketing as long as the right marketing strategy hits the right audience;
3	Although mobile messages are more likely to be seen as intrusive & abusive than those arriving via non-mobile channels, it doesn't mean that trust is a core factor to enable its success;
4	I think brand trust will always be critical to any campaign. Whether they are using m-Marketing or some other form of marketing like social media, traditional media etc. However, in multichannel mobile marketing environment, trust is not a core factor that industry players are keen to concern;
5-C	It is very likely that consumers will react to messages form a trusted source; however it can be argued that brand trust is gained from the mobile marketing campaign or from the brands;
6-C	Trust indeed has influences to m-Marketing strategies, such as opt in, permission, and consumer satisfaction; I understand it may become a minor factor for multichannel strategy, yet it shouldn't be non-critical.
	Comments Regarding Entertainment as not critical for multichannel m-Marketing
7	The marketing message doesn't always have to be 'entertaining', it become less compulsory for multichannel mobile marketing;
8	In my experience, most people prefer actually 'business like' communication - brief, to the point, no 'extras';
9	The value that can differentiate from other marketing campaign is more important than the added feature e.g. entertainment;
10	Comparing to entertainment, content and information is more critical in marketing perspective;
11	It is more difficult to ensure entertained for the marketing message via multiple channel;
12-C	I believe the entertainment requirement of multichannel mobile marketing is increasing, not decreasing; but, it is depending on the scope and description of entertainment; from my point of view, social networking and engagement are more appropriate;

13 -C	Entertainment value is highly critical. Especially if the aim is to create WOM / viral campaign; perhaps it doesn't match the aim for multichannel strategy and development, and therefore becomes not critical.
Comments Regarding LBS & Mobility as not critical for multichannel m-Marketing	
14	Global positioning service is a built in feature to recent cell phone or smart phone;
15	Not all m-Marketing service is location-based, and it is difficult to deploy LBS in a large area such as global location;
16	Maybe too early to put location-based service as a critical point for multichannel m-Marketing;
17	Location awareness is just an extra value if location-based service is needed; it is becoming more critical overtime and the more you can use location information the more relevant the messages will be in near future
18	Sometimes, location awareness against user privacy for mobile business application and service;
19 -C	Location-based awareness is the fastest growing area of m-Marketing and will ultimately bridge the gap between the online & offline worlds.
Comments Regarding Response Time as not critical for multichannel m-Marketing	
20	Mobile communication is immediate, thus response should be immediate;
21	Probably part of the basic expectation so falls off the list to the multichannel approach. However it is really depending on the users;
22	It is difficult for brands, providers and users to manage response time, this is a MNO's (mobile network operator) responsibility to control the quality of service over mobile communication; however from my point of view, it is more complicated to control response time for multichannel mobile marketing;
23	Response time has two dependencies: campaign performance and user behaviours;
24 -C	Response time is still a key factor in all type of communication; Instant responses are THE critical assess of response - I doubt people will store promotional texts etc to respond later.
Comments Regarding Frequency as not critical for multichannel m-Marketing	
25	Frequency is not critical for mobile marketing as long as permission is given;
26	Message receivers can manage frequency via opt in process, thus it is not necessary;
27	Although mobile messages are more likely to be seen as intrusive & abusive than those arriving via non-mobile channels, it doesn't mean that frequency is a core factor to enable its success;
28	Frequency of messages is important and marketing campaigns need to think about how often you are communicating with the end users. If it is a push campaign you need to be mindful of how often to use the mobile device as a way to interact;
29 -C	Suitable frequency is good and can be a marketing strategy.
Comments Regarding Technical Support as not critical for multichannel m-Marketing	
30	Assimilation with mobile devices will eventually reduce the need for technical support, as it has with computers
31	Hoping that Technical support is not needed. It needs to be Idiot Proof or the consumer will not bother with the promotion. Certainly wouldn't bother contacting anyone to fix an issue;
32 -C	Support is still important for customers, not matter to single or multi- channel mobile marketing;
33 -C	Technical support is actually more critical for multichannel mobile marketing and as campaigns become more complex the need for support increases.

C – Contradictory comment

Discussion of these comments is provided in Chapter 6.

5.2.8.2 Comments Related to Factors Considered to be More or Less Critical

for Multichannel m-Marketing (23 Factors)

Table 5.37 presents the comments provided by Round 2 participants in relation to the findings in Round 1 concerning success factors considered to be *More* or *Less Critical* for multichannel m-Marketing. In the Round 1 data analysis, the panel's responses resulted in the following factors being considered as more critical for multichannel m-Marketing in comparison to single-channel m-Marketing:

- Profit/Value
- Usability
- Response channel

Factors considered to be less critical in multichannel m-Marketing were:

- Permission
- Content
- Accuracy
- Response time

Table 5.37

Comments to Factors Considered to be More or Less Critical for Multichannel m-Marketing

Comments Regarding Profit/Value as being **more** critical for multichannel m-Marketing	
	Comments
1	Value is always important - doesn't matter how many channels are involved;
2	As brands utilize more channels the cost will increase so it's important that the ROI is evident;
3	The campaigns have to come in at *marginal Cost* compared to traditional forms of advertising and/or Promotion - AND must have a measurable output (turnover, sales, no of responses, assessment of single user responses) to allow evaluation and appropriate adjustment, continuation or withdrawal from the program;
4	Perceived value of the mobile experience will drive m-Marketing acceptance, level of use and consumer payment for content services;
5	Profit is a by product of successfully implementing the value proposition;
6	Breakeven for running or managing a multichannel campaign is higher;
	It is likely that multichannel m-Marketing can generate more profit to brands as the response rate are comparable higher;
7	I think it is important to generate profit and value to m-Marketing campaign operator or service providers. Also, to all other stakeholders involved, especially that multichannel m-Marketing is new. The involved parties to its value chain are not clear yet.
Comments Regarding Usability as being **more** critical for multichannel m-Marketing	
8	With more channels comes more management so it's important each channel is user friendly and cooperative well;
9	If multichannel mobile marketing service is not instantly usable and easily usable the response rates will not be as needed and the effectiveness of the campaign denigrated to the point of obsolescence;
10	Usability issues will regress toward the norm as more mobile device makers emulate multichannel compatible mobile phone model;

11	The better usability design, the less annoyed customers;
12	Since multichannel m-Marketing is new, it expected usability becomes more important in design and development phases;
13	Usually, usability is link to user experience and phone features.

Comments Regarding Response Channel as being **more** critical for multichannel m-Marketing

14	In same situation, multiple channels are always better than single channels;
15	Polymorphism is becoming more important in multichannel approach; this is supporting usability as well;
16	It is important that users can respond in other channels in a most preferred manner, for example react to a mobile phone message in a web interface;
17	Mobile is a direct response channel and will find much of its future success in the direct response arena;
18	It is much more choice for the consumer and for the campaign owner to be interacted, harder to quantify where the leads came from;
19	It is likely that multiple communication approach can increase response rate for mobile marketing;
20	Response channel is more important if multichannel communications are delivered all over mobile; Otherwise, I assume that the response channel needs to be back to the mobile;

Comments Regarding Permission as being **less** critical for multichannel m-Marketing

21	Users have started accepting permission is a default feature;
22	User opt in is a feature that allow users to send permission to mobile marketing campaign operators;
23	Maybe users are now considering mobile channel is a safe channel so does not need to pay too much attention to permission;
24-C	Permission will always be one of the most critical factors to the success of m-Marketing, no matter it is single-channel or multichannel.

Comments Regarding Content as being **less** critical for multichannel m-Marketing

25	Users are more likely to examine the usability before looking deeply at the content;
26	Cross-channel interaction and communication is more important for multichannel m-Marketing;
27-C	Short - understandable in an instant and easy to respond to are the essential components - If it is too complex or long winded then I suspect response rates would drop badly;
28-C	Content is important because it determines the usefulness of the message;
29-C	Content for single- or multi-channel m-Marketing will continue to be one of the key differentiators of success.

Comments Regarding Accuracy as being **less** critical for multichannel m-Marketing

30	As long as the message receivers understand the meaning of a message, accuracy is not really important;
31-C	Rather obviously - ALL details contained in the messaging MUST be error free (Spelling, dates, requirements etc). Anything less is simply not acceptable!
32-C	The disruptive nature of m-Marketing requires it to be more information accurate than other digital technologies.

Comments Regarding Response Time as being **less** critical for multichannel m-Marketing

	Refer to Table 5.42: Comments 20 - 24 Note: No other comments were provided, respondents directed the researcher back to their previous comments.

C – Contradictory comment

5.2.9 Summary of Findings from Round 2

In Round 2 all 29 m-Marketing success factors were identified, confirmed, scored and categorized. These activities and the associated outcomes are summarized in Table 5.38.

Table 5.38
Round 2 Findings Summary

Findings	Techniques	Descriptions
1	Descriptive Statistics (Mean Value)	One additional *Very critical* single-channel m-Marketing success factor (campaign promotion) and two additional multichannel m-Marketing success factors (campaign promotion & interoperability) were identified; One factor (interoperability) that was considered to be *Critical* for multichannel but *Not critical* for single-channel m-Marketing was identified.
2	Median Difference Comparison	One additional success factor considered to be more critical to multichannel than to single-channel m-Marketing (interoperability) was identified.
3	Correlation Test	One additional factor (campaign promotion) was found to be correlated with user acceptance & satisfaction for multichannel m-Marketing but not correlated with user acceptance & satisfaction for single-channel m-Marketing.
4	Participants' Categorization	The six newly identified m-Marketing success factors were categorized into development, use and deployment, and impacts, by the Round's 22 participants, with most falling primarily into one of the three categories.
5	Majority Vote	Participants supported a model indicating that m-Marketing success is encouraged by acceptance and satisfaction in all three phases identified in the IS success model; qualitative data were collected and presented to support participants' selections.
6	Qualitative Analysis (Descriptive Statements and Interpretation)	Comments were gathered to support findings derived from the data analysis in Round 1 for *Not critical*, *More critical* and *Less critical* multichannel m-Marketing success factors.
7	Soliciting consensus through Email	All findings from Rounds 1 & 2 were summarised and sent to participants for comment and confirmation.

5.3 Round 3: Data Analysis and Findings

In Rounds 1 and 2 of the Delphi study the expert panel of mobile Marketing academics and professionals were asked to identify, score and categorize success factors for single- and multichannel m-Marketing. In the third and final round of the survey the participants were asked to respond to two further multi-part questions. First, participants were asked to indicate whether each of the already identified success factors for multichannel m-Marketing has an impact on consumer satisfaction, or on business benefits (for brands and service providers), or on both. Second, the participants were asked to provide qualitative feedback regarding the findings derived from Round 2.

5.3.1 Consumer Satisfaction and Profit-Oriented Stakeholders' Benefits

It is asserted in this thesis that in m-Marketing the consumer is a stakeholder who should be satisfied with the intangible value of m-Marketing and who does not receive direct commercial benefit from m-Marketing; in contrast, brand owners and service providers are commercially motivated and so are profit/value-oriented stakeholders. In order to drive m-Marketing success, achieving both consumer satisfaction and profit/value-oriented stakeholder benefits is important. In Round 3, the Delphi participants were asked to indicate whether they considered the multichannel m-Marketing success factors identified in previous rounds to be important to consumer satisfaction, or to profit/value-oriented stakeholders' benefit, or to both. Six options were presented to the panellists regarding each success factor:

a) Important to consumer satisfaction only;
b) Important to profit/value-oriented stakeholders' benefit only;
c) More important to consumer satisfaction;
d) More important to profit/value-oriented stakeholders' benefit;
e) Equally important to both;
f) Not particularly important to either.

In addition, three other values were calculated from those provided by the panellists:

g) Sum of c, d and e (representing importance to both groups);
h) Sum of c and e (representing importance to both groups but tending more towards consumer satisfaction);
i) Sum of d and e (representing importance to both groups but tending more towards profit/value-oriented stakeholders' benefit).

These results are presented in Table 5.39.

Table 5.39
Consumer Satisfaction vs. Profit/value-Oriented Stakeholders' Benefits

Success factors	a)	b)	c)	d)	e)	f)	g)	h)	i)
User Acceptance & Satisfaction	0	1	0	11	7	0	18	7	18
Brand Trust	0	2	1	8	8	0	17	9	16
Campaign Popularity	0	5	0	10	4	0	14	4	14
Campaign Promotion	0	6	0	6	7	0	13	7	13
Clutter on Mobile Medium	0	0	10	0	9	0	19	19	9
Content (Message)	4	1	6	0	8	0	14	14	8
Cost of Service	4	0	10	0	5	0	15	15	5
Customization	0	6	0	6	7	0	13	7	13
Delivery Time	4	0	6	0	9	0	15	15	9
Entertainment (Message)	10	0	6	0	3	0	9	9	3
Frequency (Message)	1	1	9	2	6	0	17	15	8
Accuracy (Message)	4	1	4	0	10	0	14	14	10
Interactivity (Business and Consumer)	0	0	1	8	10	0	19	11	18
Interoperability	0	4	0	14	1	0	15	1	15
Location Awareness & Mobility	1	1	9	1	7	0	17	16	8
Long Term Relationship	0	0	0	14	5	0	19	5	19
Permission	0	0	12	1	6	0	19	18	7
Personalization	6	0	8	0	5	0	13	13	5
Privacy	4	0	8	1	6	0	15	14	7
Quality of Service	4	0	10	0	5	0	15	15	5
Response Channel	2	2	6	0	9	0	15	15	9
Response Time	0	0	14	0	5	0	19	19	5
Richness (Message)	5	4	2	2	6	0	10	8	8
Security	4	0	8	1	6	0	15	14	7
Technical Support	0	0	8	2	8	1	18	16	10
Usability	5	0	11	0	3	0	14	14	3
User Opt-in	1	0	2	2	14	0	18	16	16
User Power	0	1	8	4	5	1	17	13	9
Profit/Value	0	5	0	12	2	0	14	2	14

Detailed analysis and discussion of these results are presented in Chapter 6, Section 6.7.

5.3.2 Qualitative Data and Analysis (Round 3)

Apart from the quantitative data gathered, Round 3 of the Delphi study also collected qualitative data relating to the previous score information provided regarding interoperability. Interoperability was identified as a factor *Critical* for multichannel m-Marketing but *Not critical* for single-channel m-Marketing; correspondingly, this factor was considered to be *more critical* for multichannel m-Marketing than for single-channel m-Marketing, with

significance of 1%; finally, interoperability was seen as being a *Very critical* factor for multichannel mobile marketing, with a mean score of more than 750. Participants were asked to provide comments to clarify or rationalise these results. Table 5.39 presents comments provided by participants relating to these Round 2 findings. Note: due to the research design outlined in Section 4.7.3.4, interoperability is investigated in particular here, as it is a Round 2 finding that needs to be verified by participants.

In addition, certain success factors across Rounds 1 and 2 were considered to be *Very critical* for m-Marketing. Participants were also asked to provide comments to clarify or rationalise these results.

Table 5.40

Comments Regarding Interoperability as a Very Critical Success Factor for Multichannel m-Marketing

	Comments
1	The multichannel approach means more interoperability issues would be raised for cross platform, medium or type of device;
2	Interoperability is an important concern while building and using the mobile marketing service ;
3	Interoperability is vital for any kind of mobile communications, and becomes more significant in 3G and 4G environment;
4	It depends on what kind of mobile tools are involved and end users' mobile devices;
5	Interoperability becomes more important for multichannel or multivendor mobile business solutions;
6	Interoperability is the most important capability of current mobile communication service, that has a key role to play in multi-channel integration.

In the analysis of data collected in both Round 1 and Round 2, any factor that had a mean score of more than 750 was considered to be *Very critical* for m-Marketing. The factors found to be *Very critical* in Round 2 were as follows:

- User acceptance & satisfaction and campaign promotion were considered to be *Very critical* for both single-channel and multichannel m-Marketing;
- Permission was considered to be *Very critical* for single-channel m-Marketing;
- Profit/Value, usability and interoperability were considered to be *Very critical* for multichannel m-Marketing.

Table 5.41 presents the comments provided by participants regarding these findings.

Table 5.41
Comments Related to Very Critical m-Marketing Success Factors

	Comments Regarding User Acceptance & satisfaction as being Very Critical for m-Marketing
	Comments
1	User acceptance & satisfaction is impacted by satisfaction, it is likely that a consumer accepts mobile marketing with satisfactions;
2	No matter single or multichannel mobile marketing, receiving user acceptance & satisfaction is the ultimate goal for the campaign owners;
3	The more users accept the mobile marketing, the more opportunity to generate business revenue for brand owner;
4	M-Marketing will only be successful through consumers' user acceptance regardless of what service providers may develop and/or deploy in their strategic planning;
5	Development, Use & Deployment and Impacts might be successful but unless the user is satisfied and accepts these, the campaign may not be successful;
6	User Acceptance is a core expectation that drives the mobile marketing success;
	Also refer to Table 5.35.
	Comments Regarding Campaign Promotion as being Very Critical for m-Marketing
8	For any mobile marketing campaign not matter single-channel or multichannel, to be effective, advertisers need to initiate customers to engage with their program;
9	Mobile marketing campaign itself needs to be promoted by the service providers or campaign owners;
10	The more people recognize the mobile marketing campaign, it is more likely that the campaign will be accepted and become successful and well-known;
11	Word of mouth is the principle of marketing, it can be used to promote mobile marketing as well;
12	I think campaign promotion has direct impact to popularity, as well as User Acceptance.
	Comments Regarding Permission as being Very Critical for Single-channel m-Marketing
13	There is nothing more important than getting users' permission for mobile marketing;
14	Mobile marketing is a permission-based marketing; Acceptance is likely to be gained while permission is gained;
15	User permission is the most important variable, the main reason for this being that most consumers are fearful of SMS mobile marketing becoming like e-mail marketing that is with high levels of SPAM;
16	User opt in is a feature that allows users to send permission to mobile marketing campaign operators.
	Comments Regarding Profit / Value as being Very Critical for Multichannel m-Marketing
17	Mobile marketing is a value-added service;
18	All stakeholders including consumers would like to generate more value from using mobile marketing;
19	The cost of implementing multichannel mobile marketing campaign is comparably higher than single-channel campaign, thus the service providers would like to receive more profit from the deployed service and the implemented campaign;
20	The expectation of using and deploying mobile marketing is to obtain higher business profit and consumer value;
	Also refer to Table 5.37.

	Comments Regarding Usability as being Very Critical for Multichannel m-Marketing
21	More channels means more management and technical issues involved, the campaign owner should make sure that each channel is user friendly;
22	The better usability design, the less annoyed customers;
23	The campaign design and implementation process become more complicated for multichannel mobile marketing, usability is also a major concern to ensure user satisfaction as well;
24	Usability for multichannel approach is also related to other external variables: such as phone features, network and application compatibility etc;
	Also refer to Table 5.37.
	Comments Regarding Interoperability as being Very Critical for Single-channel m-Marketing
	Also refer to Table 5.40. Note: no comments were provided, respondents directed the researcher back to their previous comments.

5.3.3 Summary of Findings from Round 3

In Round 3, all 29 m-Marketing success factors were categorized based on their importance to consumer satisfaction and profit/value-oriented stakeholders' benefits. In addition, qualitative data were collected from participants in this round in order to lend support to the survey's previous findings regarding very critical success factors for mobile marketing. Table 5.42 summarizes the activities and outcomes of this round.

Table 5.42
Round 3 Findings Summary

Findings	**Techniques**	**Descriptions**
1	Frequency Count & Analysis	All 29 m-Marketing success factors were categorized into six selections based on their importance to consumer satisfaction and profit/value oriented stakeholders' benefits.
2	Qualitative Analysis (Descriptive and Exploratory)	Comments were gathered to support findings derived from Rounds 1 & 2 data analysis regarding *Very critical* m-Marketing success factors.
3	Soliciting consensus through Email	All findings from Rounds 1, 2 & 3 were summarized and sent to participants for comment and confirmation.

5.4 Summary of the Main Findings

This chapter has presented all the quantitative and qualitative data gathered in the 3-Round Delphi study. The initial findings that have resulted from the data analysis are summarised and presented in Table 5.43.

Table 5.43
Summary of the research findings

Findings	Qualitative Data	Research Question	Results and Comments
Six new m-Marketing success factors	Tables 5.19 & 5.21 in section 5.1.6	1	Campaign promotion, campaign popularity, interoperability, user power, clutter on mobile medium, and customization
Six factors critical to single-channel but not critical to multichannel m-Marketing	Table 5.18 in section 5.1.6 and Table 5.36 in section 5.2.8	1&2	Location awareness & mobility, response time, entertainment, frequency, brand trust, and technical support
One factor critical to multichannel but not critical to single-channel m-Marketing	Table 5.40 in section 5.3.2	1&2	Interoperability
Three very critical m-Marketing success factors for single-channel m-Marketing	Table 5.41 in section 5.3.2	3	Campaign promotion, user acceptance & satisfaction, and permission
Four very critical m-Marketing success factors for multichannel m-Marketing	Table 5.41 in section 5.3.2	3	Campaign promotion, user acceptance & satisfaction, usability, profit/value, and interoperability
Four factors more critical to multichannel than single-channel m-Marketing	Tables 5.37 & 5.40 in section 5.2.8	2	Profit/value, usability, response channel, interoperability
Four factors less critical to multichannel than single-channel m-Marketing	N/A	2	Permission, response time, content, and accuracy
Three pairs of correlated factors	N/A	4	Content and accuracy; security and privacy; permission and opt in
Two pairs of factors correlated for single-channel but not for multichannel m-Marketing	N/A	4	Delivery time and response time; richness and entertainment

Seven factors correlated with user acceptance & satisfaction in multichannel m-Marketing	N/A	4	Permission, Accuracy, content, long term relationship, frequency, personalization, and campaign popularity
Categorization of m-Marketing success factors from factor analysis with 3 component extractions	N/A	5	These findings are discussed and compared with participants' categorization outcomes in Chapter 6.
Categorization of m-Marketing success factors by participants based on IS success model	N/A	5	These findings are discussed and compared with the factor analysis outcomes in Chapter 6.
Role of m-Marketing user acceptance & satisfaction in m-Marketing success identified	Table 5.35	6	This finding both draws on and refines the proposed m-Marketing success model in Chapter 3.
Categorization of m-Marketing success factors in relation to two variables that evaluate m-Marketing acceptance (consumer satisfaction and profit/value oriented stakeholder's benefits)	N/A	7	This finding helps to support and link multichannel m-Marketing success factors with the m-Marketing success model.

In Chapter 6 the researcher discusses the research results according to the sequence outlined in Table 5.43. In addition, the researcher uses all findings to inform a discussion of how the proposed m-Marketing success model is related to empirical evidence regarding multichannel m-Marketing in this thesis.

Chapter 6: Discussion

The last section of the previous chapter presented the findings derived from the empirical work undertaken and provides answers to the research questions, in Table 5.43. This chapter considers and discusses the research outcomes by referring to the results of the quantitative data analysis, to the qualitative comments offered by participants, as well as to relevant literature.

6.1 Newly-Identified m-Marketing Success Factors

In Round 1 of the Delphi study participants identified six new m-Marketing success factors. These factors were then ranked by participants for relevance and criticality to both single-channel and multichannel m-Marketing approaches in Round 2 of the study. The six factors are listed below:

- Campaign Popularity
- Campaign Promotion
- Interoperability
- User Power
- Clutter on Mobile Medium
- Customisation

This section discusses the meaning (based on the qualitative data presented in Tables 5.19 and 5.21) and levels of criticality (based on the descriptive statistics presented in Tables 5.24 and Table 5.25) of these new factors for m-Marketing. The influence of these six factors on m-Marketing is discussed with reference to relevant literature.

6.1.1 Campaign Popularity

According to the participants' opinions and the achieved consensus, the meaning of the new factor *campaign popularity* relates to whether the m-Marketing campaign is running on a mobile network that hosts most of the target consumers. Based on the statistics shown in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor to both single-channel and multichannel m-Marketing are presented in Table 6.1.

Table 6.1.
Mean Scores and Levels of Criticality for Campaign Popularity

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	603	Critical
Multichannel	573	Critical

Although there is no previous literature in which the term popularity is used for describing an m-Marketing campaign, Campaign Popularity is considered to be relevant and Critical to both single-channel and multichannel m-Marketing. As stated in (Leppaniemi & Karjaluoto, 2005), the popularity of m-Marketing can influence consumers' willingness to use such a service. It is likely that a more popular m-Marketing campaign receives more attention from users, with substantial impact on user acceptance or willingness to use services deployed by such a campaign (Tahtinen, 2005).

6.1.2 Campaign Promotion

According to the participants' views, the new factor *campaign promotion* refers to the promotion quality and strategy of the m-Marketing campaign and service, e.g., whether the campaign is targeting the right audiences. Based on the statistics shown in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor for both single-channel and multichannel m-Marketing are presented in Table 6.2.

Table 6.2
Mean Scores and Levels of Criticality for Campaign Promotion

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	751	Very Critical
Multichannel	757	Very Critical

For any kind of marketing communication, campaign promotion is important (David, 1983; Soley & Reid, 1982). Since m-Marketing is a permission-based marketing approach, campaign promotion is key in persuading users to believe that m-Marketing can create value for them through a subscription (Barnes & Scornavacca, 2004). This includes how to attract consumers to give permission to the campaign, so that they can be reached and marketing messages can be delivered to them, as well as how to attract businesses to join the campaign on the basis that m-Marketing will be able to outperform other non-mobile marketing approaches. Campaign promotion has been identified in many previous m-Marketing studies as a success factor; the outcome from this Delphi study indicates that promoting the campaign is very critical (with a mean score above 750) for both single-channel and multichannel m-Marketing. In section 6.3.2, campaign promotion is discussed as a Very critical success factor for both single-channel and multichannel m-Marketing. As a newly identified m-Marketing success factor that received a mean score higher than 750, it is recommended that mobile marketing service providers should pay close and particular attention to promoting their newly launched campaigns.

6.1.3 Interoperability

In line with views of the panellists, the new factor *interoperability* means that a media-compatible m-Marketing communication, such as a coherent message, can be sent through all media, including device, channel, and platform variations. Based on the statistics in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor to both single-channel and multichannel m-Marketing are shown in Table 6.3.

Table 6.3
Mean Scores and Levels of Criticality for Interoperability

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	485	Not Critical
Multichannel	767	Very Critical

It can be seen that interoperability receives a mean score of 485 for single-channel m-Marketing and so is considered not critical for this m-Marketing approach; in contrast, it receives a much higher mean score (767) and is considered very critical for multichannel m-Marketing. As noted by (Camponovo & Pigneur, 2003), m-Marketing communication requires different kinds of mobile networks, application systems or devices to support its operation and therefore interoperability issues may arise. Since in single-channel m-Marketing information is delivered over a homogeneous mobile medium, interoperability is not an essential factor. However, this is not the case for the multichannel approach. According to (Lalopoulos & Chochliouros, 2005), multichannel mobile communication is not simply running multiple single-channels at the same time: it requires data exchange across communication channels, user devices and network platforms. Thus, it is not unexpected that interoperability becomes important for multichannel m-Marketing – however, we now have empirical evidence of that expectation.

6.1.4 User Power

According to the panellists' responses, the new factor *user power* refers to the level of power held by m-Marketing users (the consumers), who are capable of influencing m-Marketing campaign development, use and deployment, service operation and management. Based on the statistics shown in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor to both single-channel and multichannel m-Marketing are presented in Table 6.4.

Table 6.4
Mean Scores and Level of Criticality for User Power

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	571	Critical
Multichannel	639	Critical

As found in (Baron, Patterson, & Harris, 2006), consumer power is perceived as a factor driving technology acceptance for m-Marketing. The analysis of the scores provided by experts in this Delphi study shows that user power receives a mean score of 571 and is considered Critical to single-channel m-Marketing. For multichannel m-Marketing, the mean score is a higher at 639, but with the same level of criticality.

6.1.5 Clutter on Mobile Medium

"*We define perceived advertising clutter as one's belief that the amount of advertising in a medium is excessive*" (Speck and Elliott, 1997a). In this study, participants reached consensus that the new factor *clutter on mobile medium* may negatively influence consumer attitude or lead to greater avoidance of using mobile media for advertising. Based on the statistics shown in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor to both single-channel and multichannel m-Marketing are presented in Table 6.5.

Table 6.5
Mean Scores and Levels of Criticality for Clutter on Mobile Medium

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	559	Critical
Multichannel	519	Critical

In a mass market, marketing activities can be performed in a push manner, such as advertisements on television, in a newspaper, or through cold calls, but with comparatively low response rates (Barnes & Scornavacca, 2004). Clutter on communication media is usually seen unfavourably by both marketing message senders (brand owners) and receivers (consumers). Push-based advertisements can result in a cluttered communication medium, such as Internet advertising (Mehta & Sivadas, 2006), something that is usually not welcomed by consumers because extra effort is required to filter the unwanted messages. As a result, a decrease in consumer satisfaction may occur that may further reduce the acceptance of such a marketing communication medium. An advantage of using m-Marketing is that users can agree to participate in the campaign (opt-in), showing willingness and trust (Okazaki, et al., 2007). As a result, more brands and consumers have noted the advantages of m-Marketing with less clutter. According to the Delphi panellists clutter on mobile medium receives mean scores (559 for single-channel and 519 for multichannel m-Marketing) that see it as a factor considered Critical for m-Marketing.

6.1.6 Customisation

According to the participants' opinions and consensus, the new factor *customisation* refers to how an m-Marketing service can be customized by the service provider. For instance, integration of short codes may become part of a branding strategy. Based on the statistics shown in Tables 5.24 and 5.25, mean scores and levels of criticality of this factor to both single-channel and multichannel m-Marketing are presented in Table 6.6.

Table 6.6
Mean Scores and Levels of Criticality for Customisation

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	590	Critical
Multichannel	576	Critical

The researcher questioned whether for participants the term customisation had a meaning similar to personalisation. One participant argued that: *"In comparison, personalisation is specific to individuals; customisation is an emerging concept for service providers to promote products and services."* Two examples were offered by two different participants:

- Example 1: *"Look at the example of m-Marketing used in the Obama election campaigns. The short code used became THE short code of the white house to be in touch directly with the president, and is still used 2 years after the election is won, thus it is very powerful."*
- Example 2: *"Businesses may have a 0800 numbers with their chosen suffix so that it is easy to remember by consumers, or it matches the company or products name with the word number combination. The main purpose of such approach is to create a proper business identity so that consumers can have a deeper impression and a feeling of professionalism."*

Customisation and personalisation are indeed considered separate concepts in the m-Marketing literature (Kurkovsky & Harihar, 2006; Rao & Minakakis, 2003). While customisation is related closely to m-Marketing deployment and to service providers, personalisation is related more to m-Marketing use and the users. The experts on the Delphi panel agree that it is a Critical success factor for m-Marketing.

6.2 Factors Not Critical to Single- and/or Multichannel m-Marketing

This section discusses the success factors that received mean scores less than 500 for single-channel and/or multichannel m-Marketing. As shown in Section 5.1.6, six factors – location awareness & mobility, response time, entertainment, frequency, brand trust, and technical support – were considered to be not critical for multichannel m-Marketing, and one factor – interoperability – was found to be not critical for single-channel m-Marketing.

6.2.1 Location-Awareness: Not Critical to Multichannel m-Marketing

Statistics presented in Table 5.2 show that *location-awareness* received a mean score of 524 for single-channel m-Marketing and so is considered a critical success factor. However, it only receives a mean score of 371 and is considered not critical for multichannel m-Marketing.

Table 6.7
Mean Scores and Levels of Criticality for Location Awareness & Mobility

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	524	Critical
Multichannel	371	Not critical

Some participants believed that location awareness & mobility is not critical all the time. For example, as can be seen in Table 5.18, in comment 3b) a participant states that "*when consumers gather marketing information from the use of m-Marketing, they usually do not need to be known about their position*". The participant agrees that location-based service sometimes creates privacy concerns for m-Marketing users. This argument is also supported in (Rao & Minakakis, 2003). As pointed out in comment 14 in Table 5.36, "*global positioning service is a built in feature to recent cell phone or smart phone*". At the present time, location awareness & mobility has become a built-in feature of many mobile devices such as mobile phones, PDAs and smart phones. It is true that some m-Marketing campaigns utilise the LBS feature from mobile devices, however it is not always necessary and included. Another participant states in comment 15, "*not all m-Marketing services are location-based, and it is difficult to deploy location-based service (LBS) in a large area such as global location.*" Thus its use, and usefulness, depend on the nature of product and service being provided. If an m-Marketing campaign does not need to use or provide a location-based service then the LBS feature is not a critical concern to the campaign owner.

Furthermore, comment 16 states "*maybe it is too early to put location-based service as a critical point*". Now that a growing number of LBS-enabled m-Marketing campaigns or applications are being trialled in existing multichannel m-Marketing (for example the trial started in August 2011 by Take5, a leading location-based m-Marketing service provider) (Raton, 2011), perhaps LBS will become a popular feature for m-Marketing in the near future, particularly as it is predicted that service providers will spend 1.5 billion US dollars in location-based services by 2015 (Clerck, 2011).

However, some other participants believe that location awareness & mobility is critical all the time. In comment *19-C* in Table 5.36, a participant points out that "*location awareness is the fastest growing area of m-Marketing and will ultimately bridge the gap between the online and offline worlds*". The researcher then suggested to participants that it is a fast growing area, but other participants argued (in comment 17) that for m-Marketing development, adoption and deployment, "*location awareness is just an extra value if*

location-based service is needed". Furthermore, as also pointed out in comment 17 *"this is becoming more critical overtime and the more you can use location information the more relevant the messages will be".* In summarizing this participant's opinion, location awareness & mobility is an important factor even if not really a critical factor, but this might be due to not having been sufficiently explored/experienced. Finally, location awareness & mobility and user privacy have been connected in comment 18, *"Sometimes, location awareness against user privacy for mobile business application and service".* It is true that location-awareness can identify a user's physical location, which normally they do not want known by unauthorized parties.

In summary, according to the study participants, the reasons for *location awareness & mobility* being not critical for multichannel m-Marketing are:

- Some m-Marketing campaigns do not offer or need location awareness services;
- Location awareness service is restricted to limited locations at present;
- Location awareness service needs more research and investment;
- Location awareness is sometimes contrary to user privacy.

6.2.2 Response Time: Not Critical to Multichannel m-Marketing

As can be seen from the statistics presented in Table 5.2 and summarised in Table 6.8, *response time* receives a mean score of 513 for single-channel m-Marketing and is considered a critical success factor. However, it only receives a mean score of 413 and is considered not critical for multichannel m-Marketing.

Table 6.8
Mean Scores and Levels of Criticality for Response Time

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	513	Critical
Multichannel	413	Not critical

As with location awareness & mobility, there is some contention as to whether response time is critical in some circumstances. For example, as can be seen in comment 2a in Table 5.18, a participant states that *"response time is not important for multichannel m-Marketing strategy, e.g., TV broadcasting".* In addition, comment 2b states that *"value obtained by m-Marketing users should not be time related; it should be more related to the content of the message".* When consumers are not considered as profit-oriented stakeholders, their expectations from the use of m-Marketing relate more to whether they can obtain accurate and relevant marketing information. This view is also supported by comments 2c and 2d, that in multichannel m-Marketing *"as long as the marketing message can be delivered to the users with the chosen mobile communication channel, response time is not a matter".* Another participant points out (comment 20 in Table 5.36) that *"mobile communication is immediate, thus response should be immediate".* It is not necessary to be

concerned about the response time of an m-Marketing service if the mobile communication service is fast enough. SMS service, mobile Internet service and mobile TV service should be instant if the mobile network is up and the bandwidth is sufficient. Moreover, an m-Marketing service can provide brands with the ability to reach consumers almost immediately because users commonly have their phones on them. If brands benefit from this immediacy it would be fair for the brand to respond in a similarly timely manner. This is also argued by a participant (comment 21), that it is *"probably part of the basic expectation so falls off the list. However it is really depending on the users"*. There is an argument here that the quality of service should be provided by the telecommunication provider (e.g.,, mobile network operator) or the m-Marketing service provider. In fact, mobile network operators and m-Marketing service providers should take the responsibility to maintain quality of service (incorporating response time) for m-Marketing.

In contrast, some other participants provided negative feedback regarding this finding, such as in comment 24-C in Table 5.36: *"response time is still a key factor in all type of communication"*. As explained above, response time can be dependent on the performance of mobile network services or the mobile marketing campaign, thus some participants continue to believe that response time is relevant and has an influence on m-Marketing success. *"Instant responses are THE critical assess of response - I doubt people will store promotional texts etc to respond late*r.*"* This participant also provides an example based on their view: *"If a response is not received within 30 minutes of going out then users' response rates can be considered low."* Although it is difficult to ensure quick response time when building an m-Marketing campaign, as it depends on many factors including network performance, this participant agreed that the time issue is critical for all kinds of communication. Furthermore, as outlined in comment 22 in Table 5.36, *"It is difficult for brands, providers and users to manage response time, this is a MNO's (mobile network operator) responsibility to control the quality of service over mobile communication; however from my point of view, it is more complicated to control response time for multichannel mobile marketing;"* time is difficult to manage as it can be a network communication issue or it can be a quality of service issue from the m-Marketing campaign. This is also supported in comment 23, *"Response time has two dependencies: campaign performance and user behaviors";* apart from performance due to the network or the campaign, user behaviour is another variable that can influence response time.

In summary, according to the study participants, the reasons for *response time* being not critical for multichannel m-Marketing are:

- Mobile communication is usually immediate and this is especially so in multichannel m-Marketing;
- If consumer value can be obtained from message content, time is a less concerning issue;
- Response time can be influenced by multiple factors, including quality of the mobile communication service.

6.2.3 Entertainment: Not Critical to Multichannel m-Marketing

As summarised in Table 6.9, *entertainment* receives a mean score of 509 for single-channel m-Marketing and is considered a critical success factor. However, it only receives a mean score of 387 and is considered as not critical for multichannel m-Marketing.

Table 6.9
Mean Scores and Levels of Criticality for Entertainment

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	509	Critical
Multichannel	387	Not critical

While it was rated as not critical overall for multichannel m-Marketing, there was some disagreement as to whether entertainment is important in some circumstances. For example, one participant states (comment 5a in Table 5.18), that "*from a marketing point of view, the message does not necessary to be entertaining*"; most importantly, the m-Marketing message needs to be relevant and meet consumers' interest. However, if a message can be entertaining at the same time then this could be a bonus. Usually, entertainment is not compulsory for message design. The above comment is also supported by another participant (comment 5b in Table 5.18): "*most users prefer actually 'business like' communication with   -brief, - to the point, and - no 'extras'*"; this participant is concerned about m-Marketing user reaction and behaviour. As pointed out in (Kavassalis, et al., 2003), in m-Marketing deployment strategy the importance of entertainment depends on the nature of the campaign; for example, a campaign related to mobile games and multimedia effects for delivering marketing messages essentially relies on entertainment. The participant gave a contrasting example: "*campaigns promoting information such as event time or location, book titles and authors, will stay away from using much entertainment.*"

In Table 5.36, a participant states (in comment 9) that "*the value that can differentiate from other marketing campaign is more important*". Fun and entertainment are nice to have but not mandatory: "*Fun and entertainment might assist in campaigns aimed at Gen X and Y demographics but would not help in campaigns aimed at audiences above 40 years of age, unless the system is clever enough (and relevant enough) to encourage instant responses. It is true that m-Marketing campaign is not aimed at demographics but at people.*"

There are also some opposing views on the need for entertainment in m-Marketing. As pointed out in comment 13-N in Table 5.36, "*entertainment value is highly critical especially if the aim is to create worth of mouth (WOM) / viral campaign*". This is also supported by comment 12-N in the same table, which refers to the scope of entertainment and the actual features of an m-Marketing campaign. Entertainment is particularly important when it is needed to demonstrate products and services, for example, using multimedia or rich data; and if the intended message audience is children then fun is

important. Another participant argues that entertainment might become more critical if it is used for social networking and engagement.

In summary, according to the study participants, the reasons for *entertainment* being not critical for multichannel m-Marketing are:

- A marketing message does not always have to be 'entertaining';
- Entertainment is a bonus only, some people do not like entertainment in m-Marketing messages;
- The value of m-Marketing is in the delivered marketing information, not in entertainment;
- Entertainment is more important if children or young people are the main audiences of the campaign;
- Entertainment is of more concern if the campaign is related to mobile games or multimedia effects.

6.2.4 Frequency: Not Critical to Multichannel m-Marketing

The factor *frequency* receives a mean score of 512 for single-channel m-Marketing and is considered critical. However, it receives a mean score of 410 and is considered not critical for multichannel m-Marketing (Table 6.10).

Table 6.10
Mean Scores and Levels of Criticality for Frequency

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	512	Critical
Multichannel	410	Not critical

Frequency is said to be particularly important in relation to push marketing, since if a message is sent too frequently, it can easily be considered annoying. Some panellists saw reason to question that thinking, however. For example, one of the respondents points out (in comment 25, Table 5.36) "*Frequency is not critical for mobile marketing as long as permission is given*"; that is, m-Marketing users are usually able to set up the frequency of receiving marketing messages sent from an m-Marketing campaign through the opt-in and permission-giving process. A similar sentiment is expressed by another participant in comment 26: "*Opt-in can affect this factor already so it is not necessary*", thus in their view opt-in is actually of more concern in m-Marketing, rather than frequency.

In contrast, some respondents expressed opposing views to the finding that frequency is considered as not critical for multichannel m-Marketing. For example, comment 27-C in Table 5.36 states: "*Mobile messages are more likely to be seen as intrusive and abusive than those arriving via non-mobile channels so managing frequency is critical*"; and comment 28-C points out that "…. *frequency of messages is important and marketing campaigns need to think about how often you are communicating with the end users. If it is a push campaign you need to be mindful of how often to use the mobile device as a*

way to interact.'' Participants refer to the situation of push marketing via mobile communication. All of the above concerns can be solved by user power, and frequency can be adjusted by users through campaign opt-in. Another good point is made in comment 29-C in Table 5.36: *"suitable frequency is good and can be a marketing strategy"*. It is likely that unwelcomed messages would hardly ever be of suitable frequency, whereas consumers might like to receive marketing information about their favourite brand on a regular basis with a suitable, user-specified frequency.

In summary, according to the study participants, the reasons for *frequency* being not critical for multichannel m-Marketing are:

- Frequency of a message is important in push-based marketing only;
- Frequency can be managed and controlled by users through the opt-in process, so it is not critical in permission-based m-Marketing.

6.2.5 Brand Trust: Not Critical to Multichannel m-Marketing

As seen in the statistics presented in Table 5.2, *brand trust* receives a mean score of 518 for single-channel m-Marketing and is considered a critical success factor. However, it only receives a mean score of 416 and is considered not critical for multichannel m-Marketing.

Table 6.11
Mean Scores and Levels of Criticality for Brand Trust

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	518	Critical
Multichannel	416	Not critical

The issue of brand trust generated several comments, some promoting its criticality and others questioning it. For example, one participant states (comment 4a from Table 5.18), that brand trust is not critical *"because users know where the messages come from"*. Since m-Marketing is mainly pull-marketing with users' opt-in and permission, users have expressed interest in receiving marketing messages about brands that they already know. In addition to that, if users do not trust the information sent from a particular m-Marketing campaign, their permission will not be given. Another participant points out (comment 1 in Table 5.36) that *"brand trust requires brand awareness"*. Not all recipients may be aware of the concept of brand trust, thus sometimes a marketing message may be ignored by users. As maintained in comment 2, *"brand trust is not important for multichannel m-Marketing as long as the right marketing strategy hits the right audience"*. An example that illustrates the actual value of brand trust in multichannel m-Marketing is when a new mobile provider in New Zealand, 2 Degrees, ran a successful low price campaign on its competitor Vodafone's mobile channel for advertising its own product and achieved success. Comment 3 states *"m-Marketing does not build brand trust"*. A successful m-Marketing campaign can support and reinforce brand trust, but it does not actually build brand trust for consumers.

In contrast, others saw brand trust as of greater relevance. For instance, comment 4-C in Table 5.36 maintains that "*brand trust will always be critical to any campaign, no matter whether consumers are using m-Marketing or some other form of marketing like social media, traditional media etc*". It is also true that a consumer would likely need to trust a brand before they invest their time to interact with their marketing messages. In many cases, brand trust has been ignored by users and m-Marketing does not build trust for brands directly. Another respondent says (comment 3): "*mobile messages are more likely to be seen as intrusive & abusive than those arriving via non-mobile channels*". It appears that this comment questions the actual value of m-Marketing. Indeed, the m-Marketing campaign does not help to build up brand trust; trust should be built based on a long-term relationship between consumers and brand owners. Brand trust can essentially *retain* consumers' interest in using m-Marketing. As outlined in (Barnes, 2004), mobile marketing messages will not easily become intrusive and abusive if permission is given by consumers. Therefore, the researcher assumes that this comment is particularly concerned with push-based m-Marketing messages. Furthermore, another participant has linked brand trust with user opt-in (comment 6-C): "*brand trust has some effects in opt-in. Users of mobile will not opt-in if they do not trust the brand.*" This means that customers are unlikely to respond to m-Marketing campaigns for businesses and/or brands that they do not feel comfortable with and who do not display the qualities of a brand leader. Hence the communications need to demonstrate quality and brand presence; thus permission is a vital point here.

In summary, according to the study participants, the reasons for *brand trust* being not critical for multichannel m-Marketing are:

- Brand trust requires brand awareness;
- Right marketing strategy is more important.

6.2.6 Technical Support: Not Critical to Multichannel m-Marketing

As summarised in Table 6.12, *technical support* receives a mean score of 554 for single-channel m-Marketing and so is considered a critical success factor. However, it only receives a mean score of 482 and is considered not critical for multichannel m-Marketing.

Table 6.12
Mean Scores and Levels of Criticality for Technical Support

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	554	Critical
Multichannel	482	Not critical

Two participants point out (comments 4a and 4b from Table 5.18) that it is not necessary to lend technical support to m-Marketing. One of them elaborates that if the system does not work or is not intuitive or easy to use, it is very likely that the customer will not wait for technical support but will walk away. This statement clearly implies to m-Marketing providers that all aspects of the system need to be tested and approved before deployment. Taking a different tack, comment 4c points out: *"It is not difficult to try and fix any issues while using m-Marketing"*, suggesting that even if problems occur they can be resolved relatively simply.

Another participant expresses a very strong view on the importance of technical support (comment 31 in Table 5.36): "*technical support needs to be Idiot Proof or the customers will not bother with the promotion"*. It is true that although technical support is not needed sometimes, an m-Marketing campaign should be designed to be user friendly. However, it may be that the m-Marketing service providers do not have the responsibility to support the m-Marketing service operation. Another comment (comment 30 in Table 5.36) points out: "*assimilation with mobile devices will eventually reduce the need for technical support, as it has with computers"*. Usually, problems with m-Marketing come from mobile communication or the end users' devices. As devices improve, and as people become more familiar with their mobile devices and mobile communication approaches, there will be less need for technical support for mobile marketing.

There are also some other views that consider technical support important, such as illustrated in comment 32-C from Table 5.36: "*the support is still important for customers, not matter to single or multi- channel mobile marketing"* and comment 33-C: *"technical support is actually more critical for multichannel mobile marketing and as campaigns become more complex the need for support increases"*. Technical support is needed for m-Marketing, but it is arguable that it is critical for m-Marketing campaign success. M-Marketing service providers will be aware that most technical issues or difficulties arise due to user inexperience or device incompatibilities.

In summary, according to the study participants, the reasons for *technical support* being not critical for multichannel m-Marketing are:

- The campaign is considered failed if users need technical support;
- All aspects of system operation should have been tested prior to deployment;
- Most support issues related to m-Marketing come from user inexperience or device incompatibility.

6.2.7 Interoperability: Not Critical to Single-Channel m-Marketing

As shown in the statistics presented in Tables 5.24 and Table 5.25, *interoperability* receives a mean score of 485 for single-channel m-Marketing and is not considered a critical success factor. However, it receives a very high mean score of 767 and is considered very critical for multichannel m-Marketing.

Table 6.13
Mean Scores and Levels of Criticality for Interoperability

M-Marketing Approach	Mean Score	Level of Criticality
Single-channel	485	Not Critical
Multichannel	767	Very Critical

Comments 1, 2, 4 and 5 in Table 5.40 all point out that "*the multichannel approach means more interoperability issues would be raised for cross platform, medium or type of device.*" Participants agree that the more mobile communication channels are used, the more network platforms, systems and end user devices are involved. Therefore more interoperability issues will arise. Comment 3 mentions that: "*multichannel m-Marketing is significantly used and deployed in 3rd and 4th mobile generations*" and highlights the importance of interoperability. Another participant (comment 6) agrees that interoperability is the most important concern with the capabilities of current mobile communication services, and has a key role to play in multi-channel integration. This is a view that is similar to comment 3. There are no participants' comments that oppose this finding.

In summary, according to the study participants, the reasons for *interoperability* being very critical for multichannel m-Marketing are:

- The more mobile channels are involved, the more interoperability issues exist;
- Interoperability is vital for 3rd and 4th generation mobile technology, which are where multichannel mobile communication is introduced.

6.3 Very Critical m-Marketing Success Factors

This section discusses those success factors that have received mean scores higher than 750 for either single-channel or multichannel m-Marketing, or for both. It is evident in the statistics presented in Tables 5.2, 5.24 and 5.25 that user acceptance and campaign promotion are very critical factors for both single-channel and multichannel m-Marketing; permission is very critical only for single-channel m-Marketing; while profit/value, usability and interoperability are very critical for multichannel m-Marketing only. In order to collectively represent the most critical success factors for m-Marketing, the mean scores for all very critical factors are presented together, in ascending order, in Table 6.14.

Table 6.14
Mean Scores for Very Critical m-Marketing Success Factors

Factors	Mean Score
S-Campaign Promotion	751.37
M-Usability	754.84
M-Campaign Promotion	757.36
M-Profit/Value	760.03
S-User Acceptance & Satisfaction	766.87
M-Interoperability	767.45
M-User Acceptance & Satisfaction	768.19
S-Permission	786.81

S- single-channel m-Marketing success factor
M- Multichannel m-Marketing success factor

The mean scores presented in Table 6.14 show that permission for single-channel m-Marketing receives the highest score amongst all the very critical success factors. It is followed by M-User Acceptance & Satisfaction and M-Interoperability. This section discusses all very critical factors and it is contended that these findings could be used by m-Marketing service providers to improve their service to both brand owners and users.

6.3.1 S-/M-User Acceptance & Satisfaction

The discussion below considers the research finding that *user acceptance & satisfaction is a very critical factor for single-channel and multichannel m-Marketing* and draws on participants' comments presented in Table 5.41.

Acceptance of a concept or an idea is said to mean that people believe (consciously or subconsciously) that this concept or idea is correct. One participant (comment 1 in Table 5.41) points out that "*user acceptance is impacted by satisfaction; a consumer accepts mobile marketing with his/her satisfaction.*" When m-Marketing success is considered in terms of development, use and deployment, and impacts, it is very likely that a consumer will accept m-Marketing given satisfactory levels for all of these three phases, as emphasised in comment 2: "*no matter single or multichannel mobile marketing, receiving user Acceptance is the ultimate goal for the campaign owners",* since in Chapter 3, user acceptance & satisfaction is noted as a very significant factor for successful m-Marketing development and deployment. Comment 3 states: "*the more users accept the mobile marketing, the more opportunity to generate business revenue for brand owner".* This implies that there is a direct connection between consumer acceptance and the benefits accrued by profit/value-oriented stakeholders, as consumers accept m-Marketing services and make purchases of a brand's products or services. Comments 4 and 5 are concerned with whether the concept of user acceptance & satisfaction should apply to m-Marketing strategy and process by linking to the three phases: development, use and deployment, and impact. Finally, comment 6 states that "*user acceptance is a core expectation that drives the mobile marketing success".* Continuous user acceptance & satisfaction can

contribute to the establishment of a higher level of m-Marketing acceptance so that users will eventually become accustomed to m-Marketing as an approach. The m-Marketing acceptance driven by user acceptance & satisfaction is therefore important for the success of m-Marketing.

The finding that *user acceptance & satisfaction is very critical for both single-channel and multichannel m-Marketing,* is accepted by all participants of this Delphi study with no negative comments.

6.3.2 S-/M-Campaign Promotion

The following discussion addresses the research finding that *campaign promotion is a very critical factor for single-channel and multichannel m-Marketing,* leveraging participants' comments presented in Table 5.41.

Even though an m-Marketing campaign promotes products and services for brand owners, "*it needs promotion itself to increase its effectiveness and popularity*", as pointed out in comment 9. This view is supported by another participant in comment 8: "*for any mobile marketing campaign not matter single-channel or multichannel, to be effective, advertisers need to initiate customers to engage with their program*". If no one knows about the campaign due to inadequate promotion the campaign will fail in its mission to provide promotional services. As pointed out in comment 12: "*Campaign promotion influences the commonality and popularity of the campaign*". The more people know about the campaign, the more it is likely that people will use the campaign and this will eventually encourage user acceptance of the campaign (comment 10): "*the more people recognize the mobile marketing campaign; it is more likely that the campaign will be accepted and become successful and well-known*" From a marketing point of view, as stated in comment 11, "*word of mouth is the principle of marketing, it can be used to promote mobile marketing as well*".

Thus, the finding that *campaign promotion is very critical for both single-channel and multichannel m-Marketing,* is accepted by all participants of this Delphi study with no contradictory comments.

6.3.3 S-Permission

The discussion that follows relates to the research finding that *permission is very critical for single-channel m-Marketing* and refers to participants' comments as presented previously (in Table 5.41). Note, however, that permission is not considered as a very critical factor for multichannel m-Marketing. The reasons why permission is considered to be less critical to multichannel than single-channel m-Marketing are discussed in section 6.4.5.

Permission is a fundamental feature of m-Marketing. Consumers give their permission to be contacted for m-Marketing purposes through the opt-in process. One participant points out in comment 13 (Table 5.41) that *"there is nothing more important than getting users' permission for mobile marketing"*. This goes some way to explain why S-Permission receives the highest mean score among all m-Marketing success factors researched in this study. Comment 2 stresses *"the relationship between user acceptance and permission"*. It is likely that user acceptance can be achieved if permission is given to use the service or campaign. Finally, comment 16 states that *"user opt- in is a feature that allows users to send their permission to use the mobile marketing campaign"*.

No specific comments were made by participants (in Table 4.47) relating to permission being considered as not very critical in multichannel m-Marketing. Moreover, as outlined in (Bamba & Barnes, 2006; Barnes & Scornavacca, 2004; Tanakinjal, et al., 2008), permission has become established as a very important factor in m-Marketing, and there is a tendency now for consumers' permission to be a default marketing campaign feature. In other words, since permission has been acknowledged as a critical factor for some time the participants may have assumed that it is a default feature of multichannel m-Marketing. Respondents may consider that permission is inherent to any type of marketing.

6.3.4 M-Profit/Value

The results indicate that the panellists' believe that *profit/value is very critical for multichannel m-Marketing* and the following discussion draws on participants' comments as presented in Table 5.41.

It is pointed out in comment 17 that *"mobile marketing is a value-added service"*. This view is also supported by prior literature (Haghirian, et al., 2005; Sun, et al., 2005). To receive value is the expectation of all m-Marketing stakeholders. The value generated can be tangible or intangible. Consumers expect to receive accurate, timely and relevant marketing information; brand owners typically want to increase sales through promotion; and all other stakeholders (e.g. providers) receive profits when users employ m-Marketing. In comment 18 a participant states *"all stakeholders including consumers would like to generate more value from using mobile marketing"*. To consumers, value is mainly evident in the benefits they receive when they get involved in the m-Marketing process. For example, if a consumer can easily obtain information about a product or service from an m-Marketing campaign, the value obtained can be in the form of less effort or time spent, or the product or service purchased at a more competitive price. To the brand owners or service providers, the value is usually expressed in terms of revenue, margins or profits, due, for instance, to an increase in sales for brand owners, higher levels of mobile SMS or Web usage charged by network operators, or gained from m-Marketing campaign development or mobile devices sales. These

considerations are also supported by comment 20: "*the expectation of using and deploying mobile marketing is to obtain higher business profit and consumer value*". Therefore, positive value generation means a positive impact on the operation of the m-Marketing campaign, and this usually leads to profit/value-oriented stakeholders and consumers' acceptance (Barnes, 2004). One participant (comment 19) points out that "*the cost for implementing a multichannel m-Marketing campaign is comparably higher than a single-channel campaign*", thus to make the investment worthwhile service providers would need to receive higher returns from the deployed service and the implemented campaign. In multichannel m-Marketing the communication system is quite complex and more vendors and providers (network, application, and device) might be involved in the multichannel m-Marketing value-chain; more value can be created to them through the use of the service. As a result, when stakeholders realise the potential intangible value and profit that can be gained from m-Marketing, they become more aware of how well m-Marketing can perform in comparison to other conventional marketing approaches.

6.3.5 M-Usability

The following discussion reviews the finding that *usability is very critical for multichannel m-Marketing* and refers to participants' comments in Table 5.41.

Usability is found to be an important factor influencing user attitude (comment 22): "*the better usability design, and the less annoyed customers.*" Usability issues are highly relevant to the end user experience. As discussed in Section 6.2.6, most issues that arise in relation to technical support of m-Marketing come from user experience or device compatibility problems; thus it is very likely that usability has a direct impact on user satisfaction and acceptance. In this study, usability is found to be critical for single-channel m-Marketing and very critical for multichannel m-Marketing. One participant explains this change in comment 21: "*more channels means more management and technical issues involved, the campaign owner should make sure that each channel is user friendly*". In comparison to single-channel m-Marketing, which involves a homogeneous communication channel, multichannel m-Marketing is more complicated due to its integration of different communication channels, as pointed out by another participant, in comment 23: "*the campaign design and implementation process become more complicated for multichannel mobile marketing, usability is also a major concern to ensure user satisfaction*". Because of the added complexity, usability of a multichannel m-Marketing approach is more difficult to achieve, and it is more difficult to satisfy all users' requirements and/or expectations. Finally, in comment 24, a participant states that "*usability for multichannel approach is also related to other external variables: such as phone features, network and application compatibility*". The usability of multichannel m-Marketing is thus affected by a complex network of factors related to the use of mobile applications, mobile devices and the mobile marketing campaign.

6.3.6 M-Interoperability

The final discussion in this section addresses the research finding that *interoperability is very critical for multichannel m-Marketing* and refers to participants' comments as presented in Table 5.40.

One participant states in comment 2 that *"interoperability is an important concern while building and using the mobile marketing service"*. When single-channel m-Marketing is used, communication takes place on a homogeneous platform. Since users of this service communicate over a single type of channel, communication can be performed within a set of predefined standards. However, in a multichannel m-Marketing campaign, interoperability issues can arise. As pointed out in comment 1, *"the multichannel m-Marketing approach means more interoperability issues would be raised for cross platform, medium or type of device"*. Additional concerns arise in the areas of service quality and security when multiple channels are interoperating with each other. Furthermore, in a multichannel m-Marketing campaign, users may experience different content quality if they are using different communication channels. The service provider must manage the creation, maintenance and delivery of multiple forms of the same content. This concern is also supported by comment 4 claiming that interoperability *"depends on what kind of mobile tools are involved and end users' mobile devices"*. In order to implement multichannel m-Marketing and meet the increasing demands for usability from end users, interoperability has become a major consideration in the development of multichannel m-Marketing campaigns. From the above statement, it can be inferred that interoperability affects usability. Comment 3 points out: *"interoperability is vital for any kind of mobile communications, and becomes more significant in 3G and 4G environment*. As explained in Chapter 2, m-Marketing channel development is significantly influenced by the mobile technology generations. The more mobile channels become available and are used by m-Marketing in 3G or 4G mobile environments, the more interoperability issues become apparent. Another participant (comment 5) maintains that *"interoperability becomes more critical for multichannel or multivendor mobile business solutions"*. In line with mobile technology development, more multichannel m-Marketing campaigns will be launched and more vendors will be involved in mobile business solution development and deployment. It is recommended that all m-Marketing stakeholders pay increasing attention to interoperability, in order to maximize the effectiveness of multichannel m-Marketing campaigns or services.

6.4 Reasons for Significant Change in Criticality According to Study Participants

In order to identify factors with a significant difference in their levels of criticality for the single-channel and multichannel approach, Chapter 5 reports a comparison of median differences. Since the 1-tailed Wilcoxon signed-ranks test is used for data analysis the direction of the differences can be identified. The results from this analysis show that several factors have become either more or less critical for multichannel m-Marketing compared to single-channel m-Marketing. The test results shown in Table 5.6 and Table 5.28 demonstrate that profit/value, usability, response channel and interoperability have become more critical in multichannel m-Marketing; in contrast, permission, response time, content and accuracy have become less critical in the multichannel context. This section discusses the reasons for those changes in rating, by referring to the qualitative data gathered in the study (presented in Table 5.37), along with relevant support from the literature. Based on the information presented in Tables 5.2, 5.6, 5.24, 5.25 and 5.28, a summary of the descriptive statistics for all factors with changes between single-channel and multichannel m-Marketing is presented in Table 6.15.

Table 6.15
Summary of Statistics for Factors with Significant Changes in Criticality

Factor	Mean score (Single-/ Multichannel)	Level of Criticality (Single-channel)	Level of Criticality (Multichannel)	Observed Significant Change
Profit/Value	(643/760)	Critical	Very critical	More critical in multichannel m-Marketing
Usability	(666/755)	Critical	Very critical	More critical in multichannel m-Marketing
Response Channel	(505/654)	Critical	Critical	More critical in multichannel m-Marketing
Interoperability	(485/767)	Not Critical	Very critical	More critical in multichannel m-Marketing
Permission	(787/623)	Very Critical	Critical	Less critical in multichannel m-Marketing
Response Time	(514/413)	Critical	Not critical	Less critical in multichannel m-Marketing
Content	(736/610)	Critical	Critical	Less critical in multichannel m-Marketing
Accuracy	(693/572)	Critical	Critical	Less critical in multichannel m-Marketing

(Note: During the data collection process the provision of qualitative data was not compulsory for participants. Some participants who supported a finding did not provide feedback, meaning that sometimes many contradictory comments against a finding were evident but fewer positive comments were gathered.)

6.4.1 Profit/Value – Significantly More Critical in Multichannel

m-Marketing

More channels may mean more consumers can opt in or use m-Marketing, thus higher response rates to campaigns or better sales to brand owners may follow. In addition, m-Marketing can generate non-monetary value to consumers and encourage their acceptance and satisfaction to use m-Marketing services. Profit/Value is a factor that was found in this study to be significantly more critical in multichannel m-Marketing than in single-channel m-Marketing.

When m-Marketing (in general) is used as a commercial service it provides direct or indirect benefits to all stakeholders. One participant says that (in comment 1, Table 5.37) *"value is always important, it doesn't matter how many channels are involved"*. Comment 7 is very similar to comment 1, stating that *"profit/value are very critical to m-Marketing stakeholders from the value-chain"*. In the m-Marketing value chain, all stakeholders including consumers, brand owners and service providers are keen to know how much value m-Marketing can provide. In particular, to the profit/value-oriented stakeholders (e.g., m-Marketing service providers), the operational cost for running a multichannel m-Marketing campaign is closely related to issues such as break-even, ROI (return on investment) and marginal cost and these need to be considered. A couple of other comments have a similar meaning: *"as brands utilize more channels the cost will increase so it's important that the ROI is evident"* (comment 2) and *"the campaigns have to come in at marginal cost compared to traditional forms of advertising and/or Promotion"* (comment 3). Comment 6 also states: *"breakeven for running or managing a multichannel campaign is higher"*. Thus, the higher the number of communication channels used, the higher the cost that is involved in managing or implementing the m-Marketing campaign; therefore industry players expect to receive significant benefits and/or profits from multichannel m-Marketing development and deployment – as one of the participants points out (comment 5) *"it is likely that multichannel m-Marketing can generate more profit to brands as the response rate are comparable higher"*. This participant emphasizes the expectation of a high response rate as one of the reasons to use multichannel m-Marketing; a higher response rate can generate more profits for brand owners.

In summary, the following reasons that the factor *profit/value* is more critical in multichannel m-Marketing compared to single-channel m-Marketing were identified through the analysis of the participants' responses:

- Cost of development and deployment are increased;
- Value is an ROI issue;
- Perceived value drives user acceptance;
- More stakeholders are involved in the multichannel m-Marketing value-chain.

6.4.2 Usability – Significantly More Critical in Multichannel m-Marketing

A number of communication channels are inherently involved in multichannel m-Marketing, and this does increase the difficulty of using the associated m-Marketing service. A participant expresses this view in comment 8 from Table 5.37: *"with more channels comes more management so it's important each channel is user friendly and cooperative well"*. In a multichannel m-Marketing environment, then, usability relates to each channel in its own right as well as the collective ease of use and coherence of all channels. The above statement is also supported by comment 9 in Table 5.37: *"if multichannel mobile marketing service is not instantly usable and easily usable the response rates will not be as needed and the effectiveness of the campaign denigrated to the point of obsolescence"*. Although a positive user experience is essential when using multichannel m-Marketing, the actual campaign design and the provision of a multichannel service that meets user requirements are also related to other variables such as quality of service and interoperability. This comment indicates that usability has a connection to user response rate, and if a campaign is well-developed but attracts few users the campaign is considered as not successful.

The following reasons that the factor *usability* is more critical in multichannel m-Marketing compared to single-channel m-Marketing were identified through the analysis of the participants' responses:

- Usability for each channel and their cooperation needs to be considered for multichannel m-Marketing;
- An m-Marketing campaign fails if it not instantly usable; however usability-oriented design for multichannel m-Marketing is more complex.

6.4.3 Response Channel – Significantly More Critical in Multichannel m-Marketing

As defined previously, response channel is the mobile communication channel or mobile communication medium used to convey a response. Adoption of a multichannel approach means that the marketing message can be delivered and responded to via multiple mobile communication channels. General support for multiple channels is evident in a participant remark in comment 14 (Table 5.37): *"in same situation, multiple channels are always better than single channel"*. A campaign may achieve a higher response rate because multiple

response channels are available to customers: "*it is likely that multiple communication approach increases the response rate for mobile marketing*". Although multichannel m-Marketing provides consumers with various communication channels for their response, they will only use their most preferable response channel(s) as pointed out by another participant in comment 16: "*it is important users can respond in a channel with most preferred manner, for example react to a mobile phone message in a web interface*". M-Marketing users can convey a response either via a mobile medium or other communication channels. For example, when a brand owner-consumer interaction takes place, either side can choose to use telephone calls, SMS or email to exchange (sending and responding) the marketing information. Thus, the customer may choose a response channel that may not necessarily be a mobile one. This is noted in comment 15: "*polymorphism in response channel becomes more important for multichannel m-Marketing*". With current 3G and 4G mobile data services, most of the conventional communication channels such as TV, email and Web can be deployed over mobile network communications along with SMS/MMS. In this study, it is assumed that in multichannel m-Marketing all communications are performed with mobile technologies.

The following reasons that the factor *response channel* is more critical in multichannel m-Marketing compared to single-channel m-Marketing were identified through the analysis of the participants' responses:

- Multichannel m-Marketing may provides a higher response rate;
- The polymorphism of multichannel m-Marketing may enhance campaign usability as users have the option to choose a response channel they are most comfortable with.

6.4.4 Interoperability – Significantly More Critical in Multichannel

m-Marketing

The findings that interoperability is considered to be *more critical in multichannel m-Marketing* and that *interoperability is very critical for multichannel m-Marketing* are supported by the same qualitative data presented in Table 5.37 and discussed in Section 6.3.6. The following reasons that the factor *interoperability* is more critical in multichannel m-Marketing compared to single-channel m-Marketing were identified:

- Multichannel m-Marketing involves more interoperability issues;
- Interoperability is more relevant in 3G and 4G mobile communications;
- Interoperability is important given the multiplicity of end user devices and multivendor solutions.

6.4.5 Permission – Significantly Less Critical in Multichannel m-Marketing

As one Delphi participant notes (comment 22 in Table 5.37): "*User opt in is a feature that allows users to send permission to mobile marketing campaign operators*". User permission is given when the user opts in to the campaign; this is a vital step to initialize the m-Marketing service and to enable interaction between the user and the campaign. However, as permission is an element included in the user opt-in service, user permission as a factor may receive less direct attention from service providers in multichannel m-Marketing campaigns. Due to the nature of m-Marketing campaigns and services, permission has become expected when m-Marketing is used (Barnes, 2004) – as one of the participants points out in comment 21 in Table 5.37 "*people have started accepting permission as a default feature*". Another participant comments (comment 23 in Table 5.37): "*maybe users are now considering mobile channel is a safe channel so does not need to pay too much attention to permission*". Therefore, it is likely that permission has become less important in multichannel campaigns now that m-Marketing has become more pervasive, if not more popular. On the other hand, some participants argue that permission is still very critical in multichannel m-Marketing, saying (comment 24-C in Table 5.37): "*permission will always be one of the most critical factors to the success of m-Marketing, no matter it is single-channel or multichannel*". As noted (Section 6.3.3), some participants were disappointed that permission was not retained as a very critical factor in multichannel m-Marketing.

The following reasons that the factor *permission* is less critical in multichannel m-Marketing compared to single-channel m-Marketing were identified through the analysis of the participants' responses:

- M-Marketing service providers need to pay less attention to permission, as permission is gained through the user opt-in process;
- Permission is an included objective of the user opt-in service;
- Users have begun to accept and understand that m-Marketing campaigns are inherently permission-based;
- Mobile is a safe channel and so permission is given less attention.

6.4.6 Content – Significantly Less Critical in Multichannel m-Marketing

In a multichannel m-Marketing environment usability may be more important than message content (comment 25 in Table 5.37): "*users are more likely to examine the usability before looking deeply at the content.*" In addition, another participant notes (comment 26, Table 5.37): "*cross-channel interaction and communication is more important for multichannel m-Marketing*". Thus interoperability is also considered to be more important than some other aspects of the multichannel approach. Overall it seems that participants saw content as relatively less important in the multichannel context.

There was some contention over this finding, however. Some participants believe that message content is still critical for multichannel m-Marketing. The following comments were received from participants:

- Comment 27-C in Table 5.37, *"Short - understandable in an instant and easy to respond to are the essential components - If it is too complex or long winded then I suspect response rates would drop badly"*. This statement identifies some characteristics of the content that make a message 'easy to use'. This comment indicates that acceptance is influenced by message content and format.
- Comment 28-C in Table 5.37, *"Content is important because it determines the usefulness of the message"*. This statement indicates that the message content influences the usefulness of the message, which is a key value obtained by consumers.
- Comment 29-C in Table 5.37, *"Content for single- or multi-channel m-Marketing will continue to be one of the key differentiators of success"*. This participant believes that content can be linked to the term success.

As noted in Table 5.2, message content is indeed critical to both types of m-Marketing. However, as far as multichannel m-Marketing is concerned, its level of criticality is reduced perhaps because message content has relatively less direct impact on m-Marketing acceptance and success. The above comments also indicate that in multichannel m-Marketing, there are more issues in play than message content. Content is no longer the focal point; interaction with and across channels is as important, along with the usability of that interaction.

6.4.7 Accuracy – Significantly Less Critical in Multichannel m-Marketing

One participant states in comment 30 (Table 5.37): "*as long as the message receivers understand the meaning of a message, accuracy is not really important"*. This participant's comment indicates that accuracy in a message sent via an m-Marketing campaign is relatively unimportant. Perhaps the growing use of text language, emoticons and the like mean that attention to accuracy has lessened (on the part of both those sending and receiving messages). In multichannel m-Marketing, since the structure or content of a marketing message become various and more complex, it may be difficult to maintain accuracy of such message content. On the other hand, some participants expressed a different view on accuracy:

- Comment 31-C in Table 5.37 *"Rather obviously - ALL details contained in the messaging MUST be error free (Spelling, dates, requirements etc). Anything less is simply not acceptable!"*
- Comment 32-C in Table 5.37 *"The disruptive nature of m-Marketing requires it to be more information accurate than other digital technologies."*

Given the always-on always-connected nature of mobile communications, and the fast-moving nature of some sectors (e.g., retail), the price for a product may be changed every hour, and as a result, the information in a marketing message may become outdated very quickly, especially while deploying a multichannel m-Marketing campaign. Care needs to be taken, then, that the message is correct *at the time of delivery*. There is also a concern about the nature of an m-Marketing message. The participant who provided Comment 32-C also gave an example to support their view: *"if the marketing message is about 25% off sale price or 25c off petrol price, then the information would surely need to be accurate."*

6.4.8 Response Time – Significantly Less Critical in Multichannel

m-Marketing

The findings that response time is *less critical for multichannel than for single-channel m-Marketing* and that response time is *not critical for multichannel m-Marketing* are supported by the same qualitative data presented in Table 5.37 and discussed in Section 6.2.2. The following reasons that the factor *response time* is less critical in multichannel m-Marketing compared to single-channel m-Marketing were identified:

- Mobile communication is usually immediate and especially in multichannel m-Marketing;
- If consumer value can be obtained from message content, time is a less concerning issue;
- Response time can be influenced by quality of mobile communication service.

6.5 Correlated m-Marketing Success Factors

This section considers the pairs of factors found to be correlated, for both single-channel and multichannel m-Marketing approaches, and relates to the three findings discussed in Table 5.43 relevant to research question 4 (refer to Section 4.3.4) of this thesis study. The Spearman rank correlation coefficient used is a non-parametric measure of the statistical association between two variables. The sign of the Spearman correlation indicates the direction of the relationship between two variables. If the correlation is positive this indicates that as the ranked values of one of the variables increase then those of the other variable also increase. On the other hand, if the correlation coefficient is negative, this indicates that the direction of movement is opposite, i.e., if the ranked values of one of the variables increase, the values of the second variable decrease. The range for the correlation coefficient is between +1 and -1, where +1 demonstrates perfect positive association between two ranked variables, and -1 demonstrates perfect negative relationship between two ranked variables.

6.5.1 Factors Correlated for Single- and Multichannel m-Marketing

According to Tables 5.7 and 5.8 in Section 5.1.3, and Tables 5.29 and 5.30 in Section 5.2.4, three pairs of factors consistently demonstrate high positive correlations (as summarised in Table 6.16). (Note that, as discussed in Section 4.8.2.2, "highly correlated" means the correlation coefficient is greater than 0.7 and it is significant at 1% level.) The three pairs of success factors are discussed individually.

Table 6.16.
Summary of factors correlated for single- and multichannel m-Marketing

Factors	r value for single-channel	r value for multichannel	Significance Level
Content / Accuracy	0.88	0.87	1%
Security / Privacy	0.86	0.76	1%
Opt-in / Permission	0.69	0.73	1%

6.5.1.1 Content and Accuracy

The correlation coefficient for the success factors content and accuracy is 0.88 for single channel m-Marketing, and it is significant at 1% level; similarly, the correlation coefficient is 0.87 for multichannel m-Marketing and it is also significant at 1% level. The success factor content refers to the overall quality of content of the marketing message (Doherty, Rao, & Mackay, 2007). Accuracy refers to the accuracy of the marketing message (Scornavacca & Barnes, 2006). The closer the correlation coefficient is to 1, the higher the positive association between the ranked scores for the two factors. This finding indicates that when accuracy is considered to be an important element of an m-Marketing message content is also considered as important, and *vice versa*. Extrapolating from this result, it may be asserted that accuracy is a significant contributor to quality of m-Marketing content. In another words, quality may subsume accuracy. Thus, accuracy of a m-Marketing message is a descriptive status of m-Marketing message content. As a result, the researcher here combines these two factors (content and accuracy) into one phrase, called quality of message content, to describe these two highly positively correlated factors for single- and multichannel m-Marketing.

6.5.1.2 Security and Privacy

The second pair of significantly correlated factors comprises security and privacy. The correlation coefficient for security and privacy is 0.86 for single-channel m-Marketing with significance at the 1% level, while the correlation coefficient for multichannel m-Marketing is 0.76 with significance at 1% level. The strength of the correlation coefficient is lower for multichannel than for single-channel m-Marketing.

According to Roussos and Moussouri (2004), security means to assist and manage privacy for the recipients (the consumers), while privacy is the protection of their private information. It is therefore evident that the meaning of these two success factors is similar, and as privacy is closely linked with security, ratings of their importance in m-Marketing follow a similar pattern. This finding may indicate that security is a major determinant in protecting privacy in m-Marketing use and deployment. In other words, m-Marketing privacy is protected through the use of effective security mechanisms. As a result, the researcher here combines these two factors (security and privacy) into a single factor, called security for privacy, to describe these two highly and positively correlated factors for single- and multichannel m-Marketing.

6.5.1.3 Opt-in and Permission

The correlation coefficient for opt-in and permission is 0.69 for single channel m-Marketing, while the correlation coefficient for the same two factors is 0.73 for multichannel m-Marketing; both are also significant at the 1% level.

Opt-in means that consumers are permitted to register into the database associated with an m-Marketing campaign (Barnes & Scornavacca, 2008), and permission means that m-Marketing is permission-based, and that permission is given by users through their opt-in (Barnes & Scornavacca, 2004). From the definition of these two success factors it is not difficult to identify a potential relationship between them – if m-Marketing is permission-based, then by implication consumers need to register for the campaign. Therefore, it is logical that the ranked criticality values for these two success factors are closely related. As a result, the researcher here combines these two factors (permission and opt in) into one, called permission given via opt in.

6.5.2 Correlated Factors for Single-Channel m-Marketing

It can be seen in Tables 5.7 and 5.8 in Section 5.1.3, and Tables 5.29 and 5.30 in Section 5.2.4, that the correlation between factors in two of the pairs exists only for single-channel and not for multichannel m-Marketing. These pairs are now discussed.

6.5.2.1 Delivery Time and Response Time

The correlation between ranked criticality values for delivery time and response time for single-channel m-Marketing is 0.72 and it is significant at the 1% level (Table 5.7), while the correlation coefficient for these two factors for multichannel m-Marketing is 0.33 and is not significant (Table 5.8)

Response time is the time taken by an m-Marketing campaign to respond when a user sends a request (Nasco & Bruner, 2008).   Delivery time is defined as the time taken by an m-Marketing campaign to deliver a message when a user sends a request (Hanley, Becker, & Martinsen, 2006). For single-channel

m-Marketing, the high correlation between ranked criticality values for delivery time and response time means that they are perceived as of similar importance in that context. As a result, the researcher here combines these two factors (delivery time and response time) into one, referred to as interaction time, to describe these two highly and positively correlated factors for single-channel m-Marketing.

6.5.2.2 Richness and Entertainment

The correlation between the ranked importance ratings for richness and entertainment for single channel m-Marketing is 0.73 and it is significant at 1% level (Table 5.7). In contrast, the correlation coefficient for richness and entertainment criticality for multichannel m-Marketing is 0.28 and is not significant (Table 5.8).

Richness refers to the enhancement of the content of an m-Marketing message, while entertainment means the marketing message is made entertaining (Baldi & Thaung, 2002). From the definition of these two success factors it is not unexpected that the perceptions of importance might be closely related. As a result, the researcher here combines these two factors (richness and entertainment) into a single factor, called richness and entertainment of marketing content, to describe these two highly and positively correlated factors for single-channel m-Marketing.

6.5.3 Factors Correlated to User Acceptance & Satisfaction in Multichannel m-Marketing

It is apparent from Tables 5.7 and 5.8 in Section 5.1.3, and Tables 5.29 and 5.30 in Section 5.2.4, that seven factors are correlated with the factor user acceptance & satisfaction in multichannel m-Marketing.

The results presented in Table 5.8 and Table 5.30 indicate that permission, long-term relationship, content, accuracy, frequency, personalization and campaign promotion all have significant correlations with user acceptance & satisfaction. All of the correlation coefficients are above 0.4 and are significant at the 5% level. According to Barnes and Scornavacca (2004), user acceptance refers to the acceptance of the m-Marketing system, service and impacts by stakeholders. As explained in subsection 3.3.2.1, user acceptance & satisfaction is considered to be a key success factor and a requirement for a higher-level of m-Marketing acceptance in this research study (refer also to Figure 3.8). Ensuring user acceptance & satisfaction is clearly key to a successful marketing campaign. Therefore, based on the participants' perceptions of criticality reported here, m-Marketing developers and providers should pay close attention to all those factors found to be highly correlated with user acceptance & satisfaction, in order to drive user acceptance & satisfaction for future multichannel campaign development and deployment.

However, user acceptance & satisfaction is not correlated with any of the success factors for single-channel m-Marketing. A possible explanation could be that, according to respondents, users have already accepted single-channel m-Marketing and have become used to it. This is in contrast to the more recent advent of multichannel m-Marketing; since this latter marketing and communication approach is relatively new its acceptance will be influenced by the factors outlined above. The correlations suggest that when a multichannel marketing campaign effectively addresses these factors user acceptance & satisfaction may be more likely to be achieved and in turn may influence the likelihood of marketing campaign success.

Moreover, this finding is related to the discussion in Section 6.4 concerning factors that are considered to be more critical in multichannel m-Marketing. Factors that have correlations with user acceptance & satisfaction for multichannel m-Marketing and are more critical in this context need to be given due attention in future multichannel m-Marketing development and deployment.

6.6 Categorization of m-Marketing Success Factors

Two approaches to categorizing all 29 m-Marketing success factors were used in the Delphi study: 1) Collecting the direct input of participants and presenting it in summarised form in Table 5.34; and 2) Conducting a factor analysis, the results of which are summarised subsection 5.2.5. This section discusses the outcomes from both approaches, and considers the potential correspondence of the respective outcomes of each.

As discussed in Section 6.2, six factors – brand trust, entertainment, local awareness, response time, frequency and technical support – are considered to be not critical to multichannel m-Marketing, and one factor – interoperability is considered as not critical to single-channel m-Marketing. In this section the six non-critical multichannel m-Marketing factors have been removed from the discussion as the categorization is concerned with critical factors only.

6.6.1 Categorization Based on Direct Participant Input

Table 5.34 presents the outcomes of the participants' categorization for the 29 m-Marketing success factors in the first round of the Delphi study and the outcome of the categorization of the six new success factors in the second round of the study. (As noted, factors considered not critical in multichannel m-Marketing are removed from the following discussion.)

As explained in Section 3.2.2 the DeLone and McLean IS success model has three main processes: development, use and deployment, and impact. Categorization based on direct participant input is in regard to these three categories. It can be seen from Table 5.34 that interactivity, content, accuracy,

richness, security, privacy, usability, quality of service and interoperability receive over 70% consensus that they are the factors most relevant to the development category. At the same time, permission, campaign popularity, campaign promotion and customization all receive over 70% consensus that they are more relevant to the use and deployment category. Finally, user acceptance, profit/value, and long-term relationship all receive over 70% consensus that they are relevant to marketing impact. In addition, although clutter on mobile medium receives 68% consensus, a value less than the self-imposed threshold of 70%, this factor can be tentatively considered relevant to the marketing impact category. The same approach could be applied to personalisation, which receives about 67% consensus; this could be tentatively considered as relevant to the use and deployment category.

There are also some success factors that receive the same levels of consensus for their belonging to more than one category. For example, user opt-in and response channel receive 45% support for their relevance to the development category as well as to the use and deployment category.

Delivery time, cost of service and user power all receive similar levels of support for two or three categories. In these cases the researcher chooses the most relevant category as that with the most participant votes. As a result, although delivery time received similar support for its relevance to the development and use and deployment categories, it is assigned here to the use and deployment category (54.8% of participant votes); in a similar way, cost of service and user power are assigned to the impact category (Table 6.17).

Table 6.17.
Categorization outcomes summary based on participants' direct input

Development	Use and Deployment	Impacts
Interactivity, content, accuracy, richness, security, privacy, usability, quality of service, interoperability, response channel and user opt-in.	Permission, campaign popularity, campaign promotion, customization, personalisation, response channel, user opt-in and delivery time.	User acceptance & satisfaction, profit/value, long-term relationship, clutter on mobile medium, cost of service, and user power.

Out of the three categories, the development category has the highest number of factors (total of 11) while the use and deployment and impact categories comprise fewer success factors (8 and 6 respectively).

6.6.2 Categorization through Factor Analysis

Just as participants' direct input was categorized into three groups, so the factor analysis is also conducted using a three-component extraction strategy, in order to potentially enable a comparison of the outcomes of the two approaches (refer to Section 5.2.5 for a discussion of factor analysis). Table 6.18 summarizes the categorization outcomes obtained through the factor analysis

of all 29 m-Marketing success factors. Note that it is assumed here that the categories are independent, and so each factor can only belong to a single category. Thus, when the analysis indicates that there is a factor relevant to more than one component, only the most correlated component will be considered relevant to that factor.

Table 6.18.
Categorization outcomes summary based on factor analysis

	Component 1	**Component 2**	**Component 3**
Single-channel m-Marketing	Privacy, technical support, security, response channel, personalization, user opt-in, brand trust, long term relationship, usability, quality of service, permission.	Clutter on mobile medium, delivery time, customization, frequency, campaign promotion, interoperability, user power, richness, entertainment.	Accuracy, content, and campaign popularity.
Multichannel m-Marketing	Long term relationship, usability, profit/value, interactivity, interoperability, campaign promotion, user opt-in, richness.	Content, permission, accuracy, user power, response channel, campaign popularity, delivery time, user acceptance & satisfaction.	Security, privacy, quality of service, personalization.

In looking at Table 6.18 it is evident that the factors listed under each component are very different for single-channel and multichannel m-Marketing; furthermore, any commonalities among the factors under each component for the same marketing approach are not readily apparent.

6.6.3 Comparative Categorization of Multichannel m-Marketing Success Factors

Table 6.19 is based on Table 6.18 and Table 5.34. It presents and compares the factors in each category as determined by participants' inputs and the factor analysis performed in this study for multichannel m-Marketing.

It can be observed that some of the factors related to the first component extracted from the factor analysis are the same factors as those associated by participants with the development phase, namely: usability, interactivity, interoperability, user opt-in and richness. The same can be observed for some of the factors related to the second factor analysis component and those associated with the use and deployment phase: permission, response channel, campaign popularity and delivery time. There are no factors related to the third factor analysis component that appear in the Participants' Input impact phase. Of note, however, is that three of the four factors shown in this component are associated with the development phase of the categorization based on participants' input.

Table 6.19

Categorization outcomes summary of multichannel m-Marketing success factors – a comparison

Factor Analysis	Component 1	Component 2	Component 3
Multichannel m-Marketing	Long term relationship, usability, profit/value, interactivity, interoperability, campaign promotion, user opt-in, richness.	Content, permission, accuracy, user power, response channel, campaign popularity, delivery time, user acceptance & satisfaction.	Security, privacy, Quality of service, personalization.
Participants' Input	**Development**	**Use and Deployment**	**Impacts**
Multichannel m-Marketing	Interactivity, content, accuracy, richness, security, privacy, usability, quality of service, interoperability, response channel and user opt-in.	Permission, campaign popularity, campaign promotion, customization personalization, response channel, user opt-in and delivery time.	User acceptance & satisfaction, profit/value, long-term relationship, clutter on mobile medium, cost of service, and user power.

In summary, while there is a degree of similarity in the outcomes of the two approaches, overall there is something like a mapping of one-third to one-half of the factors. Thus it is not easy to draw conclusions by comparing the outcomes from these two categorization approaches. In addition, the factor analysis with three component extractions is able to explain less than half of the variation in the data, which may negatively influence the accuracy of the research outcome. Therefore there may be some missing components that need to be explained in the dataset. In light of this, to seek more interpretable results (and while acknowledging the constraints on factor analysis with small data sets), the researcher has run an additional six-component factor analysis of the success factors for multichannel m-Marketing.

As can be seen from the Scree Plot for the six-component factor analysis presented in Figure 6.1, the slope is very steep up to the sixth point; therefore at least five component extractions should be included in the new factor analysis. Also, as can be seen in Table 6.20, when six components are extracted, the total variance explained by the model is 70%; this indicates that much of the variation in the data (and much more than is achieved when using the three-component analysis) can be explained by the six components.
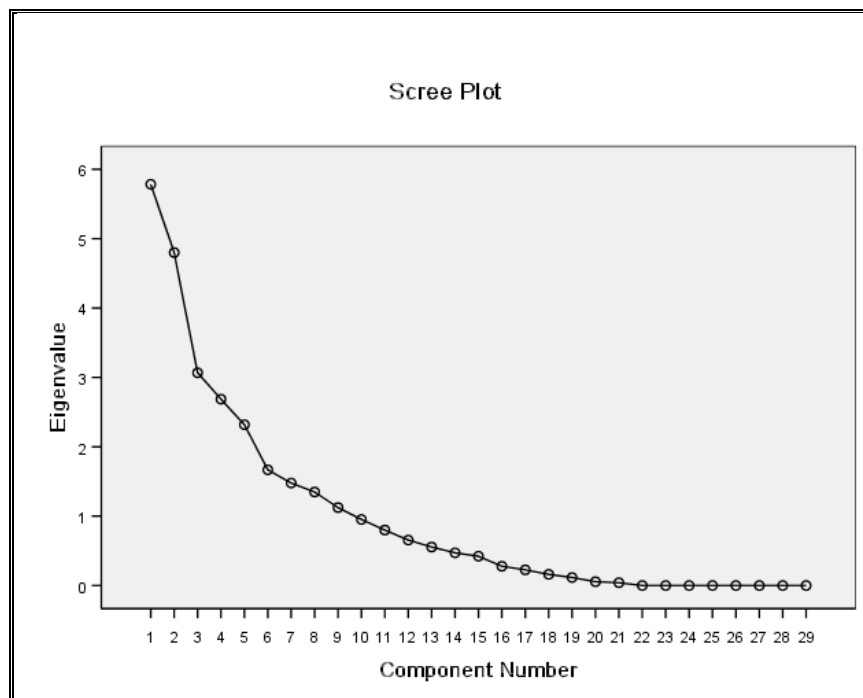
Figure 6.1. Scree Plot of Factor Analysis for Multichannel m-Marketing (29 Success Factors with six components)

The rotated component matrix table (Table 6.21) presents the success factors obtained for each factor when the six-component factor analysis was run. After removing the six non-critical multichannel factors from the list, the findings of this new factor analysis are as follows:

1) The first component includes delivery time, interactivity, usability, customization, richness and profit/value;
2) The second component includes the factors privacy, security, quality of service, personalization, and interoperability;
3) The third component includes content, permission, accuracy, and response channel;
4) The fourth component includes campaign popularity;
5) The fifth component includes long term relationship, user opt-in, and cost of service.
6) The sixth component includes user power.

Although the outcomes from this six-component factor analysis cannot be used directly for comparison with the categorization outcomes based on participants' input, they are more informative and have better coverage than the outcomes obtained from the three-component factor analysis presented in Chapter 4. The observation of the above categories may be interpreted as follows: finding 1 is relevant to m-Marketing *service provisioning*; finding 2 is concerned with the *technical issues* of mobile communication; finding 3 is principally concerned with users' *actual use* of m-Marketing; finding 4 relates to the *popularity* of the m-Marketing campaign; finding 5 considers *user behaviour* and willingness to undertake/use m-Marketing; and finding 6 is related solely to *user power*..

Table 6.20
Total Variance Explained by Multichannel m-Marketing (29 Success Factors with six components)

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	*% of Variance*	*Cumulative %*	*Total*	*% of Variance*	*Cumulative %*	*Total*	*% of Variance*	*Cumulative %*
1	5.785	19.948	19.948	5.785	19.948	19.948	5.278	18.202	18.202
2	4.800	16.553	36.501	4.800	16.553	36.501	3.976	13.709	31.911
3	3.067	10.574	47.075	3.067	10.574	47.075	3.228	11.132	43.042
4	2.686	9.264	56.339	2.686	9.264	56.339	2.740	9.448	52.491
5	2.318	7.993	64.332	2.318	7.993	64.332	2.578	8.891	61.382
6	1.668	5.752	70.084	1.668	5.752	70.084	2.524	8.702	70.084
7	1.478	5.096	75.179						
8	1.348	4.649	79.828						
9	1.123	3.873	83.701						
10	.952	3.282	86.983						
11	.799	2.756	89.740						
12	.655	2.260	91.999						
13	.554	1.911	93.911						
14	.471	1.625	95.535						
15	.422	1.454	96.989						
16	.277	.956	97.946						
17	.225	.776	98.722						
18	.160	.552	99.274						
19	.115	.398	99.671						
20	.055	.190	99.861						
21	.040	.139	100.000						

Extraction Method: Principal Component Analysis.

Table 6.21
Rotated Component Matrix for multichannel m-Marketing (29 Success Factors with six extractions)

Success factors	Components					
	1	**2**	**3**	**4**	**5**	**6**
Delivery time	.861					
Brand trust	.803					-.340
Interactivity	.767				.336	
Usability	.750					
Customization	.635				-.459	
Response time	.630				.386	
Frequency	.590	-.363	.465			
Entertainment	.581	-.427	.335		.301	
Richness	.507	-.483	.303			-.309
Privacy		.843				
Security		.769				
Quality of service		.668				
Personalization		.624		.597		
Interoperability	.366	.558			.399	-.343
Content		-.405	.779			
Campaign promotion			-.749			
Permission			.745			
Accuracy		-.434	.678			
Campaign popularity				.790		
Acceptance				-.747		
Response channel	-.389		.413	-.493		
Location Awareness & Mobility					.662	
Long term relationship					.607	-.311
User opt-in				.326	.596	
Cost of service					.556	
User power				.445		.726
Clutter on mobile medium						-.692
Technical support	.439			-.339		.596
Profit/Value	.449	.329				-.542

To summarize, a set of multichannel m-Marketing success factors have been categorised using two different analyses (comprising three phases and six components, respectively) in this section. The first approach considers the DeLone and McLean IS success model outlined in Section 3.2.2, for assigning the success factors to one of the three categories: m-Marketing development, m-Marketing use and deployment, and m-Marketing impact. The second approach relies on factor analysis where the multichannel m-Marketing success factors are categorised into six components.

6.7 User Acceptance & satisfaction and m-Marketing Success

This section firstly explores and discusses *the role of acceptance and its connection to m-Marketing success* based on the research outcomes presented in Section 5.2.7. The qualitative data presented in Table 5.35 is also referred to in the discussion. User acceptance & satisfaction is one of the most critical m-Marketing success factors, as found in the literature review and in the scores given by the Delphi experts; and it is related to acceptance for m-Marketing development, use and deployment, and impacts (discussed in Section 3.2.3). The meaning of the term user acceptance & satisfaction as a success factor is slightly different. As discussed in the stakeholder analysis presented in subsection 3.1.2.4, this thesis considers m-Marketing users to include both consumers *and* brand owners. Therefore, user acceptance & satisfaction includes the involvement of *both* consumers and brand owners. Furthermore, when the researcher uses the term m-Marketing acceptance, it is different from user acceptance & satisfaction as mentioned in literature, and is a term adapted from the technology acceptance model, as outlined in Figure 3.5. M-marketing acceptance is determined by two variables: consumer acceptance (driven by consumer satisfaction) and profit/value-oriented stakeholder acceptance (driven by profit/value). The discussion in this section is concerned with the link between m-Marketing acceptance (including the two variables) and the multichannel m-Marketing success factors.

6.7.1 The Role of m-Marketing Acceptance

The aim of this discussion is to identify the role of m-Marketing acceptance based on the experts' views and its relationship to m-Marketing success. A participant in the Delphi study states (comment 3 in table 5.41): "*the consumer is king for m-Marketing, consumer satisfaction and acceptance means success*". This comment is very direct and points out that satisfaction and acceptance by consumers can essentially drive mobile marketing success. Another participant (comment 7) appears to disagree with this belief: "*satisfaction and acceptance should be determined by all parties, brand, agency and Customer as essential to success. To not evaluate and or monitor success for each of the parties (at all stages) would be a missed opportunity for evaluation to be able to be compared against future campaigns.*" This comment asserts that m-Marketing success should reflect the views of *all* m-Marketing stakeholders, including consumers and other value-driven stakeholders. Consumers are paying to use m-Marketing and other stakeholders are providing m-Marketing services. This is also supported by comment 6: "*m-Marketing campaign needs to be operated and supported by stakeholders in value-chain, without them, m-Marketing cannot be operated or deployed*". Therefore, satisfaction and acceptance of all parties are vital. In comment 2, a participant mentions that "*development, use & deployment and impacts might be successful but unless the user is satisfied and accepts these, the campaign may not be successful.*" Although m-Marketing development, use and deployment, and impacts are processes related to m-Marketing acceptance, they become meaningless if not accepted

by consumers, brand owners and other stakeholders. In the participants' opinion, then, it is the user who decides whether m-Marketing is successful. If the m-Marketing campaign does not achieve user response, no matter how well it is developed or deployed, it cannot be considered successful. Furthermore, most participants agree that consumer satisfaction and profit/value-oriented stakeholder benefit are both important.

There are two relevant comments related to m-Marketing strategy and success. Comment 5 states: "*I think it is critical that the right marketing strategy hits the right audience",* while comment 8 points out that *"m-Marketing will only be successful through consumers' acceptance regardless of what service providers may develop and/or deploy in their strategic planning."* If the value can be seen by the targeted audience, this will be more likely to lead to greater consumer satisfaction and higher consumer acceptance of m-Marketing. Further, comment 9 states: "*both satisfaction and acceptance should apply to all 3 phases of m-Marketing development, use and impacts",* indicating that m-Marketing acceptance (driven by consumer satisfaction and profit/value-oriented stakeholders' benefit) should be an objective of all three phases included in the IS success model (Figure 3.6).

All participants agree that m-Marketing acceptance (by consumers, brand owners and other stakeholders) has a direct impact on m-Marketing success. The following conclusions regarding m-Marketing success can be drawn from the above discussion:

- M-Marketing success is influenced by acceptance at all stages including development, use and deployment, and impacts;
- M-Marketing acceptance is driven by consumer satisfaction *and* profit/value-oriented stakeholders' benefit;
- M-Marketing acceptance is vital for m-Marketing success.

6.7.2 Consumer Satisfaction and Stakeholders' Benefits

According to relevant literature, the success of m-Marketing is evident in the willingness of users to pay for an m-Marketing service, and to continuously use the deployed service (Leppaniemi & Karjaluoto, 2005). In other words, for m-Marketing to be considered successful, it must have been accepted by the m-Marketing users (brand owners, consumers and other providers). Therefore, the researcher assumes that receiving stakeholder acceptance & satisfaction is a necessary precursor to the success of m-Marketing. The level of this acceptance can effectively signal the degree of success of m-Marketing. As also explained in Section 3.1.4 and discussed in Section 6.7.1, m-Marketing acceptance is driven by consumer satisfaction and profit/value-oriented stakeholders' benefit.

Table 5.39 presents the participants' responses to the question asking if each specific success factor is important to consumer satisfaction and/or profit/value-oriented stakeholders' benefit. In this section, the six non-critical multichannel m-Marketing factors are excluded from the discussion. The following conclusions are drawn based on the researcher's analysis of the participants' responses:

1) More than half of the round three respondents believe permission, clutter on mobile medium, cost of service, quality of service, and usability are more important to consumer satisfaction than to profit/value-oriented stakeholders' benefits;

2) More than half of the respondents believe that campaign popularity, interoperability and profit/value are more important to profit/value-oriented stakeholders' benefits than to consumer satisfaction;

3) More than half of the respondents believe that user opt-in, interactivity and accuracy are equally important to both consumer satisfaction and profit/value-oriented stakeholders' benefits;

4) No respondents believe that user acceptance & satisfaction, campaign popularity, campaign promotion, customization, interoperability, long term relationship and profit/value are more important to consumer satisfaction than to profit/value-oriented stakeholders' benefits;

5) No respondents believe that clutter on mobile medium, content, cost of service, delivery time, accuracy, personalization, quality of service, response channel and usability are more important to profit/value-oriented stakeholders' benefits than to consumer satisfaction;

6) More than half of the respondents believe that permission, clutter on mobile medium, content, cost of service, delivery time, accuracy, interactivity, long term relationship, personalization, privacy, quality of service, response channel, security, usability, opt-in and user power are either equally important to both or more important to consumer satisfaction;

7) More than half of the respondents believe that user acceptance & satisfaction, brand trust, campaign popularity, campaign promotion, customization, accuracy, interactivity, long term relation, user opt-in and interoperability are either equally important to both or more important to profit/value-oriented stakeholders' benefits;

8) Apart from one respondent, all the others believe that all of the factors are important for either consumer satisfaction or profit/value-oriented stakeholders' benefits. The exception is that one respondent believes that technical support and user power are not important for either consumer satisfaction or profit/value-oriented stakeholders' benefits;

9) Overall, most respondents think all factors are important for both consumer satisfaction and profit/value-oriented stakeholders' benefits (except for entertainment for which most respondents think it is important to consumer satisfaction only. Note, however, that entertainment is not a factor included in the above discussion as it is found not critical for multichannel m-Marketing).

The above findings support our understanding of the relationships between the significant multichannel m-Marketing success factors and the two variables that drive m-Marketing success. Table 6.22 presents the factors along with the most preferred category for each from the two considered, according to the majority assigned by participants, mainly by observing the results in columns h and i from Table 5.39. (Column h presents the sum of 'equally important to both variables' and 'important to both but more important to consumer satisfaction' responses; column i presents the sum of 'equally important to both variables' and 'important to both but more important to stakeholders' benefit' responses.)

Table 6.22
Most preferred category for multichannel success factors in m-Marketing acceptance

Success Factors	Number in h	Number in i	Preferred Category
Campaign Popularity	4	14	Stakeholders' Benefit
Campaign Promotion	7	13	Stakeholders' Benefit
Clutter on Mobile Medium	19	9	Consumer Satisfaction
Content	14	8	Consumer Satisfaction
Cost of Service	15	5	Consumer Satisfaction
Customization	7	13	Stakeholders' Benefit
Delivery Time	15	9	Consumer Satisfaction
Accuracy	14	10	Consumer Satisfaction
Interactivity	11	18	Stakeholders' Benefit
Interoperability	1	15	Stakeholders' Benefit
Long Term Relationship	14	19	Stakeholders' Benefit
Personalization	13	5	Consumer Satisfaction
Permission	13	7	Consumer Satisfaction
Privacy	14	7	Consumer Satisfaction
Quality of Service	15	5	Consumer Satisfaction
Response Channel	15	9	Consumer Satisfaction
Richness (Message)	9	9	Consumer Satisfaction
Security	14	7	Consumer Satisfaction
Usability	11	3	Consumer Satisfaction
User Acceptance & satisfaction	7	18	Stakeholders' Benefit
User Opt-in	16	16	Consumer Satisfaction
User Power	13	9	Consumer Satisfaction
Profit/Value	2	14	Stakeholders' Benefit

Although opt-in and richness both have equal values in columns h and i from Table 5.39, they are assigned above to be more important to consumer satisfaction because they both have a higher value in column a than in column b in the original results. This means more participants believe these factors to be more important and relevant to consumer satisfaction than to profit/value-oriented stakeholders' benefit.

There is no particular factor that is considered not critical to either of the two variables that drive m-Marketing success or that is considered extremely more important to one than the other. Factors that are important or more important to consumer satisfaction than to profit/value-oriented stakeholders' benefit should be more relevant to consumers' acceptance; in contrast, factors that are important or more important to profit/value-oriented stakeholders' benefit than to consumer satisfaction can encourage value-driven stakeholders' acceptance.

6.8 Chapter Summary

In this Chapter, six newly identify success factors were discussed. As a result of the analysis, six (other) factors were found to be not critical to multichannel m-Marketing, and one factor was found to be not critical to single-channel m-Marketing. Thus, there are 28 single-channel m-Marketing success factors in total and 23 multichannel m-Marketing success factors in total. They are all presented in Table 6.23.

Table 6.23
Full list of single-channel and multichannel m-Marketing success factors

Factors	Single-Channel m-Marketing	Multichannel M-Marketing
Accuracy	Yes	Yes
Richness	Yes	Yes
Privacy	Yes	Yes
Security	Yes	Yes
Usability	Yes	Yes
Delivery Time	Yes	Yes
Response Channel	Yes	Yes
Quality of Service	Yes	Yes
Permission	Yes	Yes
Opt-in	Yes	Yes
Interactivity	Yes	Yes
Personalization	Yes	Yes
Cost of Service	Yes	Yes
Campaign Popularity	Yes	Yes
Campaign Promotion	Yes	Yes
User Power	Yes	Yes
Customization	Yes	Yes
Acceptance	Yes	Yes
Value/Profit	Yes	Yes
Long Term Relationship	Yes	Yes
Clutter on Medium	Yes	Yes
Content	Yes	Yes
Interoperability	No	Yes
Technical Support	Yes	No
Frequency	Yes	No
Brand Trust	Yes	No
Response Time	Yes	No
Entertainment	Yes	No
Location-Awareness	Yes	No

Four factors have become more critical in multichannel m-Marketing and four factors have become less critical in multichannel m-Marketing, when compared to single-channel. In future m-Marketing development and deployment, service providers should pay due attention to the factors that have become more critical but should not ignore factors that have become less critical either, as they may still be important to success (even if relatively less so). Also, as mentioned by participants, the criticality of success factors is related to the specific nature of an m-Marketing campaign.

In terms of categorization, the researcher first compared the results from the participants' direct input with those of a three-component extraction factor analysis that provided limited findings due to shortcomings in coverage. Next, the researcher conducted a six-component factor analysis with the aim to identify six main categories for all multichannel m-Marketing success factors. However, useful findings were also derived from participants' categorizations as the outcome was related to the three-phase model recommended in DeLone and McLean's IS success model, presented in Figure 3.6.

The researcher also discussed the role of acceptance and how it can be used to encourage or influence m-Marketing success. Participants agree that m-Marketing acceptance is determined by two variables: consumers' satisfaction and profit/value-oriented stakeholders' benefits; in addition, if m-Marketing acceptance is achieved, m-Marketing can be considered successful.

According to the above findings and discussion, the previously proposed m-Marketing success model (Figure 3.8) is partially validated and supported for multichannel m-Marketing as presented in Figure 6.2 (in which the arrows at this stage represent association and should be analysed further for cause and effect).

Technology (Development)	Intention and Actual (Deployment and Use)	Value (Impacts)
Interactivity, Content, Information accuracy, Richness, Security, Privacy, Usability, Quality of service, Interoperability, Response Channel	Campaign popularity, Campaign promotion, Customization, Personalization, Response channel, Opt-in and Delivery time	User acceptance & satisfaction, Profit/value, Long-term relationship, Clutter on mobile medium, Cost of service, and User power

M-Marketing Acceptance

Consumer Satisfaction	Profit/value-oriented Stakeholders' Benefit
Clutter on mobile medium, Content, Cost of service, Delivery time, Information accuracy, Permission, Personalisation, Privacy, Quality of service, Response channel, Richness, Security, Usability, User opt-in, and User power	User acceptance & satisfaction, Campaign popularity, Campaign promotion, Customization, Interactivity, Interoperability, Long term relationship, Profit/value

Mobile Marketing Success

Figure 6.3. Multichannel M-Marketing Success Model

All 23 multichannel m-Marketing success factors were categorised into m-Marketing development, m-Marketing use and deployment and m-Marketing impacts. In addition, the relationship of all success factors with m-Marketing success factors and m-Marketing acceptance was also analysed and discussed in Section 6.7. M-Marketing acceptance is associated with m-Marketing success, as shown in Figure 6.3; however, consumer satisfaction and profit/value-oriented stakeholders' benefits should be considered in all three phases outlined in the model. Thus, the investigation of multichannel m-Marketing success factors evaluates the success of multichannel m-Marketing using the model proposed in this thesis.

The next Chapter discusses the conclusions and implications of this study and provides recommendations for further research.

Chapter 7: Conclusions and Implications

This chapter provides an overall summary of the thesis. The researcher concludes the outcomes of the conducted Delphi investigation and outlines some limitations that emerged through the study process. The final two sections in the chapter summarise the implications of the findings for practice and research.

7.1 Summary and Conclusions

This thesis is an in-depth study of the success factors for m-Marketing, and is focused particularly on a comparison of the criticality of these factors in single-channel versus multichannel m-Marketing contexts. It has been established (in Sections 1.1 and 2.4.6) that an increasing number of multichannel m-Marketing campaigns will be built and that such services will be widely deployed in the near future, meaning that it is timely to publish the findings of this study.

The researcher has identified a number of success factors for m-Marketing, including 28 factors that are critical for the single-channel approach and 23 for the multichannel approach. These factors were scored by a group of experts through a three-round Delphi investigation and the outcomes for single-channel and multichannel m-Marketing were analysed and compared. The multichannel m-Marketing success factors were categorized into three groups based on the Delphi participants' input and into six groups based on factor analysis carried out as part of this study.

As part of the Delphi study drawing on the knowledge of a panel of m-Marketing experts, the following six new m-Marketing success factors were identified: campaign promotion, campaign popularity, interoperability, clutter on mobile medium, user power and customisation. These factors have not been identified in prior literature as success factors for m-Marketing, nor have they been discussed or considered as factors related to m-Marketing. All factors, including the 23 factors previously identified from literature and the six newly-identified factors in this thesis, were then scored and categorised, and it was determined whether they are relevant or critical in single-channel and multichannel m-Marketing approaches. The outcome of this analysis is that brand trust, frequency, technical support, response time, location awareness and entertainment were found to be not critical to multichannel m-Marketing, while, quite predictably, interoperability was found to be not critical to single-channel m-Marketing.

The transition from single- to multichannel m-Marketing is a current trend; the study therefore also considered changes in the criticality of success factors associated with this trend. By using various statistical analysis techniques to compare scores given to success factors for single-channel and multichannel approaches, the researcher found that profit/value, usability, response channel and interoperability were considered to be more critical in multichannel than in single-channel m-Marketing, while permission, response time, content and information accuracy were seen as less critical in the multichannel context. Furthermore, campaign promotion and user acceptance & satisfaction were found to be very critical factors for both single-channel and multichannel m-Marketing, whereas profit/value, interoperability and usability were very critical only in the multichannel approach, and permission was very critical only in the single-channel approach.

Correlations among success factors were also examined. The criticality of three pairs of factors: 1) content and accuracy 2) security and privacy and 3) permission and opt-in, were found to be correlated regardless of the m-Marketing approach. Another two pairs: 1) delivery time and response time and 2) richness and entertainment, were correlated in single-channel m-Marketing but were much less closely associated in the multichannel context. The factors permission, information accuracy, content, long term relationship, frequency, personalization and campaign popularity were more strongly correlated with user acceptance & satisfaction under a multichannel approach than in a single-channel approach. Furthermore, this thesis proposes an m-Marketing success model that has been used to explain the success of multichannel m-Marketing in this study.

In conclusion, this study has achieved its two stated objectives: to investigate the importance of multichannel integration to the future success of mobile marketing; and to determine the factors that influence multichannel mobile marketing success. The research has found that an initial precursor to success is acceptance. A success model for multichannel m-Marketing has been proposed, with an emphasis on the connection between m-Marketing acceptance and two variables – consumer satisfaction and profit/value-oriented stakeholders' benefits. In applying the Information Systems success model as a fundamental theory in this research along with the Technology Acceptance Model (TAM), the researcher has built a three-phase framework for mobile marketing (development, use and deployment, impacts) that leverages these and other previous theoretical models, to assess how these phases are supported by a range of critical success factors. New m-Marketing success factors may continue to emerge; differences among and correlations between m-Marketing factors' criticality levels for single-channel and multichannel approaches provide a fuller understanding to support those developments, for those using or adopting multichannel m-Marketing campaigns and addressing their impacts. This thesis has identified, verified, compared and categorised success factors for single-channel and multichannel m-Marketing. More fine-grained examinations of the model and consideration of factors in each of the three phases would form useful extensions to the work reported here.

7.2 Limitations

There are no major risks or constraints that have negatively influenced the research process and outcomes of this research. The core empirical component of the research for this thesis was a successful 3-round Delphi study. Appropriate methods and techniques for data collection and analysis have been used when conducting this study. Therefore, the researcher believes that the research outcomes are accurate and relevant, although the study does have some specific limitations.

One of the first limitations is the decreasing number of participants in the Delphi study. While 31 experts participated in round 1 of the study, just 22 of them took part in round 2 and even fewer participants (19) carried on until the end of round 3. This may have influenced the research outcomes particularly in terms of reduced availability of qualitative feedback to verify the round 1 and 2 findings. Furthermore, if those who withdrew from the study represented a particular perspective on the issues raised then this perspective may be under-represented in the final analysis.

Although all recruited participants were m-Marketing professionals they may well be experts in different areas and this would almost certainly influence their perceptions and opinions. For example, if a particular participant works for a location-based m-Marketing campaign and service, he or she might disagree that mobility is less important in multichannel m-Marketing. In this regard it is interesting to note that there are more opposing arguments in the participants' feedback for factors that become less critical, than for factors that become more critical. In any case, it is believed that the use of mean values for criticality would have ensured that one-off responses did not bias overall outcomes to an unwarranted degree. It is suggested to have a larger sample size of participants to ensure the availability of a larger amount of empirical data collected. Given a larger sample it could also be appropriate to consider the potential influence of the chosen participants' backgrounds and their expertise, since people with different backgrounds may have consequently different perceptions regarding multichannel mobile marketing success and the meaning, relevance and criticality of particular success factors. The researcher attempted to carefully and clearly define each factor from the literature and to explain those definitions in the empirical study, so it is hoped that this issue would have had minimal confounding effect in the empirical part of this study. A larger and more diverse sample might also support the conduct of comparative data analysis based on different sub-groups if numbers of participants in each were close to equal or were representative of the sub-populations of interest.

Initially, the researcher categorised the identified m-Marketing success factors into three groups via factor analysis, with the purpose of comparing the results to those obtained through participants' input. However, the three-component factor analysis could explain less than half of the variation in the data, and therefore, the results would not be a good representation of the data. As a result,

the researcher conducted another factor analysis with six-component extractions, which provided better coverage of the factor categorisations. However, during the research process the researcher found that it was not appropriate to include the six newly identified factors in the factor analysis, as the numbers of participants in rounds 1 and 2 were different. Since the outcome of such an analysis may reduce research rigor, the researcher excluded the factor analysis outcome for 29 success factors from the discussion. This limitation may be addressed if a larger sample size of participants is available.

Finally, it is noted and acknowledged that this study did not gather data from m-Marketing users. Since multichannel m-Marketing had just been newly deployed at the outset of the survey work its use was not widespread, and it would have been difficult to acquire meaningful consumer feedback or brand owners' sales reports at this early stage of adoption – hence the decision to draw on the views of a useful first sample of experts who could provide informed comment. It is recommended that if this study is to be replicated as multichannel mobile marketing becomes more fully established and deployed over industry projects, the data collection should be directed to ascertaining the views of the campaign users (brand owners and consumers).

7.3 Implications for Practice

In terms of industry implications, the research outcomes inform a number of recommendations for those who have the ability, infrastructure and interest to launch multichannel m-Marketing campaigns. The research as presented has identified and comprehensively examined a number of m-Marketing success factors applicable to single-channel and multichannel approaches. The investigation of these m-Marketing success factors involves the analysis of their mean and median scores, correlations and categorizations, based on information received from a panel of industry and academic experts, and includes comparisons between single-channel and multichannel criticality.

Based on the meta-analysis conducted previously by the researcher (Huang & Symonds, 2009), it is contended that m-Marketing will continue to evolve and it is likely that more and more m-Marketing campaigns and services will be implemented through multichannel mobile communication. The term multichannel m-Marketing is introduced and explained in this thesis and is its main focus, and the research outcomes provide a guideline to industry players who have the interest to launch multichannel m–Marketing campaigns. Apart from the 23 factors identified as an outcome of the literature review, six new success factors were identified and discussed in this thesis. According to the scoring outcomes for success factors in single-channel and multichannel m-Marketing, industry representatives and organisations should pay more attention to the very critical factors and relatively less attention to the non-/less critical factors when developing their future m-Marketing campaigns and deploying m-Marketing services.

Another contribution of this research study is that it categorises the identified multichannel m-Marketing success factors. Two approaches for achieving this categorization were used. First, participants in the Delphi study were asked to categorise all multichannel m-Marketing success factors into three categories, closely matching the three phases (m-Marketing development, use and deployment, and impacts) adapted from the information system success model (DeLone & McLean, 2003). Also, the researcher conducted three-component and six-component factor analyses to group those factors. These research findings provide a guideline to m-Marketing industry players while developing, using and adopting future multichannel m-Marketing campaigns, and to explain the relationships between factors outlined and examined.

The delineation of single-channel and multichannel mobile marketing into three distinct phases, of development, use and deployment, and impacts, should also be of interest to marketers. This should better enable marketers to prioritise tasks and activities in campaign design and channel implementation based on the findings reported here – specifically, the scores, ranks, correlations and categorizations of the critical success factors.

In considering the nature of contemporary mobile marketing, the researcher strongly believes that the outcomes reported here, while based on the views of a group of professionals, are reflective of reality. Mobile SMS, mobile Internet with WAP advertising and application advertising, and mobile TV advertising are widely deployed for marketing purposes, and commonly in a multichannel communication campaign. Further stakeholder analysis should generate insights of significance as industry players understand their role and position within the entire mobile marketing operation, and ensure that mobile marketing is generating value for brand owners' ROI and consumers' satisfaction.

7.4 Implications for Research

This thesis represents a cross-disciplinary investigation of mobile technology and marketing activities. As multichannel m-Marketing is more widely introduced it is likely that there will be a change in the success factors affecting m-Marketing and their criticality when compared to those for the single-channel approach. This was a particular focal point of the discussion in this thesis. In response, this study conducted a three-dimensional m-Marketing stakeholder analysis, based on the researcher's previous framework proposed in (Huang, 2011). The researcher argued that m-Marketing users include *both* consumers and brand owners and, more importantly, that m-Marketing acceptance is positively affected by consumer satisfaction and profit/value-oriented stakeholders' (brand owners and service providers) benefits.

This study reviewed and analysed the evolution of the information systems success model in Section 3.2, and proposed an m-Marketing success model in Section 3.2.3 (also refer to Figure 3.9). The study provides empirical evidence and discussion to evaluate multichannel m-Marketing success by using the proposed m-Marketing success model. As a result, the philosophical relationship between multichannel m-Marketing success factors on the one hand and the information system success theory and technology acceptance theory on the other, is demonstrated.

The study makes a contribution to the body of knowledge on mobile marketing in a multichannel context and provides a foundation for further theoretical and empirical research in this domain. For other researchers, the integration of IS success and TAM is a positive preliminary step in supporting the study of mobile marketing given its cross-disciplinary nature across business and technology. The comparison between single-channel and multichannel approaches is the main theoretical contribution that informs how multichannel m-Marketing success is achieved. Other researchers may choose to test the specific hypotheses that can be derived from the outcomes of this work, whether addressing aspects of the underlying models, the three phases of m-Marketing development, or the relationship among and between the critical success factors identified here.

Further studies could focus on providing explanations regarding other stakeholders in multichannel m-Marketing, and the potential changes that may occur in the mobile business value chain. It is recommended that further empirical investigations focus on gathering data from users who have already experienced multichannel m-Marketing. The strongest evidence to demonstrate if m-Marketing is successful or not should be collected from users. Future studies should attempt to answer questions such as "How can we build consumer satisfaction?" or "Can multichannel m-Marketing increase sales for brand owners?" Other work may investigate the relationships identified in this thesis in terms of causality, using formal hypothesis testing in the context of explanatory (rather than exploratory) research. It is encouraging that with the ongoing advancement of technologies more m-Marketing models can be built and applied in the field of marketing. It is also recommended that other researchers could evaluate multichannel mobile marketing success through alternative information systems theories, e.g., Rogers' diffusion of innovation theory or Christiansen's disruptive innovation theory.

Due to the fast pace of mobile technology development, it would also be of interest to predict what the next generation of mobile marketing might look like, and whether/how location-based services would work co-operatively in a multichannel m-Marketing environment.

References

Adachi, F. (2001). Wireless past and future: Evolving mobile communications systems. *IEICE Trans Fundamentals, 84*(1), 55-60.

Agrawal, P., & Famolari, D. (1999). Mobile computing in next generation wireless networks *Proceedings of the 3rd international workshop on Discrete algorithms and methods for mobile computing and communications* (pp. 560-571). WA, USA: Seattle.

Akter, S., & Kondo, F. N. (2007). Mobile information services marketing to serve the BOP market *Proceedings of the The 2nd IEEE Asia-Pacific Service Computing Conference* (pp. 480-487): Washingtong DC: IEEE.

Albers, A., & Kahl, C. (2008). Design and Implementation of Context-Sensitive Mobile Marketing Platforms *Proceedings of E-Commerce Technology and the Fifth IEEE Conference on Enterprise Computing, E-Commerce and E-Services*. Washington DC: IEEE.

Anantatmula, V. S. P. (2004). Criteria for Measuring Knowledge Management Efforts in Organizations. *Digital Abstracts International, 65*(2), 597.

Anderson, P., & Blackwood, A. (2004). Mobile and PDA technologies and their future use in education. *JISC Technology & Standards Watch* Retrieved May 12, 2008, from http://www.jisc.ac.uk/uploaded_documents/ACF11B0.pdf

Anderson, P., & Blackwood, A. (2005). Mobile and PDA Technologies: Looking around the corner. Retrieved July 11, 2008, from http://www.jisc.org.uk/uploaded_documents/jisctsw_05_04pdf.pdf

Anil, S., Ting, L. T., Moe, L. H., & Jonathan, G. P. G. (2003). Overcoming barriers to the successful adoption of mobile commerce in Singapore. *Internatinoal Journal of Mobile Communications, 1*(1-2), 194-231.

Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia scale I. Item selection and cross-validation of the factor structure *Journal of Psychosomatic Research, 38*(1), 23-32.

Bailey, T. (2007). Mobile enhancing the performance arts center: A case study and conceptual view *International Journal of Mobile Marketing, 2*(2), 86-89.

Baldi, P., & Long, A. D. (2001). A Bayesian framework for the analysis of microarray expression data: regularized t -test and statistical inferences of gene changes *Bioinformatics, 17*(6), 509-519.

Baldi, S., & Thaung, H. (2002). The entertaining way to m-Commerce - Japan's approach to the mobile Internet. *Electronic Markets, 12*(1), 6-13.

Ballantine, J., Levy, M., & Martin, A. (1996). The 3-D model of information systems success: the search for the dependent variable continues. *Information Resources Management Journal, 9*(4), 5-20.

Balza, S. D., & Hancea, O. (1996). Privacy and the internet: Intrusion, surveillance and personal data. *International Review of Law, Computers & Technology 10*(2), 219-234.

Bamba, F., & Barnes, S. J. (2006). Evaluating consumer permission in SMS advertising *Proceedings of the 5th international conference on Mobile and Ubiquitous Computing*. Helsinki, Finland: IDEA publishing.

Bamba, F., & Barnes, S. J. (2007). SMS advertising, permission and the consumer: A study. *Business Process Management Journal, 13*(6), 815-824.

Bannister, J., Mather, P., & Coope, S. (2003). *Convergence technologies for 3G networks*. NY, USA: John Wiley and Sons.

Barclay, L. W. (1994). HF studies within the international telecommunication union *Proceedings of Sixth International Conference on HF Radio Systems and Techniques* (pp. 6-10). Washington DC: IEEE.

Barnes, S. (2002). The electronic commerce value chain: Analysis and future developments. *International Journal of Information Management, 22*(2), 91-108.

Barnes, S., & Scornavacca, E. (2006). *Unwired business: Cases in mobile business*. Chicago, USA: Idea Group Inc.

Barnes, S., & Huff, S. L. (2003). Rising sun: iMode and the wireless Internet. *Communications of ACM, 46*(11), 78-84.

Barnes, S., & Scornavacca, E. (2004). Mobile marketing: The role of permission and acceptance. *International Journal of Mobile Communications, 2*(2), 128-139.

Barnes, S., & Scornavacca, E. (2006). Key Issues in Mobile Marketing: Permission and Acceptance. In S. Barnes (Ed.), *Unwired business: Cases in mobile business*. Chicago, USA: Idea Group Inc.

Barnes, S. J., & Scornavacca, E. (2004). Mobile marketing: The role of permission and acceptance. *International Journal of Mobile Communications, 2*(2), 128-139.

Barnes, S. J., & Scornavacca, E. (2008). Uncovering patterns in mobile advertising opt-in behaviour: a decision hierarchy approach. *International Journal of Mobile Communications, 6*(4), 405-416.

Baron, S., Patterson, A., & Harris, K. (2006). Beyond technology acceptance: understanding consumer practice. *Journal of Service Management, 17*(2), 111-135.

Barutçu, S. (2007). Attitudes towards mobile marketing tools: A study of Turkish consumers. *Journal of Targeting, Measurement and Analysis for Marketing, 16*(1), 26-39.

Barwise, P., & Strong, C. (2003). Permission-based mobile advertising. *Journal of Interactive Marketing, 16*(1), 14-24.

Battiato, S., Farinella, G. M., Giuffrida, G., Sismeiro, C., & Tribulato, G. (2009). Using visual and text features for direct marketing on multimedia messaging services domain. *Multimedia Tools and Applications, 42*(1), 5-30.

Bauer, H., Reichardt, T., Exler, S., & Tranka, E. (2005). Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study. *International Journal of Electronic Commerce, 5*(11), 110-117.

Baumgartner, H., & Steenkamp, J.-B. (2001). Response Styles in Marketing Research: A Cross-National Investigation. *Journal of Marketing, 38*(2), 143-156.

Bayartsaikhan, K., Danielak, P., Dunst, K., Guibert, J., Luxford, L., Romanossian, R., et al. (2007). Marketing for third screen: A case study of market potential of mobile TV and video across the U.S. and selected european countries *International Journal of Mobile Marketing, 2*(1), 12-27.

Beatrix, C. E. (2007a). Implementing the legal criteria of meaningful consent in the concept of mobile advertising. *Computer Law & Security Report, 23*(3), 262-269.

Beatrix, C. E. (2007b). Privacy issues in mobile advertising. *International Review of Law, Computers & Technology, 21*(3), 225-236.

Beatrix, C. E. (2008). Regulating mobile advertising in the European Union and the United States. *Computer Law & Security Report, 24*(5), 421-436.

Becker, M. (2006). Academic review: Mobile marketing predictions for 2006. Retrieved August 9, 2008, from http://mmaglobal.com/modules/article/view.article.php/190

Becker, M. (2007). What is in the data? Leveraging mobile Ad network data. *Journal of Targeting, Measurement and Analysis for Marketing, 16*(1), 3-7.

Bennett, W. L. (2003). New media power: The Internet and global activism. In N. Couldry & J. Curran (Eds.), *Contesting media power*. MD, USA: Rowman and Littlefield.

Berry, L. L. (1995). Relationship marketing of services: Growing interest, emerging perspectives. *Journal of the Academy of Marketing Science, 23*(4), 236-245.

Beville, H. M. (1988). *Audience ratings: radio, television, and cable*. Oxon, UK: Routledge.

Birdsall, I. A. (2004). It seemed like a good idea at the time: The forces affecting implementation of strate- gies for an information technology project in the Department of Defense. *Digital Abstracts International, 65*(7), 2756.

BizM3. (2009). BizM3, the Multi-Channel plaftform for mobile Marketing. Retrieved August 10, 2011, from http://www.bizm3.com/index.html

Blechar, J., Constantiou, I., & Damsgaard, J. (2005). The role of marketing in the adoption of new mobile services: Is it worth the investment? *Proceedings of the International Conference on Mobile Business* (pp. 370-376). Washington DC: IEEE.

Bluebookadvertising. (2010). BizM3, mobile marketing - text message marketing. Retrieved August 5, 2011, from http://www.bluebookadvertising.com/mobile_marketing/

Bouwman, H., Carlsson, C., Castillo, F. M., & Walden, P. (2007). Barriers and drivers in the adoption of current and future Mobile services. *Telematics and Informatics, 24*(2), 145-160.

Bowrey, K. (2005). *Law and Internet cultures*. Cambridge, UK: Cambridge University Press.

Braiterman, J., & Savio, N. (2007). Design sketch: The context of mobile interation. *International Journal of Mobile Marketing, 2*(1), 66-68.

Brancheau, J. C., Janz, B. D., & Wetherbe, J. C. (1996). Key issues in information systems management:1994-95 SIM Delphi results. *MIS Quarterly, 20*(2), 225-243.

Brittain, J. E. (2004). Electrical engineering hall of fame: Guglielmo Marconi. *Proceedings of IEEE, 92*(9), 1501-1504.

Brown, J., Shipman, B., & Vetter, R. (2007). SMS: The short message service. *Computer 40*(12), 106-110.

Brungs, A., & Jamieson, R. (2005). Identification of legal issues for computer forensics. *Information Systems Management, 22*(2), 57-66.

Buchwald, J. Z. (1994). *The creation of scientific effects: Heinrich Hertz and electric waves*. hicago, USA: University of Chicago Press.

Bunn, M. D., Savage, G. T., & Holloway, B. B. (2002). Stakeholder analysis for multi-sector innovations. *Journal of Business & Industrial Marketing, 17*(2-3), 181-203.

Bush, V. D., Venable, B. T., & Bush, A. J. (2000). Ethics and Marketing on this Internet: Practitioners' Perceptions of Societal, Industry and Company Concerns *Journal of Business Ethics, 23*(3), 237-248.

Camponovo, G., & Pigneur, Y. (2003). Business model analysis ap- plied to mobile business *in Proceedings of the 5th International Confer- ence on Enterprise Information Systems (ICEIS)*. Angers, France: ICEIS.

Carroll, A., Barnes, S., & Scornavacca, E. (2005). Consumers' perceptions and attitudes towards SMS mobile marketing in New Zealand *Proceedings of International Conference on Mobile Business, 2005* (pp. 434-440). Washington, DC: IEEE.

Carroll, A., Barnes, S., Scornavacca, E., & Fletcher, K. (2007). Consumers' perceptions and attitudes towards SMS advertising - Recent evidences in New Zealand. *International Journal of Advertising, 26*(1), 79-98.

Carroll, A., Barnes, S. J. & Scornavacca, E. (2005). Consumers' perceptions and attitudes towards SMS mobile marketing in New Zealand *Proceedings of International Conference on Mobile Business, 2005* (pp. 434-440). Washington, DC: IEEE.

Carson, W. A. (2005). Successful implementation of enterprise resource planning software: A Delphi study. *Digital Abstracts International, 66*(1), 242-243.

Chatterjeea, S., Chakrabortyb, S., Sarkerc, S., Sarkerc, S., & Laud, F. Y. (2009). Examining the success factors for mobile work in healthcare: A deductive study. *Decision Support Systems, 46*(3), 620-633.

Chaudhuri, A. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing 75*(5), 14-27.

Chen, J. C. H., Chiniwar, S., Lin, B., & Chen, P. (2006). Security in e-business and beyond: A case study reflecting current situations and future trends. *International Journal of Mobile Communications, 4*(1), 17-33.

Cheong, J. H. (2005). Mobile internet acceptance in Korea. *Interent Research, 15*(2), 125-140.

Cheung, M. (2008). `Click here': the impact of new media on the encoding of persuasive messages in direct marketing. *Discourse Studies, 10*(2), 161-189.

Chincholle, D., Goldstein, M., Nyber, M., & Eriksson, M. (2002). Lost or found? A usability evaluation of a mobile navigation and location-based service. *Persuasive Technology, 24*(11), 9-17.

Chou, T.-H., Hsu, L.-L., & Chen, J. C. H. (2003). The ubiquitous service-oriented design of 3G/4G mobile commerce. *International Journal of Mobile Communications, 8*(4), 451-467.

Chowdhury, H. K., Parvin, N., Weitenberner, C., & Becker, M. (2006). Consumer attitude toward mobile advertising in an emerging market: An empirical study. *International Journal of Mobile Marketing, 1*(2), 33-41.

Clayton, M. J. (1997). Delphi: a technique to harness expert opinion for critical decision-making tasks in education *Educational Psychology: An International Journal of Experimental Educational Psychology 17*(4), 373-386.

Clerck, J.-P. D. (2011). Location-based and mobile marketing become big business: your business? Retrieved October, 15, 2011, from http://www.conversionmarketingforum.com/en/blog/location-based-and-mobile-marketing-become-big-business-your-business

Clulow, V. (2005). Futures dilemmas for marketers: can stakeholder analysis add value? *European Journal of Marketing, 39*(9-10), 978-997.

Coderre, F., St-Laurent, N., & Mathieu, A. (2004). Comparison of the quality of qualitative data obtained through telephone, postal and email surveys. *International Journal of Market Research, 46*(3), 347-357.

Conover, W. J., & Iman, R. L. (1981). Rank Transformations as a Bridge Between Parametric and Nonparametric Statistics. *The American Statistician, 35*(3), 124-129.

Crowdedbrain. (2010). NAVTEQ wins award for best location-aware mobile ad campaign. Retrieved September 10, 2011, from http://www.crowdedbrain.co.uk/gps/navteq-wins-award-for-best-location-aware-mobile-ad-campaign.html

Dahlman, E., Ekstrom, H., Furuskar, A., Jading, Y., Karlsson, J., Lundevall,, M., & Parkvall, S. (2006). The 3G long-term evolution: Radio interface concepts and performance Evaluation *Proceedings of IEEE Vehicular Technology Conference* (pp. 137-141). Washington DC: IEEE.

Dalkey, N. (1969). *The Delphi method: An experimental study of group opinion*. CA, USA: Rand Corporation.

Dalkey, N., & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management Science 9*(3), 458-467.

David, M. R. (1983). Marketing the Political Product. *European Journal of Marketing, 22*(9), 34-47.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*(3), 319-340.

Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies, 38*(3), 475-487.

Davis, R., & Yung, D. (2005). Understanding the interactivity between television and mobile commerce. *Communications of the ACM, 48*(7), 103-105.

DeGroot, M. (1974). Reaching a consensus. *Journal of the American Statistical Association, 69*(354), 118-131.

Delbeq, A., Van de Ven, A., & Gustafson, D. H. (1975). *Group techniques for program planning: A guide to nominal group and Delphi processes*. Glenview, USA: Scott, Foresman and Company.

DeLone, W., & McLean, E. (1992). Information systems success: the quest for the dependent variable. *Information systems research, 3*(1), 60-96.

DeLone, W., & McLean, E. (2002). Information Systems Success Revisited *in Proceedings of the 35th Annual Hawaii International Conference on System Sciences*. New York: ACM.

DeLone, W., & McLean, E. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems, 19*(4), 9-30.

DeLone, W., & McLean, E. (2004). Measuring e-commerce success: Applying the DeLone & McLean information systems success model. *International Journal of Electronic Commerce, 9*(1), 31-47.

Dickinger, A., Haghirian, P., Murphy, J., & Scharl, A. (2004). An investigation and conceptual model of SMS marketing *Proceedings of the 37th Hawaii international conference on system sciences* (pp. 31-41). Washington DC: IEEE.

Dickinger, A., Haghirian, P., Murphy, J., & Scharl, A. (2004). An investigation and conceptual model of SMS marketing *Proceedings of the 37th Hawaii international conference on system sciences* (pp. 31-41). Washington DC: IEEE.

Dickinger, A., & Kleijnen, M. (2008). Coupons going wireless: Determinants of consumer intentions to redeem mobile coupons. *Journal of Interactive Marketing, 22*(3), 23-39.

Dickson, G. W., Leitheiser, R. L., Wetherbe, J. C., & Nechis, M. (1984). Key Information Systems Issues for the 1980's. *MIS Quarterly, 8*(3), 135-159.

Ding, X., Li, J., & Ho, S. (2004). Unique features of mobile commerce. *Journal of Electronic Science and Technology of China, 3*(1), 1-14.

DiStefano, C. (2002). The Impact of Categorization With Confirmatory Factor Analysis. *Structural Equation Modeling: A Multidisciplinary Journal 9*(3), 327-346.

Dishaw, M. T., & Strong, D. M. (1999). Extending the technology acceptance model with task-technology fit constructs.

Doherty, K., Rao, S., & Mackay, M. M. (2007). Young Australians' perceptions of mobile phone content and information services - An analysis of the motivations behind usage. *Young Consumers, 8*(4), 257-268.

Doyle, S. (2001). Software review: Using short message services as a marketing tool *The Journal of Database Marketing, 8*(3), 273-277.

Drossos, D., & Giaglis, G. M. (2005). Factors That Influence the Effectiveness of Mobile Advertising: The Case of SMS *Advances in Informatics, 2*(1), 278-285.

Duncan, N. B. (1995). Capturing flexibility of information technology infrastructure: A study of resource characteristics and their measure. *Journal of Management Information Systems, 12*(2), 37-58.

Duncan, T., & Moriarty, S. E. (1998). A communication-based marketing model for managing relationships. *Journal of Marketing, 62*(2), 1-13.

Duncan, T., & Moriarty, S. E. (1995). Direct marketing: rise and rise or rise and fall? *Marketing Intelligence & Planning, 13*(6), 16-23.

Duncan, T., & Moriarty, S. E. (1998). A Communication-Based Marketing Model for Managing Relationships. *The Journal of Marketing, 62*(2), 1-13.

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing Buyer-Seller Relationships. *The Journal of Marketing, 51*(2), 11-27.

Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin, 81*(6), 358-361.

Ehrnberg, E., & Sjoberg, N. (1995). Technological discontinuities competition and firm performance. *Technology Analysis & Strategic Management, 7*(1), 93-107.

Ellis, D. V., Ellis, L., & Barraclough, C. (2007). Perceptions towards SMS marketing: An exploratory investigation. *Management Dynamics, 16*(2), 16-27.

Endacott, R., Clifford, C. M., & Tripp, J. H. (1999). Can the needs of the critically ill child be identified using scenarios? Experiences of a modified Delphi study. *Journal of Advanced Nursing, 30*(3), 665-676.

Facchetti, A., Rangone, A., Renga, F. M., & Savoldelli, A. (2005). Mobile marketing: An analysis of key success factors and the European value chain. *International Journal of Management and Decision Making, 6*(1), 65-80.

Ferri, C. P., Prince, M., Brayne, C., Brodaty, H., Fratiglioni, L., Ganguli, M., et al. (2005). Global prevalence of dementia: a Delphi consensus study. *The Lancet, 366*(9503), 2112-2117.

Fouskas, K. G., Giaglis, G. M., & Kourouthanassis, P. E. (2005). A roadmap for research in mobile business. *Internatinoal Journal of Mobile Communications, 3*(4), 350-373.

Frank, C., & Wuersch, M. (2006). Implicit opt-in mobile advertising via the ipointer selection model. *International Journal of Mobile Marketing, 1*(2), 68-74.

Frenchman, E., Balabanovic, M., Behnert, M., Smith, B., Ray, N., Reid, M., et al. (2009). The Future of Digital Marketing 2009 *Proceedings of the 11th International Conference of Digital Marketing* (pp. 117-125). London, UK: Econsultancy.

Friedrich, R., Gröne, F., Hölbling, K., & Peterson, M. (2009). The march of mobile marketing: New chances for consumer companies, new opportunities for mobile operators. *Journal of Advertising Research, 49*(1), 54-61.

Fu, X., Bourgeois, A., Fan, P., & Pan, Y. (2006). Using a genetic algorithm approach to solve the dynamic channel-assignment problem. *Internatinoal Journal of Mobile Communications, 4*(3), 333-353.

Gabriel, S. B., Schaffner, S. F., Nguyen, H., Moore, J. M., & Roy, J. (2002). The Structure of Haplotype Blocks in the Human Genome. *Science Magazine, 296*(5576), 2225-2229.

Gafni, R. (2008). Framework for quality metrics in mobile-wireless information systems. *Interdisciplinary Journal of Information, 3*(1), 23-31.

Galloway, C. S., & Brown, S. P. (2004). Annoying, intrusive, … and constitutional: telemarketing and the national Do-Not-Call Registry. *Journal of Consumer Marketing, 21*(1), 27-38.

Gardner, M. J., & Altman, D. G. (1986). Confidence intervals rather than P values: estimation rather than hypothesis testing. *British Medical Journal, 292*(6522), 746-766.

Gauzente, C. (2004). Web merchants' privacy and security statements: how reassuring are they for consumers? A two-sided approach. *Journal of Electronic Commerce Research, 5*(3), 181-198.

Gefen, D., & Keil, M. (1998). The impact of developer responsiveness on perceptions of usefulness and ease of use: an extension of the technology acceptance model. *ACM SIGMIS Database, 29*(2), 110-119.

Gerdsri, N. (2005). An analytical approach on building a technology development envelope (TDE) for roadmapping of emerging technologies. *Digital Abstracts International, 66*(3), 1697.

Germanakos, P., Samaras, G., & Christodoulou, E. (2005). Multi-channel Delivery of Services - the Road from eGovernment to mGovernment: Further Technological Challenges and Implications *Proceedings of the first European Conference on Mobile Government* (pp. 210-220). Brighton: Euro mGov.

Ghodeswar, B. M. (2008). Building brand identity in competitive markets: a conceptual model. *Journal of Product & Brand Management, 17*(1), 4-12.

Gidofalvi, G., Larsen, H. R., & Pedersen, T. B. (2008a). Estimating the capacity of the location-based advertising channel. *International Journal of Mobile Communications, 6*(3), 357-375.

Gidofalvi, G., Larsen, H. R., & Pedersen, T. B. (2008b). Estimating the capacity of the Location-Based Advertising channel. *International Journal of Mobile Communications 6*(3), 357-363.

Goulding, C. (2002). *Grounded theory: a practical guide for management, business and market*. CA, USA: SAGE.

Goyder, J. (1985). Face-to-Face Interviews and Mailed Questionnaires: The Net Difference in Response Rate. *Public Opinion Quarterly, 49*(2), 234-252.

Granello, D. H., & Wheaton, J. E. (2004). Online Data Collection: Strategies for Research. *Journal of Counseling & Development 82*(4), 387-392.

Grant, I., & O'Donohoe, S. (2007). Why young consumers are not open to mobile marketing communication. *International Journal of Advertising, 26*(2), 223-233.

Grassl, W. (1999). The reality of brands: towards an ontology of marketing. *The American journal of economics and sociology, 58*(2), 313-359.

Green, N. (2004). A Spy in your Pocket? The Regulation of Mobile Data in the UK. *Surveillance & Society, 7*(2), 56-70.

Gronroos, C. (2004). The relationship marketing process: Communication, interaction, dialogue value. *Journal of Business & Industrial Marketing, 19*(2), 99-113.

Gruber, H., & Verboven, F. (2001). The diffusion of mobile telecommunications services in the European Union. *European Economic Review, 45*(3), 577-588.

Guarino, N. (1995). Formal ontology, conceptual analysis and knowledge representation. *International Journal of Human-Computer Studies - Special issue: the role of formal ontology in the information technology, 43*(5-6), 77-86.

Hagen, N. A., Stiles, C., Nekolaichuk, C., Biondo, P., Carlson, L. E., Fisher, K., et al. (2008). The Alberta Breakthrough Pain Assessment Tool for Cancer Patients: A Validation Study Using a Delphi Process and Patient Think-Aloud Interviews. *Journal of Pain and Symptom Management 35*(2), 136-152.

Haghirian, P., & Inoue, A. (2007). An advanced model of consumer attitudes toward advertising on the mobile internet. *International Journal of Mobile Communications, 5*(1), 48-67.

Haghirian, P., Madlberger, M., & Inoue, A. (2008). Mobile advertising in different stages of development: A cross-country comparison of consumer attitudes *Proceedings of the 41st Annual Hawaii International Conference on System Sciences* (pp. 48-52). Washington DC: IEEE.

Haghirian, P., Madlberger, M., & Tanuskova, A. (2005). Increasing advertising value of mobile marketing - An empirical study of antecedents *Proceedings of the 38th Annual Hawaii International Conference on System Sciences (HICSS'05)* (pp. 32-37). Washington DC: IEEE.

Haghirian, P., & Sangyo, K. (2005). Identify success factors for mobile marketing. *Asia Pacific Advances in Consumer Research, 6*(1), 28-29.

Haig, M. (2002). *Mobile marketing: The message revolution*. London: Kogan Page.

Han, S., Harkke, V., Ruggero, P. L., & Mio, R. d. (2002). A foresight framework for understanding the future of mobile commerce. *Journal of Systems and Information Technology, 6*(2), 19-40.

Hanley, M., & Becker, M. (2006). Editor's Letter. *International Journal of Mobile Marketing, 1*(1), 1-2.

Hanley, M., Becker, M., & Martinsen, J. (2006). Factors influencing mobile advertising acceptance: Will incentives motivate college students to accept mobile advertisements? *International Journal of Mobile Marketing, 1*(1), 50-58.

Hansell, S. (2003). Internet is losing ground in battle against spam. Retrieved August 6, 2008, from http://zoo.cs.yale.edu/classes/cs155/spr03/nyt_spam.pdf

Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique - Methodological issues in nursing research *Journal of Advanced Nursing, 32*(4), 1008-1015.

Heinonen, K., & Strandvik, T. (2007). Consumer responsiveness to mobile marketing. *International Journal of Mobile Communications, 5*(6), 603-617.

Heller, N. E. (2006). Growth of mobile multimedia advertising. *International Journal of mobile marketing, 1*(1), 41-49.

Hills, G. E., Hultman, C. M., & Miles, M. P. (2008). The evolution and development of entrepreneurial marketing. *Journal of Small Business Management, 46*(1), 99-112.

Ho, S. Y., & Kwok, S. H. (2002). The attraction of personalized service for users in mobile commerce: an empirical study. *ACM SIGecom Exchanges - Mobile commerce, 3*(4), 253-261.

Hosbond, J. H., & Skov, M. B. (2007). Micro mobility marketing: Two cases on location-based supermarket shopping trolleys. *Journal of Targeting, Measurement and Analysis for Marketing, 16*(1), 68-78.

Huang, R., & Symonds, J. (2009). Mobile marketing evolution: Systematic literature review on multi-channel communication and multi-characteristics campaign *In Proceedings of the 13th Enterprise Distributed Object Computing Conference*. Washington DC: IEEE.

Huang, Y. (2011). Value, Interest and Power: A Three Dimensional Model for Mobile Marketing Stakeholder Analysis. *International Journal of Mobile Marketing, 2*(1), 43-53.

Huber, J. F. (2004). Mobile next-generation networks. *IEEE Multimedia, 11*(1), 72-83.

Hunt, S. D. (1991). *Modern marketing theory: Critical issues in the philosophy of marketing science*. Cincinnati, OHio: South-Western Publishing.

Hunt, S. D. (2002). *Foundations of marketing theory: Toward a general theory of marketing*. New York, USA: M.E. Sharpe.

Idwan, S., Alramouni, S., Al-Adhaileh, M., & Al-Khasawneh, A. (2008). Enhancing mobile advertising via Bluetooth technology. *International Journal of Mobile Communications, 6*(5), 587-597.

Irvine, C. (2001). Emerging value propositions for m-commerce. *Journal of Business Strategies, 18*(2), 44-52.

Ivanek, F. (2008). Convergence and competition on the way toward 4G. *IEEE Microwave Magazine, 9*(4), 6-14.

Jayawardhena, C., Kuckertz, A., Karjaluoto, H., & Kautonen, T. (2009). Antecedents to permission based mobile marketing: an initial examination. *European Journal of Marketing, 43*(3-4), 473 - 499.

Jelassi, T., & Enders, A. (2006). Mobile Advertising: A European Perspective. In S. J. Barnes & E. Scornavacca (Eds.), *Unwired Business: Cases in Mobile Business [*PA, USA: IRM Press.

Joanes, D. N., & Gill, C. A. (1998). Comparing measures of sample skewness and kurtosis. *Journal of the Royal Statistical Society: Series D, 47*(1), 183-189.

John, M. (2004). Can mobile services facilitate commerce: Findings from the Greek telecommunications market. *International Journal of Mobile Communications, 2*(2), 188-198.

Kambhatla, K. K., Kumar, S., & Lima, C. R. (2008). Video telephony performance over cellular CDMA EVDO Rev. A *Proceedings of 2008 IEEE International Symposium on Broadband Multimedia Systems and Broadcasting* (pp. 1-7). Washingtong DC: IEEE.

Kargin, B., Basoglu, N., & Daim, T. (2009). Factors affecting the adoption of mobile services. *International Journal of Services Sciences 2*(1), 29-52.

Karjaluoto, H., & Alatalo, T. (2007). Consumers' attitudes towards and intention to participate in mobile marketing. *International Journal of Services Technology and Management, 8*(2-3), 155-173.

Karjaluoto, H., Lehto, H., Leppäniemi, M., & Mustonen, T. (2007). Insights into the implementation of mobile marketing campaigns. *International Journal of mobile marketing, 2*(2), 10-20.

Karjaluoto, H., Lehto, H., Leppaniemi, M., & Jayawardhena, C. (2008). Exploring gender influence on customer's intention to engage permission-based mobile marketing *Electronic Markets, 18*(3), 242-259.

Karjaluoto, H., Standing, C., Becker, M., & Leppaniemi, M. (2008). Factors affecting Finnish consumers' intention to receive SMS marketing: A conceptual model and an empirical study. *International Journal of Electronic Business, 6*(3), 298-310.

Kautonen, T., Karjaluoto, H., Jayawardhena, C., & Kuckertz, A. (2007). Permission-based mobile marketing and sources of trust in selected European markets. *Journal of Systems and Information Technology, 9*(2), 104 - 123.

Kavanagh, J., & Hall, W. (2008). Grand Challenges in Computing Research. *In Proceedings of the Grand Challenges Conference 2008*. London, UK: UKCRC

Kavassalis, P., Spyropoulou, N., Drossos, D., Mitrokostas, E., Gikas, G., & Hatzistamatiou, A. (2003). Mobile permission marketing: Framing the market inquiry. *International Journal of Electronic Commerce, 8*(1), 55-79.

Keil, M., Tiwana, A., & Bush, A. (2002). Reconciling user and project manager perceptions of IT project risk: A Delphi study. *Information Systems Journal, 12*(2), 103-119.

Keil, M., Tiwana, A., & Bush, A. A. (2002). Reconciling User and Project Manager Perceptions of IT Project Risk: A Delphi Study. *Information Systems Journal, 12*(1), 103-119.

Keller, K. L. (2001). Mastering the marketing communications mix: Micro and macro perspectives on integrated marketing communication programs. *Journal of Marketing Management, 17*(7-8), 819-847.

Key, P., & Dietmar, G. W. (2007). Success factors in mobile viral marketing: A multi-case study approach *Proceedings of the International Conference on the Management of Mobile Business* (pp. 34-40). Washington DC: IEEE.

Kim, J.-o., & Mueller, C. W. (1978). *Factor analysis: Statistical methods and practical issues*. California, USA: SAGE.

Kim, M. J., & Jun, J. W. (2008). A case study of mobile advertising in South Korea: Personalisation and digital multimedia broadcasting (DMB). *Journal of Targeting, Measurement and Analysis for Marketing, 16*(2), 129-139.

Kima, C., Oha, E., Shinc, N., & Chaeb, M. (2009). An empirical investigation of factors affecting ubiquitous computing use and U-business value *International Journal of Information Management, 29*(6), 436-448.

Klein, A. G., & Koenigstorfer, J. (2007). New insights into the acceptance of mobile internet services: a mixed-method approach. *International Journal of Internet Marketing and Advertising, 4*(1), 72-92.

Koe, B. (2008). Singapore's 4G plans: LTE could beat WiMAX. Retrieved April 2, 2008, from http://eok.net/2008/04/12/singapores-4g-plans-lte-could-beat-wimax/

Koivumaki, T., Ristola, A., & Kesti, M. (2006). Predicting consumer acceptance in mobile services: Empirical evidence from an experimental end user environment. *International Journal of Mobile Communications, 4*(4), 418-435.

Kondo, F. N., & Nakahara, M. (2007). Differences in customers' responsiveness to mobile direct mail coupon promotions. *International Journal of Mobile Marketing, 2*(2), 68-74.

Krimmel, M. L. (2008). Interactive Mobile Marketing: Mobile Operator Shaping the Strategic Network of Mobile Advertising. *Interactive Marketing, 3*(1), 423-433.

Krishnamurthy, S. (2001). A comprehensive analysis of permission marketing. *Journal of Computer-Mediated Communication, 6*(2), 1-23.

Kumar, S. (2004). Mobile communications: Global trends in the 21st century. *International Journal of Mobile Communications, 2*(1), 67-86.

Kumar, S., & Zahn, C. (2003). Mobile communications: Evolution and impact on business operations. *Technovation, 23*(6), 515-520.

Kuoa, Y.-F., & Yub, C.-W. (2006). 3G telecommunication operators' challenges and roles: A perspective of mobile commerce value chain *Technovation, 26*(12), 1347-1356.

Kurkovsky, S., & Harihar, K. (2006). Using ubiquitous computing in interactive mobile marketing. *Personal Ubiquitous Computing, 10*(4), 227-240.

Kurubacak, G. (2007). Identifying Research Priorities and Needs in Mobile Learning Technologies for Distance Education: A Delphi StudyGulsun Kurubacak. *International Journal of Teaching and Learning in Higher Education, 19*(3), 216-230.

Lai, J. Y. (2006). Assessment of employees' perceptions of service quality and satisfaction with e-business. *International Journal of Human-Computer Studies, 64*(9), 926-938.

Lalopoulos, G., & Chochliouros, I. (2005). Evolution of Mobile Commerce Applications. In M. Pagani (Ed.), *Encyclopedia of Multimedia Technology and Networking*. PA, USA: Idea Group Inc.

Laszlo, J. (2009). The new unwired world: An IAB status report on mobile advertising. *Journal of Advertising Research, 49*(1), 27-43.

Lee, C., & Helal, S. (2002). Protocols for service discovery in dynamic and mobile networks. *International Journal of Computer Research, 11*(1), 1-12.

Lee, J., & Geistfeld, L. V. (1999). Elderly consumers' receptiveness to telemarketing fraud. *Journal of Public Policy & Marketing, 18*(2), 208-217.

Lee, K. C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective *Interacting with Computers, 21*(5-6), 385-392.

Lee, T. (2005). The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce. *Journal of Electronic Commerce Research, 6*(3), 165-180.

Lee, T., & Jun, J. (2007). Contextual perceived value? Investigating the role of contextual marketing for customer relationship management in a mobile commerce context. *Business Process Management Journal, 13*(6), 798-810.

Leek, S., & Christodoulides, G. (2009). Next-generation mobile marketing: How young consumers react to bluetooth-enabled advertising. *Journal of Advertising Research, 49*(1), 44-53.

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model *Information & Management, 40*(3), 191-204.

Lehmann, H., Kuhn, J., & Lehner, F. (2004a). The Future of Mobile Technology: Findings from a European Delphi Study *Proceedings of the 37th Annual Hawaii International Conference on System Sciences* (Vol. 3, pp. 300-317). Big Island: HICSS.

Lehmann, H., Kuhn, J., & Lehner, F. (2004b). The future of mobile technology: findings from a European Delphi study *in Proceedings of the 37th Annual Hawaii International Conference on System Sciences*. Washington DC: IEEE.

Leppäniemi, M., & Karjaluoto, H. (2008). Mobile marketing: From marketing strategy to mobile marketing campaign implmentation. *International Journal of Mobile Marketing, 3*(1), 50-61.

Leppäniemi, M., Karjaluoto, H., & Salo, J. (2004). The success factors of mobile advertising value chain. *E- Business Review, 4*(1), 93-97.

Leppaniemi, M., & Karjaluoto, H. (2005). Factors influencing consumers willingness to accept mobile advertising: A conceptual model. *International Journal of Mobile Communications, 3*(3), 197-213.

Li, E. Y. (1998). Perceived importance of information system success factors: A meta analysis of group differences. *Information & Management, 32*(1), 15-28.

Li, H., & Stoller, B. (2007). Parameters of mobile advertising: A field experiment. *International Journal of Mobile Marketing, 2*(1), 4-11.

Lin, C. C. (2003). A critical appraisal of customer satisfaction and e-commerce. *Managerial Auditing Journal, 18*(3), 202-212.

Lin, H.-H., & Wang, Y.-S. (2006). An examination of the determinants of customer loyalty in mobile commerce contexts *Information & Management, 43*(3), 271-282.

Lind, R., Schumacher, R., Reger, R., Olney, R., Yen, H., Laur, M., et al. (1999). The Network Vehicle-a glimpse into the future of mobile multi-media. *IEEE Aerospace and Electronic Systems Magazine, 14*(9), 27-32.

Lindholm, C., Keinonen, T., & Kiljander, H. (2003). *Mobile usability*. New York, USA: McGraw-Hill Professional.

Lindholm, C., Keinonen, T., & Kiljander, H. (2003). *Mobile usability*. New York, USA: McGraw-Hill Professional.

Liu, R. Y., Parelius, J. M., & Singh, K. (1999). Multivariate Analysis by Data Depth: Descriptive Statistics, Graphics and Inference. *The Annals of Statistics, 27*(3), 783-840.

Loe, R. C. d. (1995). Exploring complex policy questions using the policy Delphi:: A multi-round, interactive survey method. *Applied Geography, 15*(1), 53-68.

Low, J., & Blois, K. (2002). The evolution of generic brands in industrial markets: the challenges to owners of brand equity. *Industrial Marketing Management, 31*(5), 385-392.

Möller, K., & Halinen, A. (2000). Relationship marketing theory: its roots and direction. *Journal of Marketing Management, 16*(1-3), 29-54.

Macıas, J. G., Rousseau, F., Berger, G., Toumi, L., & Duda, A. (2004). Quality of service and mobility for the wireless Internet. *Wireless Networks, 9*(4), 341-352.

Mackay, M. M., & Weidlich, O. (2007). Case study: Conducting a web-based survey of mobile content usage by Australian mobile phone customers. *International Journal of Mobile Marketing, 2*(1), 28-33.

Mahatanankoon, P. (2007). The Effects of Personality Traits and Optimum Stimulation Level on Text-Messaging Activities and M-commerce Intention. *International Journal of Electronic Commerce, 12*(1), 7-30.

Mahatanankoon, P., Wen, H. J., & Lim, B. B. L. (2006). Evaluating the technological characteristics and trust affecting mobile device usage. *Internatinoal Journal of Mobile Communications, 4*(6), 662-681.

Maneesoonthorn, C., & Fortin, D. (2006). Texting behaviour and attitudes toward permission mobile advertising. *International Journal of mobile marketing, 1*(1), 66-72.

Mann, R. (1999). German advertising standards under pressure from Europe. Retrieved June 22, 2008, from http://damm-mann.de/assets/eipr_99_519.pdf

Marez, L. D., Vyncke, P., Berte, K., Schuurman, D., & Moor, K. D. (2007). Adopter segments, adoption determinants and mobile marketing. *Journal of Targeting, Measurement and Analysis for Marketing, 16*(1), 78-96.

Maron, M., Magnus, S., & Read, K. (2009). An empirical study to evaluate the location of advertisement panels by using a mobile marketing tool *Proceedings of Eighth International Conference on Mobile Business*. Washington: IEEE.

Mathieson, K., Peacock, E., & Chin, W. W. (2001a). Extending the technology acceptance model: the influence of perceived user resources. *ACM SIGMIS Database - Special issue on adoption, diffusion, and infusion of IT, 32*(3), 77-85.

Mathieson, K., Peacock, E., & Chin, W. W. (2001b). Extending the technology acceptance model: the influence of perceived user resources. *ACM SIGMIS Database - Special issue on adoption, diffusion, and infusion of IT, 32*(3), 110-122.

Mehta, R., & Sivadas, E. (1995). Direct marketing on the internet: An empirical assessment of consumer attitudes. *Journal of Direct Marketing, 9*(3), 21-32.

Mehta, R., & Sivadas, E. (2006). Direct marketing on the internet: An empirical assessment of consumer attitudes. *Journal of Direct Marketing, 9*(3), 21-32.

Meijden, M. J. v. d., Tange, H. J., Troost, J., & Hasman, A. (2003). Determinants of Success of Inpatient Clinical Information Systems: A Literature Review. *Journal of Informatics in Health and Biomedicine, 10*(1), 235-243.

Mennecke, B. E., & Strader, T. J. (2003). *Mobile commerce: technology, theory, and applications*. PA,USA: Idea Group Inc (IGI).

Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., Salmenkivi, S., Raulas, M., et al. (2007). An empirical study of the drivers of consumer acceptance of mobile advertising. *Journal of Interactive Advertising, 7*(2), 33-45.

Merisavo, M., Vesanen, J., Arponen, A., Kajalo, S., & Raulas, M. (2006). The effectiveness of targeted mobile advertising in selling mobile services: An empirical study. *International Journal of Mobile Communications, 4*(2), 119-127.

Merrilees, B., Getz, D., & O'Brien, D. (2005). Marketing stakeholder analysis: Branding the Brisbane Goodwill Games. *European Journal of Marketing, 39*(9-10), 1060-1077.

Michael, A., & Salter, B. (2006). *Mobile marketing: Achieving competitive advantage through wireless technology*. Oxford, UK: Butterworth-Heinemann.

Miller, B. (1998). Satellites free the mobile phone. *IEEE Spectrum, 35*(3), 26-35.

Miyazaki, A. D., & Fernandez, A. (2000). Internet privacy and security: An examination of online retailer disclosures. *Journal of Public Policy & Marketing, 19*(1), 54-61.

Miyazaki, A. D., & Fernandez, A. (2000). Internet Privacy and Security: An Examination of Online Retailer Disclosures. *Journal of Public Policy & Marketing, 19*(1), 54-61.

MMA. (2008). Mobile technology and marketing. Retrieved May 15, 2008, from http://www.mmaglobal.com/

MMA. (2010). Mobile technology and marketing. Retrieved May 15, 2010, from http://www.mmaglobal.com/

MMA. (2011). MMA updates definition of mobile marketing. Retrieved February 19, 2011, from www.mma.com

MMAglobal. (2011). Mobile marketing ecosystem. Retrieved February 25, 2011, from http://mmaglobal.com/resources/mobile-marketing-ecosystem

MobileMarketingWatch. (2010). iAd Mobile Marketing to Offer 'Interactivity and Emotion'. Retrieved August 01, 2011, from http://www.mobilemarketingwatch.com/iad-mobile-marketing-to-offer-interactivity-and-emotion-6025/

Mohr, J., & Nevin, J. R. (1990). Communication Strategies in Marketing Channels: A Theoretical Perspective. *The Journal of Marketing, 54*(4), 36-51.

Molla, A. (2001). E-commerce systems success: An attempt to extend and respecify the DeLone and Maclean model of IS success. *Journal of Electronic Commerce Research,, 2*(4), 131-144.

Monjack, J. (2011). Upstream Adds Personalisation To Their Mobile Marketing Gamification Engine. Retrieved August 01, 2011, from http://gametuned.com/2011/05/upstream-adds-personalisation-to-their-mobile-marketing-gamification-engine/

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research, 1*(1), 48-76.

Morgan, R. M., & Hunt, S. (1999). Relationship-Based Competitive Advantage: The Role of Relationship Marketing in Marketing Strategy. *Journal of Business Research, 46*(3), 281-290.

Morimoto, M., & Chang, S. (2006). Consumers' Attitudes toward Unsolicited Commercial E-mail and Postal Direct Mail Marketing Methods: Intrusiveness, Perceived Loss of Control, and Irritation. *Journal of Interactive Advertising, 7*(1), 77-91.

Mort, G. S., & Drennan, J. (2005). Marketing m-services: Establishing a usage benefit typology related to mobile user characteristics. *Journal of Database Marketing & Customer Strategy Management, 12*(4), 327-342.

Mundry, R. (1998). Use of statistical programs for nonparametric tests of small samples often leads to incorrect P values: examples from Animal Behaviour. *Animal Behaviour, 56*(1), 256-259.

Muthen, B., & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of non-normal Likert variables. *British Journal of Mathematical and Statistical Psychology, 38*(1), 171-189.

Mylonakis, J. (2004). Can mobile services facilitate commerce? Findings from the Greek telecommunications market. *International Journal of Mobile Communications, 2*(2), 188-198.

Nambisan, S., Agarwal, R., & Tanniru, M. (1999). Organisational mechanisms for enhancing user innovation in information technology. *MIS Quarterly, 23*(8), 365-395.

Nasco, S. A., & Bruner, G. C. (2008). Comparing consumer responses to advertising and non-advertising mobile communications. *Psychology and Marketing, 25*(8), 821-837.

Newell, J., & Meier, M. (2007). Desperterly seeking opt-in: A field report from a student-led mobile marketing initiative. *international Journal of Mobile Marketing, 2*(2), 53-57.

Nichols, V. (2003). OSs battle in the smart-phone market. *Computer, 36*(6), 10-12.

Niederman, F., Brancheau, J. C., & Wetherbe, J. C. (1991). Information systems management issues for the1990s. *MIS Quarterly, 15*(4), 475-500.

Niiniluoto, I. (1991). Realism, relativism, and constructivism. *Synthese, 89*(1), 135-162.

Observer, B. (2011). Cell phone users, 58% of population. Retrieved August 01, 2011, from http://www.bhutanobserver.bt/cell-phone-users-58-population/

Ojanpera, T., & Prasad, R. (1998). An overview of air interface multiple access for IMT-2000/UMTS. *IEEE Communications Magazine, 36*(9), 82-86.

Okazaki, S. (2005a). Mobile advertising adoption by multinationals - Senior executives' initial responses. *Internet Research, 15*(2), 160-180.

Okazaki, S. (2005b). Mobile advertising adoption by multinationals: Senior executives'initial responses. *Internet Research, 15*(2), 160-180.

Okazaki, S. (2005c). New perspectives on M-Commerce research. *Journal of Electronic Commerce Research, 6*(3), 160-164.

Okazaki, S. (2007). Exploring gender effects in a mobile advertising context: On the evaluation of trust, attitudes, and recall. *Sex Roles, 57*(11-12), 897-908.

Okazaki, S. (2008). Special issue on mobile advertising issues and challenges. *Journal of Interactive Advertising, 1*(1), 1-15.

Okazaki, S., Katsukura, A., & Nishiyama, M. (2007). How mobile advertising works: The Role of Trust in Improving Attitudes and Recall. *Journal of Advertising Research, 47*(2), 165-178.

Okoli, C., & Pawlowski, S. D. (2004). The Delphi method as a research tool: an example, design considerations and applications. *Information and Management, 42*(1), 15-29.

Paay, J., & Kjeldskov, J. (2009). Understanding the user experience of location-based services: five principles of perceptual organisation applied. *Journal of Location Based Services, 2*(117-131).

Pagani, M. (2004). Determinants of adoption of third generation mobile multimedia services. *Journal of Interactive Marketing, 18*(3), 46-59.

Pagani, M. (2008). A value-choice model for forecast market consequence of 3G mobile service design decisions. *Internatinoal Journal of Mobile Marketing, 3*(1), 23-31.

Page, C., & Lepkowska-White. (2002). Journal of Consumer Marketing. *Web equity: a framework for building consumer value in online companies, 19*(3), 231-248.

Patricia, M., & Eusebio, S. (2005). Mobile marketing: Killer application or new hype? *Proceedings of the International Conference on Mobile Business* (pp. 294-300). Washington DC: IEEE.

Patterson, C. A., Muntz, R. R., & Pancake, C. M. (2003). Challenges in location-aware computing. *IEEE Pervasive Computing, 2*(2), 80-89.

Paul, C. L., Redman, S., & Sanson-Fisher, R. W. (2004). A cost-effective approach to the development of printed materials: a randomized controlled trial of three strategies. *Health Education Research, 19*(6), 698-706.

Payne, A., Ballantyne, D., & Christopher, M. (2005). A stakeholder approach to relationship marketing strategy: The development and use of the "six markets" model. *European Journal of Marketing, 39*(7-8), 855-871.

Payne, A., & Frow, P. (2004). The role of multichannel integration in customer relationship management *Industrial Marketing Management, 33*(6), 527-538.

Pelton, J. N. (1981). The Future of Telecommunications: A Delphi Survey. *Journal of Communication, 31*(1), 177-189.

Peng, B. (2006). Mobile marketing: The Chinese perspective. *International Journal of Mobile Marketing, 1*(2), 50-59.

Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the implications of the internet for consumer marketing *Journal of the Academy of Marketing Science, 25*(4), 329-346.

Petrova, K., & Huang, R. (2007). Mobile Internet deployment models in New Zealand. In S. Krishnamurthy (Ed.), *Proceedings of IADIS International Conference e-Commerce* (pp. 337-341). Algarve, Portugal: IADIS.

Petter, S., & McLean, E. R. (2009). A meta-analytic assessment of the DeLone and McLean IS success model: An examination of IS success at the individual level *Information & Management, 46*(3), 159-166.

Pfleeger, S. L., & Bloom, G. (2005). Canning SPAM: Proposed solutions to unwanted email *IEEE Security & Privacy, 3*(2), 40-47.

Phelps, J., Lewis, R., & Mobilio, L. (2004). Viral Marketing or Electronic Word-of-Mouth Advertising: Examining Consumer Responses and Motivations to Pass Along Email. *Journal of Advertising Research, 44*(1), 333-348.

Piddshetti, M. M. (2007). Word of mouth marketing techniques. Retrieved August 15, 2008, from http://hitechstartups.wordpress.com/2007/08/08/word-of-mouth-marketing-wom-techniques/

Pihlström, M., & Brush, G. J. (2008). Comparing the perceived value of information and entertainment mobile services. *Psychology and Marketing, 25*(8), 732-755.

Pizarro, M. (1998). Epistemology and methodology for social justice and empowerment in Chicana/o communities *International Journal of Qualitative Studies in Education 11*(1), 57-80.

Poon, P. P., & Wagner, C. (2001). Critical success factors revisited: success and failure cases of information systems for senior executives. *Decision Support Systems, 30*(4), 393-418.

Pousttchi, K., & Wiedemann, D. G. (2006). A contribution to theory building for mobile marketing: Categorizing mobile marketing campaigns through case study research *Proceedings of International Conference on Mobile Business (ICMB'06)* (pp. 1-8). Munich Germany: University of Augsburg Press.

Powell, C. (2003). The Delphi technique: myths and realities. *Journal of Advanced Nursing, 41*(4), 376-382.

Pura, M. (2005). Linking perceived value and loyalty in location-based mobile services. *Managing Service Quality, 15*(6), 509-538.

Pynnönen, M., & Hallikas, J. (2006). Building a Customer Value Model in Mobile Communication Business *Frontiers of e-Business Research 2006, ICEB + eBRF Conference Proceedings*. Tampere, Finland: Tampere University Press.

Ram, S., & Jagdish N. Sheth. (1989). Consumer Resistance to Innovations: The Marketing Problem and its solutions. *Journal of Consumer Marketing, 6*(2), 5-14.

Ramkumar, G. D. (2007). Image recognition as a method for opt-in and applications for mobile marketing. *International Journal of Mobile Marketing, 2*(2), 42-49.

Rangaswamy, A., & Bruggen, G. H. V. (2005a). The Mobile Digital Contents Distribution Scenario. *Journal of Interactive Marketing, 19*(2), 5-11.

Rangaswamy, A., & Bruggen, G. H. V. (2005b). Opportunities and challenges in multichannel marketing: An introduction to the special issue. *Journal of Interactive Marketing, 19*(2), 5-10.

Rao, B., & Minakakis, L. (2003). Evolution of mobile location-based services. *Communications of the ACM, 46*(12), 110-118.

Rao, S., & Troshani, I. (2007). A conceptual framework and propositions for the acceptance of mobile services. *Journal of Theoretical and Applied Electronic Commerce Research, 2*(2), 61-73.

Raton, B. (2011). Boca Raton-Based Take5 Solutions, L.L.C. Acquires Ireland's Digital Reach Group, a Leader in Mobile Marketing Services. Retrieved October, 15, 2011, from http://www.take5s.com/index.php?option=com_content&view=article&id=56&Itemid=52

Rau, P.-L. P., Zhang, T., Shang, X., & Zhou, J. (2011). Content relevance and delivery time of SMS advertising. *International Journal of Mobile Communications 9*(1), 19-38.

Rettie, R., Grandcolas, U., & Deakins, B. (2005). Text message advertising: Response rates and branding effects. *Journal of Targeting, Measurement and Analysis for Marketing, 13*(4), 304-313.

Reyck, B. D., & Degraeve, Z. (2003). Broadcast Scheduling for Mobile Advertising. *Operations Research, 51*(4), 509-517.

Richins, M. L. (1983). Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study. *The Journal of Marketing, 47*(1), 68-78.

Robinson, W. S. (1957). The statiscitcal measurement of agreement. *American Sociological Review, 22*(1), 17-25.

Rockwell, K., Furgason, J., & Marx, D. B. (2000). Research and Evaluation Needs for Distance Education: A Delphi Study. *Online Journal of Distance Learning Administration, 3*(3).

Rohm, A. J., & Sultan, F. (2006). An exploratory cross-market study of mobile marketing acceptance. *International Journal of Mobile Marketing, 1*(1), 4-12.

Rohs∗, M., & Gfeller, B. (2004). Using camera-equipped mobile phones for interacting with real-world objects. *Advances in Pervasive Computing, 3*(15), 301-332.

Rosemann, M., & Bruin, T. d. (2005). Towards a Business Process Management Maturity Model *in Proceedings of the Australasian Conference on Information Systems* (pp. 331-345). Hobart: ACIS.

Rosenbloom, B. (2006). Multi-channel strategy in business-to-business markets: Prospects and problems. *Industrial Marketing Management, 36*(1), 4-9.

Roska, T. (2005). Cellular wave computers and CNN technology - A SoC architecture with xK processors and sensor arrays *Proceedings of the 2005 IEEE/ACM International Conference on Computer-Aided Design* (pp. 557-564). Washington DC: IEEE.

Rotondi, A., & Gustafson, D. (1996). Theoretical, methodological and practical issues arising out of the Delphi method. In M. Adler & E. Ziglio (Eds.), *Gazing into the oracle: the Delphi method and its application to social policy and public health* (pp. 34-45). London, UK: Jessica Kingsley Publishers.

Roussos, G., & Moussouri, T. (2004). Consumer perceptions of privacy, security and trust in ubiquitous commerce. *Personal and Ubiquitous Computing, 8*(6), 416-429.

Rowley, J. (1998). Promotion and marketing communications in the information marketplace. *Library Review, 47*(8), 383-387.

Ryals, L., & Ryals, A. (2001). Customer relationship management in financial services: towards information-enabled relationship marketing. *Journal of Strategic Marketing, 9*(1), 3-27.

Sabat, H. K. (2002). The evolving mobile wireless value chain and market structure. *Telecommunications Policy, 26*(9-10), 505-535.

Salo, J., & Karjaluoto, H. (2007). Mobile games as an advertising medium: Towards a new research agenda. *Innovative Marketing, 3*(1), 71-84.

Sarjakoski, T., Koivula, T., & Sarjakoski, T. (2007). A knowledge-based map adaptation approach for mobile map services *Location Based Services and TeleCartography* (pp. 247-264). Berlin Heidelberg: Springer

Satyanarayanan, M. (1997). Mobile computing: Where's the tofu? *ACM SIGMOBILE Mobile Computing and Communications Review, 1*(1), 17-21.

Saxton, J. (2006). The growth of the Internet, digital television and mobile telephony and the implications for not-for-profit marketing. *International Journal of Nonprofit and Voluntary Sector Marketing, 6*(4), 347-363.

Scharl, A., Dickinger, A., & Murphy, J. (2005a). Diffusion and success factors of mobile marketing. *Electronic Commerce Research and Applications, 4*(2), 159-173.

Scharl, A., Dickinger, A., & Murphy, J. (2005b). Diffusion and success factors of mobile marketing. *Electronic Commerce Research and Applications, 4*(2), 159-171.

Schierholz, R., Ostrowski, A., Glissmann, S., Kolbe, L. M., & Brenner, W. (2005). Performance measurement of mobile marketing in multi-channel environments *Proceedings of ICMB 2005 International*

Conference on Mobile Business, 2005 (pp. 301-307). Washington D.D: IEEE.

Schlegelmilch, B., & Penz, E. (2002). Knowledge Management in Marketing. *The Marketing Review,, 3*(1), 5-19.

Schultz, D. E., Tannenbaum, S. I., & Lauterborn, R. F. (1993). *Integrated marketing communications*. IA, USA: McGraw-Hill Professional.

Scornavacca, E., & Barnes, S. J. (2006). Barcode enabled m-commerce: Strategic implications and business models. *International Journal of Mobile Communications, 4*(2), 163-177.

Scornavacca, E., & McKenzie, J. (2007). Unveiling managers' perceptions of the critical success factors for SMS based campaigns. *International Journal of Mobile Communications, 5*(4), 445-456.

Scornavacca, E., Prasad, M., & Lehmann, H. (2006). Exploring the organisational impact and perceived benefits of wireless Personal Digital Assistants in restaurants. *International Journal of Mobile Communications, 4*(5), 558-567.

Scott, G. (2000). Critical technology management issues of new product development in high-tech companies. *Journal of Product Innovation Management, 17*(1), 57-77.

Scott, M. (2008). In mobile advertising: The consumer is 'king'. Retrieved July 4, 2008, from http://www.analysysmason.com/Research/Industry-comment/Insight/In-mobile-advertising-the-consumer-is-king/

Sedgwick, E. K. (1990). *Epistemology of the closet*. CA, USA: University of California Press.

Sengupta, D. L. (1999). Introduction to principles of radio transmission and reception with antenna and coil aerials. *Proceedings of IEEE, 87*(5), 890-893.

Sheth, J. N., & Parvatiyar, A. (1995). Relationship marketing in consumer markets: Antecedents and consequences *Journal of the Academy of Marketing Science, 23*(4), 255-271.

Shim, J. P., Varshney, U., Dekleva, S., & Knoerzer, G. (2006). Mobile and wireless networks: services, evolution and issues. *Internatinoal Journal of Mobile Communications, 4*(4), 405-417.

Shin, D.-H. (2007). User acceptance of mobile Internet: Implication for convergence technologies *Interacting with Computers, 19*(4), 472-483.

Shin, Y. M., Lee, S. C., Shin, B., & Lee, H. G. (2010). Examining influencing factors of post-adoption usage of mobile internet: Focus on the user perception of supplier-side attributes *Information Systems Frontiers, 12*(5), 595-606.

Siau, K., & Shen, Z. (2003a). Mobile communications and mobile services. *International Journal of Mobile Communications, 1*(1-2), 3-14.

Siau, K., & Shen, Z. (2003b). Mobile communications and mobile services. *Internatinoal Journal of Mobile Communications, 1*(1-2), 3-14.

Simons, R. W. (1996). Guglielmo marconi and early systems of wireless communication. *GEC Review, 11*(1), 37-44.

Smith, A. (2006). Exploring m-commerce in terms of viability, growth and challenges. *Internatinoal Journal of Mobile Communications, 4*(6), 682-703.

Smith, P., & Taylor, J. (2004). *Marketing communications: An integrated approach*. London: UK: Kogan Page.

Soley, L. C., & Reid, L. N. (1982). Promotional Expenditures in U.S. Congressional Elections. *Journal of Marketing & Public Policy, 1*(1), 147-155.

Springer, J. A., Binder, J. R., Hammeke, T. A., Swanson, S. J., Frost, J. A., Bellgowan, P. S. F., et al. (1999). Language dominance in neurologically normal and epilepsy subjects: A functional MRI study. *Oxford Journals, 122*(11), 2033-2046.

Srivastava, R. K., Shervani, T. A. & Fahey, L. (1999). Marketing, business processes, and shareholder value: An organizationally embedded view of marketing activities and the discipline of marketing. *Journal of Marketing, 63*(7), 168-179.

Stuart, J. B., & Eusebio, S. (2008). Uncovering patterns in mobile advertising opt-in behaviour: A decision hierarchy approach. *International Journal of Mobile Communications, 6*(4), 405-416.

Stuart, J. B., & Eusebio, S. (2008). Uncovering patterns in mobile advertising opt-in behaviour: A decision hierarchy approach. *International Journal of Mobile Communications, 6*(4), 405-416.

Sugai, P. (2007). Exploring the impact of handset upgrades on mobile content and service usage. *Internatinoal Journal of Mobile Communications, 5*(3), 281-299.

Suher, H. K., & İsper, N. B. (2011). Permission based mobile marketing and SMS AD avoidance. *Journal of Yasar University, 21*(6), 3633-3647.

Sumsion, T. (1998). The Delphi Technique: An Adaptive Research Tool *The British Journal of Occupational Therapy, 61*(4), 153-156.

Sun, S.-Y., Su, C.-F., & Ju, T. (2005). A study of consumer value-added services in mobile commerce: focusing on domestic cellular phone companies in Taiwan, China *Proceedings of the 7th international conference on Electronic commerce*. New York: ACM.

Sun, S. Y., Su, C. F., & Ju, T. (2005). A study of consumer value-added services in mobile commerce: Focusing on domestic cellular phone companies in Taiwan, China *In Proceedings of the 7th international conference on Electronic commerce*. New York: ACM.

Svidén, O. (1988). Future information systems for road transport: A Delphi panel-derived scenario. *Technological Forecasting and Social Change, 33*(2), 159-178.

Tabachnick, B., & Fidell, L. (2001). *Using multivariate statistics (4th ed.).* Boston, Mass: Allyn and Bacon.

Tahtinen, J. (2005). Mobile advertising or mobile marketing - A need for a new concept? *Proceedings of eBRF 2005* (pp. 152-164). Tampere, Finland: EBRF.

Tanakinjal, G. H., Deans, K. R., & Gary, B. J. (2008). Management of permission-based mobile marketing diffusion - A conceptual model. *International Journal of Business and Management, 2*(6), 52-58.

Thorsen, E., & Moore, J. (1996). *Integrated communication: Synergy of persuasive voices*. Philadelphia, PA: Lawrence, Erlbaum.

Toit, A. d. (2003). Knowledge: a sense making process shared through narrative. *Journal of Knowledge Management, 7*(3), 27-37.

Trappey, R. J., & Woodside, A. G. (2005). Consumer Responses to Interactive Advertising Campaigns Coupling Short-Message-Service Direct Marketing and TV Commercials. *Journal of Advertising Research, 45*(4), 382-401.

Tripathi, A. K., & Nair, S. K. (2006). Mobile advertising in capacitated wireless networks. *IEEE Transactions on Knowledge and Data Engineering, 18*(9), 1284-1296.

Troshani, I., & Hill, S. R. (2009). Linking stakeholder salience with mobile services diffusion. *International Journal of Mobile Communications 7*(3), 269-289.

Tsai, J. Y., Elelman, S., Cranor, L., & Acquisti, A. (2011). The effect of online privacy information on purchasing behavior: An experimental study. *Information System Research, 22*(2), 254-268.

Tsang, M. M., Ho, S.-C., & Liang, T.-P. (2004). Consumer attitudes toward mobile advertising: An empirical study. *International Journal of Electronic Commerce, 8*(3), 65-78.

Tsirulnik, G. (2011). SMS case study - Mobil1 Lube Express. Retrieved March 3, 2011, from http://www.mobilemarketer.com/cms/resources/case-studies/8791.html

TxT2GET. (2011a). Campaign Creative Compliance Retrieved July 20, 2011, from http://cms.txt2get.com.au/Case-Studies-1/AU-Compliance-and-Tips/default.aspx

TxT2GET. (2011b). MS Marketing - Case Studies. Retrieved August 15, 2011, from http://cms.txt2get.com/

Udo, G. J. (2001). Privacy and security concerns as major barriers for e-commerce: a survey study. *Information Management & Computer Security, 9*(4), 165-174.

Ursu, M. F., Thomas, M., Kegel, I., Williams, D., Tuomola, M., Lindstedt, I., et al. (2008). Interactive TV narratives: Opportunities, progress, and challenges. *ACM Transactions on Multimedia Computing, Communications, and Applications, 4*(4), 74-92.

Uscholda, M., & Gruningera, M. (1996). Ontologies: Principles, methods and applications. *The Knowledge Engineering Review, 11*(2), 93-136.

Varnali, K., & Toker, A. (2010). Mobile marketing research: The-state-of-the-art. *International Journal of Information Management, 30*(1), 144-151.

Varshney, U. (2003). Location management for mobile commerce applications in wireless Internet environment. *ACM Transactions on Internet Technology (TOIT), 3*(3), 71-81.

Venkatesh, V., Ramesh, V., & Massey, A. P. (2003). Understanding usability in mobile commerce. *Communications of the ACM - Mobile computing opportunities and challenges, 46*(12), 32-41.

Ververidis, C., & Polyzos, G. C. (2002). Mobile marketing using a location based service *Proceedings of the 1st International Conference on Mobile Business* (pp. 211-217). Athens, Greece: ADIS2002.

Viehland, D., & Hughes, J. (2002). The future of the wireless application protocol *AMCIS 2002 Proceedings*. Dallas, USA: Americas Conference on Information Systems (AMCIS).

Vrdoljak, M., Vrdoljak, S. I., & Skugor, G. (2000). Fixed-mobile convergence strategy: technologies and marketopportunities. *IEEE Communication Magazine, 38*(2), 116-121.

Vriendt, J. D., Laine, P., Lerouge, C., & Xu, X. (2002). Mobile network evolution: A revolution on the move. *IEEE Communication Magazine, 40*(4), 104-111.

Waldburger, M., & Stiller, S. (2006). Toward the mobile grid:Service provisioning in a mobile dynamic virtual organization *the Proceedings of IEEE International Conference on Computer Systems and Applications* (pp. 579-583). Washington DC: IEEE.

Walsham, G. (1996). Ethical theory, codes of ethics and IS practice. *Information Systems Journal, 6*(1), 69-81.

Wang, A. (2007). How consumers perceive free offers: Implications for mobile marketing. *International Journal of Mobile Marketing, 2*(2), 35-41.

Wang, Y.-S. (2008). Assessing e-commerce systems success: a respecification and validation of the DeLone and McLean model of IS success. *Information Systems Journal, 18*(5), 529-557.

Wehmeyer, K., & Lankenau, C. M. (2007). Mobile couponing - Measuring consumers' acceptance and preferences with a limit conjoint approach *Proceedings of the 20th Bled eConference*. Bled, Slovenia: University of Maribor.

Wilcoxon, F. (1945). Individual comparisons by ranking methods. *Biometrics Bulletin, 1*(6), 80-83.

Wilkinson, N. (2002). *Network generation network services*. New York, USA: John Wiley & Sons.

Williams, P. L., & Webb, C. (1994). The Delphi technique: a methodological discussion. *Journal of Advanced Nursing, 19*(1), 180-186.

Wixom, B. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information Systems Research, 16*(1), 85-102.

Wood, J., Keen, A., Basu, N., & Robertshaw, S. (2003). The development of mobile applications for patient education *Proceedings of the 2003 Conference on Designing For User Experiences* (pp. 1-4). New York: ACM.

Worth, A., Nurmatov, U., & Sheikh, A. (2010). Key components of anaphylaxis management plans: consensus findings from a national electronic Delphi study. *Journal of the Royal Society of Medicine, 1*(5), 42-45.

Xu, D. (2006). The Influence of Personalization in Affecting Consumer Attitudes Toward Mobile Advertising in China. *Journal of Computer Information Systems, 47*(2), 9-19.

Xu, D. J., Liao, S. S., & Li, Q. (2008). Combining empirical experimentation and modeling techniques: A design research approach for personalized

mobile advertising applications. *Decision Support Systems, 44*(3), 710-724.

Xu, G., & Gutiérrez, J. A. (2008). An Exploratory Study of "Killer Applications" and Critical Success Factors in M-Commerce. In M. Khosrow-Pour (Ed.), *Web Technologies for Commerce and Services Online* (pp. 231-226). NY, USA: Information Resources Management Association.

Yang, K., & Jolly, L. (2006). Value-added mobile data services: The antecedent effects of consumer value on using mobile data services. *International Journal of mobile marketing, 1*(2), 12-17.

Yang, K., & Jolly, L. D. (2006). Value-added mobile data services: The antecedent effects of consumer value on using mobile data services. *International Journal of Mobile Marketing, 1*(2), 12-17.

Ye, G. (2007). Mobile marketing systems: Framework and technology enabler. *International Journal of mobile marketing, 2*(1), 43-49.

Zúñiga, G. L. (2001). Ontology: Its transformation from philosophy to information systems ontology and its transformation from philosophy to information systems *Proceedings of the international conference on Formal Ontology in Information Systems* (pp. 187-197). New York: ACM.

Zaidi, A. (2009). *Mobile Marketing Buyer's Guide*. London, UK: Econsultancy.

Zhang, J., & Mao, E. (2008). Understanding the acceptance of mobile SMS advertising among young Chinese consumers. *Psychology and Marketing, 25*(8), 787-805.

Zineldin, M. (2000). Beyond relationship marketing: Technologicalship marketing. *Marketing Intelligence & Planning, 18*(1), 9-23.

Appendices

Appendix A: Ethical Issues

The following information is provided to the Delphi members, with the purpose of giving them more details about the research study and the Delphi process.

What is the purpose of this research?
This research study aims to investigate success factors of single-channel and multichannel m-Marketing. Importance, relevancy, level of impacts and categories of these success factors are examined.

What is a Delphi study?
The Delphi method is a systematic and interactive research method that relies on a panel of experts. The experts answer questionnaires in two or more rounds. After each round, a facilitator (the researcher) provides an anonymous summary of the experts' forecasts from the previous round as well as the reasons they provided for their judgments.

How was I chosen to become a participant?
You were chosen as one of the m-Marketing or relevant academic researchers, or m-Marketing relevant professionals in industry sector. I am going to invite you because you are either from his personal network or recommended by other participants.

How many rounds are in the Delphi process and how can we be interactive?
You will participate in a 3-round Delphi process; you can choose to use direct mail, email or interactive website for the participation.

How many questions do I need to answer in each round?
There are 24 questions in Round One, 19 questions in Round Two and 36 questions in Round Three.

What is the cost to participate the research?
According to the AUTEC guidelines, there is no cost except for your time. There is no more than 45 minutes for each round of the Delphi study; this may take up to one hour to complete two rounds.

What are the discomfort and risks?
None anticipated. No sensitive question will be asked.

What are the benefits?
Multichannel m-Marketing is new to mobile service providers, marketers, brand owners and consumers. Your participation assists to outline success factors of multichannel m-Marketing and perceive their importance. The research outcome provides preliminary implication and understanding to the market players, who intend to design and implement multichannel m-Marketing campaign. Furthermore, I am hoping to gain a PhD on the basis of the completion of this research study.

How will the privacy be protected?
The information gathered from you as a participant will not be used for any other purposes apart from the thesis. Information used will be completely kept confidential.

Appendix B: Ethics Application Cover Page

Auckland University of Technology Ethics Committee (AUTEC)

EA1

APPLICATION FOR ETHICS APPROVAL FOR RESEARCH PROJECTS

Please read the notes at the end of the form before submitting this application.

A. General Information

A.1.	Project Title

Critical Success Factors for Multichannel Mobile Marketing: A Delphi Study

A.2.	Applicant Name and Qualifications

Applicant Name: Judith Symonds

- Qualifications:
    - PhD November 2005, University of Queensland
    - MIT (by research) November 1998. "IS change management in Australia", University of Southern Queensland
    - BIT 1994, University of Southern Queensland

A.3.	Applicant's School/Department/Academic Group/Centre

School of Computer and Mathematical Sciences

A.4.	Applicant's Faculty

Faculty of Design and Creative Technologies

A.5.	Student Details

Please complete this section only if the research is being undertaken by a student as part of an AUT qualification.

A.5.1.	Student Name(s):

Yiwen Huang (Raymond)

A.5.2.	Student ID Number(s):

0478106

A.5.3.	Completed Qualification(s):

Master of Computer and Information Sciences – 2007 AUT University

Postgraduate Diploma of Computing – 2006 - Unitec New Zealand

Graduate Diploma of Information Technology – 2005 Auckland Institute of Studies

Diploma of Commerce 2003 – Victoria University of Technology (Australia)

Appendix C: Ethics Approval Letter

MEMORANDUM
Auckland University of Technology Ethics Committee (AUTEC)

To: Judith Symonds
From: **Charles Grinter** Ethics Coordinator
Date: 3 August 2010
Subject: Ethics Application Number 10/117 **Critical success factors for Multichannel Mobile Marketing: A Delphi study.**

Tena koe Judith

Thank you for providing written evidence as requested. I am pleased to advise that it satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC) at their meeting on 14 June 2010 and that I have approved your ethics application. This delegated approval is made in accordance with section 5.3.2.3 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 13 September 2010.

Your ethics application is approved for a period of three years until 3 August 2013.

I advise that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through http://www.aut.ac.nz/research/research-ethics/ethics. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on ;

- A brief report on the status of the project using form EA3, which is available online through http://www.aut.ac.nz/research/research-ethics/ethics. This report is to be submitted either when the approval expires on or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact me, by email at ethics@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEC and myself, I wish you success with your research and look forward to reading about it in your reports.

On behalf of Madeline Banda, Executive Secretary
Auckland University of Technology Ethics Committee

Cc: Yiwen Huang (Raymond) yiwen.huang@aut.ac.nz, yiwenhuang917@gmail.com

From the desk of ...   Private Bag 92006, Auckland 1142   Tel: 64 9 921 9999
Madeline Banda   New Zealand   ext 8044
Executive Secretary   E-mail: ethics@aut.ac.nz   Fax: 64 9 921 9925
AUTEC   page 1 of 1

Appendix D: Invitation Letter (Sample)

Raymond Yiwen Huang
School of Computer and Information Sciences
Auckland University of Technology
Phone: 006421-681218, Email: raymondh.aut@gmail.com

October 8, 2010

Dear Prospective Participant:

My name is Raymond Yiwen Huang; I am a PhD Candidate from School of Computer and Mathematical Sciences, AUT University, New Zealand.

I intend to conduct a research study for my PhD dissertation, and I hope that you would agree to participate in my research. My research topic is "Critical Success Factors for Single-Channel and Multichannel Mobile Marketing: A Delphi Study". As you are an expert in the field, I would like to invite you as a critical member on my Delphi panel, in order to gain further knowledge in this area.

I am going to conduct a 2-tier Delphi study; your participation is to provide assistance and adjustment to perceive importance of a list of critical success factors for mobile marketing. The collected information is considered private; and it will be used in my dissertation only, not for other purposes. More information about this project is provided in sections of this letter.

Your participation is entirely voluntary, if you accept my invitation, please sign the attached 'Consent Form' with digital signature and reply to this email (If you would like to sign on a hard copy, please reply this email and provide your mailing address, I will send a form as well as a returned envelop to you). Moreover, participant's Information has been attached to this email. You can choose to participate on written format questionnaires or via my prebuilt interactive online data collection website, the URL of the website is http://dracocephalum.no-ip.org/rh/Default.aspx, you can obtain information about my PhD study, the researcher, supervisors and my ethics approval details. A new URL for the questionnaire will be provided to you once the consent form is signed and returned.

I need to thank you very much for your time and consideration; I wish that your expertise can help me to work out my research questions.

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisors:
Primary PhD supervisor: Prof. Stephen MacDonell, stephen.macdonell@aut.ac.nz
Secondary PhD supervisor: Krassie Petrova, krassie.petrova@aut.ac.nz

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, madeline.banda@aut.ac.nz, 921 9999 ext 8044.

Yours Faithfully

Raymond Yiwen Huang

Approved by the Auckland University of Technology Ethics Committee on 03/08/2010. AUTEC Reference number 10/117

Appendix E: Consent Form (Sample)

Project title:

MEASURING THE SUCCESS OF MULTICHANNEL MOBILE MARKETING THROUGH AN AMALGAMATION OF THE IS SUCCESS MODEL AND THE TECHNOLOGY ACCEPTANCE MODEL: A DELPHI STUDY OF MOBILE MARKETING SUCCESS FACTORS

Supervisors: Stephen MacDonell & Krassie Petrova
Researcher: Raymond Yiwen Huang

I have read and understood the information provided about this research project in the Information Sheet dated 20th June 2010.
I have had an opportunity to ask questions and to have them answered.
I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
If I withdraw, I understand that all relevant information including the collected data (emails or paper works), will be deleted or destroyed permanently.
I agree to take part in this research.
I wish to receive a copy of the report from the research (please tick one): Yes √
    No○

Participant's signature:
Participant's name: [Name]
Participant's Contact Details (if appropriate):
[Address]

Date: 22/10/2010

Appendix F: Raw Data

Round 1 – Raw Data for multichannel m-Marketing Factors (23 factors / 31 participants)

Multi-channel																															
Acceptance	908	942	671	824	898	905	629	766	602	768	756	835	786	832	797	664	681	731	717	783	803	732	851	747	723	966	580	788	823	670	636
Permission	727	775	675	739	685	858	525	0	623	685	732	715	772	656	662	707	708	649	497	524	780	646	664	741	645	661	480	722	752	646	580
User Opt-in	564	358	880	315	498	777	680	488	820	750	520	583	254	700	322	405	823	371	322	281	850	929	690	634	607	602	554	561	687	542	658
Brand Trust	112	166	620	524	232	675	383	269	0	523	369	443	471	527	376	627	453	608	380	528	641	422	334	501	464	159	541	256	497	301	479
Value / Profit	510	580	1000	883	825	823	515	636	675	845	759	865	785	702	802	722	566	735	802	1000	950	507	890	966	925	717	717	744	756	720	639
Relationship	149	339	836	273	219	665	566	486	634	680	621	493	288	468	624	650	439	676	510	576	547	605	610	524	615	537	602	720	377	619	598
Interactivity	286	459	866	451	486	569	500	739	0	612	673	508	337	687	347	483	746	697	673	714	785	737	637	628	763	563	536	754	650	578	667
Content	517	766	0	814	390	567	934	0	729	785	580	571	576	645	698	778	805	746	849	727	738	939	0	826	0	586	651	528	828	670	655
Accuracy	546	602	0	792	554	556	822	0	680	687	649	485	0	555	651	717	775	694	703	644	650	968	559	866	0	481	458	525	774	652	701
Entertainment	290	351	0	395	153	787	407	520	0	271	476	449	0	656	505	661	483	439	505	632	710	689	656	309	0	556	268	0	389	433	0
Richness	315	303	102	478	527	700	622	497	0	676	358	685	610	577	514	739	481	858	337	567	724	508	0	579	634	642	571	680	507	618	564
Frequency	229	361	0	493	188	679	493	405	0	329	597	427	376	495	497	678	590	503	522	653	487	332	439	366	0	427	542	580	478	529	0
Personalization	658	549	1000	819	514	732	636	636	780	635	681	561	807	575	664	775	834	644	650	598	567	657	695	534	631	622	814	563	604	588	715
Location Awareness	327	0	493	0	459	800	566	0	0	493	647	353	0	609	0	531	658	371	573	319	0	0	517	644	370	562	192	0	600	555	476
Privacy	546	641	1000	812	700	755	651	632	757	786	695	552	888	850	798	710	1000	380	612	808	504	666	903	578	959	505	644	536	812	652	789
Security	641	717	1000	515	859	1000	682	759	789	698	793	500	858	818	820	727	922	164	754	778	647	678	883	649	876	611	703	593	834	750	707
Usability	754	783	1000	514	420	1000	541	717	0	735	832	822	686	801	892	695	658	741	931	732	950	778	649	929	1000	714	893	866	950	732	685
Delivery Time	634	242	934	781	568	585	437	749	0	605	828	687	582	631	408	746	602	556	837	731	678	747	334	459	722	656	553	724	562	633	661
Response Time	203	0	749	653	505	572	473	366	0	497	483	310	0	579	0	749	551	0	595	529	550	709	0	553	636	573	543	512	500	421	0
Response Channel	620	846	532	569	929	505	451	478	710	693	698	654	725	654	824	754	883	577	524	653	687	717	639	583	532	753	561	619	722	619	564
Cost of Service	742	803	661	573	807	1000	822	717	657	881	746	483	731	842	607	958	553	795	676	822	643	812	708	736	651	758	563	629	546	702	676
Quality of Service	578	681	1000	614	632	578	515	689	646	776	580	583	661	750	676	880	583	519	719	727	678	569	621	703	642	743	653	614	648	521	691
Technical Support	251	612	156	641	598	567	507	645	0	0	724	478	0	672	481	629	483	358	605	629	350	634	605	541	587	247	729	517	624	577	502

Round 2 – Raw Data for Multichannel m-Marketing Factors (6 new identified factors / 22 participants)

Round 2 - Multi																						
Campaign Popularity	743	412	568	823	345	627	851	502	729	562	505	375	715	495	268	500	672	588	602	502	758	466
Campaign Promotion	843	624	778	724	802	652	757	886	829	798	861	736	809	764	717	686	670	775	721	802	683	745
Interoperability	745	636	925	724	834	855	761	659	651	912	698	742	788	856	707	727	842	704	753	822	810	733
User Power	808	717	832	727	519	404	847	776	673	512	717	281	490	717	495	620	703	521	570	732	674	725
Clutter on Medium	347	293	510	498	644	568	649	454	593	625	405	656	486	488	719	314	545	620	682	308	563	457
Customization	521	449	644	705	542	479	642	750	248	545	627	642	736	492	698	619	436	379	628	515	702	665

Round 3 – Raw Data for Single-channel m-Marketing Factors (6 new identified factors / 19 participants)

Round 3 - Single																			
Campaign Popularity	714	849	378	708	595	660	600	725	503	624	530	584	616	705	338	541	496	631	665
Campaign Promotion	786	847	785	766	717	798	800	839	711	527	784	695	730	756	684	886	743	721	701
Interoperability	276	649	306	561	507	311	800	569	253	276	457	535	678	450	632	377	701	358	524
User Power	668	508	356	371	624	596	700	702	678	603	542	598	469	680	532	559	503	620	535
Clutter on Medium	392	608	544	658	390	585	550	561	525	450	630	606	543	473	598	710	632	567	604
Customization	310	736	520	709	495	456	580	766	513	695	536	648	717	725	563	589	499	564	587