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Consumer Attitudes Toward Mobile Advertising

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CONSUMER ATTITUDES TOWARD MOBILE ADVERTISING

PURPOSE OF THE STUDY

Academic research in the field of mobile advertising has to date been fragmented and the results have been controversial. The purpose of this research is to study the consumer view of mobile advertising in order to discover how consumers in Finland perceive mobile advertisements. A thorough literature review of previous studies in the fields of social psychology, advertising psychology and mobile advertising was conducted to establish the theoretical foundations of this study. On the basis of the literature review a research framework of consumer attitudes in the mobile advertising context was constructed.

METHODOLOGY

Research data was collected in co-operation with a Finnish mobile solution provider as a part of mobile advertising campaigns implemented during the fall of 2009. The data consisted of two samples. The primary sample received a mobile advertisement where as the control group did not. The purpose was to examine the attitudinal differences between these two groups. Text message invitations to the survey were sent to both samples. The questionnaire could be directly accessed through a link in the text message or alternatively by typing in the address to the browser on a computer. The response rates were 5,45 % for the primary sample and 11,7 % for the control group. After the data collection phase the data was subjected to various statistical analyses to test the hypotheses presented in the research framework.

FINDINGS

The results of the study highlight the importance of utilizing customer data in the design of mobile advertising campaigns. When the mobile advertiser has the possibility to target actual needs of customers based on existing customer data, attitudes toward mobile advertisements are likely to be positive. This implies that mobile advertising should be based on service rather than selling.

KEYWORDS: mobile advertising, mobile marketing, consumer behavior, attitudes, purchase intention, advertising psychology, advertising

KULUTTAJIEN ASENTEET MOBIILIMAINONTAA KOHTAAN

TUTKIMUKSEN TAVOITTEET

Koska mobiili on vielä suhteellisen nuori mainonnan kanava, akateeminen tutkimus tällä alueella on ollut hajanaista ja tulokset usein ristiriitaisa. Tämän tutkimuksen tarkoituksena on tutkia mobiilimainontaa kuluttajanäkökulmasta. Erityisesti tutkimuksessa keskitytään tarkastelemaan suomalaisten kuluttajien asenteista mobiilimainontaa kohtaan. Tutkimuksen teoreettinen tausta kumpuaa sosiaalipsykologian, mainonnan psykologian sekä mobiilimarkkinoinnin tieteen haaroilta. Kokonaisvaltaisen kirjallisuuskatsauksen perusteella rakennettiin viitekehys, josta käy ilmi tutkimuksen keskeisimmät konstruktit.

METODOLOGIA

Tutkimusdata kerättiin yhteistyössä suomalaisien mobiiliratkaisuiden tarjoajan kanssa syksyn 2009 aikana toteutettujen mobiili kampanjoiden yhteydessä. Tutkimusdata koostui kahdesta otoksesta, joista toiselle lähetettiin mobiilimainos ja toiselle ei. Otoksiin kuuluville henkilöille lähetettiin tekstiviestillä kutsu, jossa pyydettiin vastaan kyselyyn joko mobiililisti tai tietokoneella. Mainoksen saaneiden otoksessa vastauksia saatiin noin 850 kappaletta vastausprosentin ollessa 5,45 %. Kontrolliryhmän tapauksessa vastauksia saatiin 484 kappaletta, jolloin vastausprosentti oli 11,7 %

TULOKSET

Tutkimuksen tulokset korostavat asiakastiedon merkitystä mobiilikampanjoiden suunnittelussa. Kun mainostajalla on mahdollisuus kohdistaa mainonta suoraan asiakkaan tarpeeseen olemassa olevan asiakastiedon perusteella, asenteet mainosta kohtaan ovat useimmiten positiivisia. Tähän perustuen mobiilimainonnan tulisi olla pikemmin palvelulähtöistä kuin puhtaasti myyvää.

AVAINSANAT: mobiilimainonta, mobiilimarkkinointi, kuluttajakäyttäytyminen, asenteet, ostoaikomus, mainonnan psykologia, mainonta

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1   INTRODUCTION

The purpose of this study is to study consumer attitudes toward mobile marketing by drawing from theory in the fields of social psychology, advertising and consumer behavior as well as mobile advertising. This chapter begins by describing the turbulent field of advertising that has peaked interest in digital marketing channels such as the mobile phone. This is followed by defining the research problem and objectives of the study. Next the central concepts of the study will be briefly discussed and the structure of the study will be presented.

1.1 Background

Today the field of advertising is going through fundamental changes. Primarily, rapid technological development has led to the digitalization of media. This digitalization has resulted in new types of media such as the mobile phone, which offers richer possibilities to reach consumers and interact with them. However, in order to fully exploit the potential of the mobile phone as an advertising channel, marketers must understand the unique characteristics related to it and the ways that consumers interact with this channel.

In part, media transition has acted as a catalyst for another significant change in the advertising industry, namely, consumer empowerment. The digitalization of media has meant that there is a wide variety of information readily available for the consumer. This has made it easier for consumers to compare product offerings and prices before significant purchase decisions. In addition, the rise of social media and brand communities has meant that consumers can share their experiences efficiently with others. Lawer and Knox (2006) describe the contemporary consumer as being informed, connected and active. From a marketing perspective, this empowerment means that consumer behavior is increasingly difficult to predict (Urban, 2004). Also, since the modern consumer expects transparency and ways to interact with the company marketers can no longer rely principally on one-way communication.

Because of the strong consumer empowerment phenomenon, it seems that across some consumer segments traditional mass marketing tactics are not achieving the same results as before (Aaker, 1997; Schultz, 2000; Urban, 2005; Lawer & Knox, 2006). Therefore a rising trend has been to utilize digital media in advertising campaigns either individually or as a part of the media

mix. The internet has been used as a marketing communication medium for sometime where as the mobile phone has only gained interest during the recent year. Since the mobile phone is a relatively new channel for advertising, academic research in this field has been, to a large extent, inconsistent and fragmented (Leppäniemi, 2006). Leppäniemi divides current mobile marketing research into three categories:

- **Consumer:** acceptance, perception, attitude, responsiveness and efficiency
- **Business and Management:** value chain, performance measurement, business models and branding
- **General research:** key factors and consequences, legal and political factors, adoption and diffusion

Leppäniemi (2006) notes that mobile marketing research has mainly focused on studying factors related to the consumer. Specifically consumer attitudes toward mobile marketing have received a considerable amount of attention (eg. Tsang 2004; James 2004; Maneesoonthron 2006; Jun 2007). Nevertheless, the results of these studies have been contradicting which suggests a need for more profound research concerning attitudes. In addition, current research has mainly focused on the antecedents of attitudes such as entertainment, informativeness and credibility of mobile advertisements (Tsang, 2004). However, the influence of attitudes toward mobile advertisement on consumer behavior and especially purchase intentions has been studied less. This study will look into the relationship between attitudes and purchase intentions with the purpose of gaining more understanding concerning mobile consumer behavior.

A number of studies have addressed the issue of permission in mobile marketing (Barwise 2002; Tsang 2004; James 2004). According to research conducted, for example, in Taiwan and Britain (Barwise, 2002; Tsang, 2004; Rettie, 2005) consumers have a negative attitude toward mobile advertising unless they have given prior consent to it. In Finland, the legislation states that mobile marketing must be based on explicit permission. However, no prior permission is needed if a customer relationship exits and the mobile advertisements are concerned with products and services related to the purchase history of the customer. For these reasons, the mobile advertising environment differs considerably from many focus countries of prior research. Because of these unique differences in the environment, the role of mobile advertising permission in attitude formation should be studied specifically in the context of Finland. In addition, one of the major

contributions of this research is that it is one of the first to look into how different types of permission influence the attitudes of Finnish consumers.

This study aims to look deeper into the consumer view of mobile advertising (Leppäniemi, 2006) in the context of the Finnish mobile advertising environment. In specific, the purpose is to understand the attitudes of Finnish consumers toward mobile advertising. This research is based on theories from three separate but closely related fields of study, namely, social psychology, advertising psychology and mobile advertising. The theoretical background will draw from these fields in order to form a research framework for attitude formation in mobile advertising.

1.2 Research problem and objectives

The discussion above suggests that consumer attitude toward mobile advertising is a domain requiring further academic research. Hence, the broader purpose of this study is to deepen our understanding regarding consumer attitudes toward mobile advertising by implementing empirical research in an authentic campaign environment. This approach ensures that participants have had at least some experience with mobile advertising and allows questions related directly to specific advertisements. In addition, this approach permits the examination of brand related outcomes and possible behavioral patterns.

This study is widely based on attitude theory that has its roots in social psychology. In order to build a research framework, this theory has been applied to the context of attitudes toward advertising and consumer behavior (Mitchell & Olson, 1981; MacKenzie; 1983; James & Kover, 1992 Mehta, 2000). The subject will be approached through the following primary research question:

What are the underlying factors which characterize the attitudes of consumers towards mobile advertising and what is the impact of attitudes on purchase intentions?

The following sub questions will serve as a basis for addressing the primary research question:

1. *How do demographic variables influence attitude toward mobile advertising?*
2. *How does permission and campaign type influence attitude toward mobile advertisement?*
3. *Do attitudes toward mobile advertising in general differ between consumers who have received mobile advertising and those who have not?*

4. *What impact does attitude toward mobile advertising in general have on attitude toward a specific mobile advertisement?*

5. *How does attitude toward mobile advertisement influence attitude towards advertised brand?*

6. *How are purchase intentions formed in the mobile marketing context?*

From a managerial perspective this study provides insight into the unique characteristics of the mobile medium. More specifically, this study contributes to the understanding of how mobile advertising is perceived and what factors contribute to successful mobile advertising. Knowledge regarding these factors will help managers to fully exploit the potential of this marketing communication medium. More importantly, this study will provide information that can be used to guide decision making and campaign planning.

1.3 Central concepts

This section will focus on defining the central concepts of this study. In previous research these concepts have been defined in a variety of ways, often contradicting one another. The definitions presented here have drawn from diverse studies and have been modified to suit the purposes of this study.

ATTITUDES

An attitude is a person's overall, enduring evaluation of a concept or object, such as a person, a brand or a service (Arnould, 2002).

ATTITUDE TOWARD MOBILE ADVERTISEMENT

A consumer's overall enduring evaluations of an advertising message in the mobile media (adapted from Arnould, 2002)

MOBILE ADVERTISING

Mobile advertising is branded content sent to mobile devices by advertisers and accessed by consumers. Different types of content include SMS messages, MMS messages, mobile applications, mobile websites and web banners as well mobile TV. However, this study will only

concentrate on studying SMS based advertisements. Mobile campaigns can exploit either push or pull strategies or a combination of both.

PERMISSION TYPE

In order to be effective, mobile marketing requires consumer data on the basis of which targeted marketing campaigns can be planned. In the European Union, the processing of personal information and the protection of privacy in the electronic communications industry is regulated by a directive established in 2002 (Leppäniemi & Karjaluoto, 2005). Consequently, a marketer must have prior permission in order to use personal data for mobile advertising purposes. In Finland, there are three different permission database types for mobile marketing: customer permission database, customer database and external permission database. Customer database is a system which contains all relevant information concerning a firm's customers. This can be for example an Enterprise Resource Planning (ERP) system which covers central business processes such as sales, production, logistics and financials (Vilpola, 2008). A customer permission base is similar to the customer database. However, in this case the company has explicitly asked for a mobile marketing permit. An external permission database contains mobile marketing permits compiled by a third party. These companies then sell contacts to mobile marketers.

CAMPAIGN TYPE

Idean (2009) divides mobile marketing into two separate concepts: mobile advertising and customer relation communication. According to Idean's distinction the sole purpose of mobile advertising messages is to advertise where as customer relation communication messages aim to strengthen the customer relationship through information based messages. Thus, mobile advertisements are considered to be product centric. Their purpose is to promote a specific product, service or brand to new or existing customers. Customer relation communication however focuses on the customer relationship and its strengthening. These two concepts will be used in this study as the primary campaign types. In addition event invitation will be used a third type because it differs substantially in nature from the other two types.

1.4   Structure of the study

This study will begin with a literature review of the most significant research streams relevant to the research problem. The study draws from the theoretical fields of social psychology, advertising psychology and mobile marketing research. Chapter 2.1 will concentrate on attitude theory integrating knowledge from both social and advertising psychology. Then chapter 2.2 will discuss the concept of mobile marketing specifically from the consumer related viewpoint. The section will conclude with the research framework and the hypotheses for the study.

Chapter 3 will describe the methodology for this research beginning with data collection methods and survey construction followed by a description of the research data collected. Next the central statistical analysis methods will be discussed and finally the validity and reliability of the study will be assed. Chapter 4 will present the results of the various analyses followed by conclusions in chapter 5.

2 LITERATURE REVIEW

In this chapter, the theoretical foundation for this study will be established. Attitude theory has its roots in social psychology and therefore the literature review will begin with research from this area. Next the concept of consumer attitudes in advertising will be discussed from the perspective of advertising psychology. The literature review will then continue with the consumer view of mobile marketing (Leppäniemi, 2006). In this context the acceptance and efficiency of mobile marketing will be reflected on in addition to consumer perceptions, responsiveness and attitudes. Moreover, permission and control in the mobile marketing context will be reviewed because these concepts have been found to influence the effectiveness of mobile marketing. The chapter will close with a presentation of the research framework and hypotheses of the study.

2.1 Understanding attitudes in the advertising context

In today's cluttered and fragmented advertising environment, it is increasingly difficult to stand out from the crowd. In addition, consumers easily ignore advertising and consider it to have little value (Wang, 2002). Also, as media costs are high advertisers are more and more concerned about the factors that contribute to effective advertising.

Petty and Cacioppo (1983) state that the goal of advertising is to influence consumer behavior. This statement has important psychological implications since as Percy and Woodside (1983) note there is a strong connection between advertising, consumer psychology and social psychology. In order to design advertisements that ultimately lead to intended behavior, it is first important to understand how advertising works and the main psychological processes related to it. Therefore this chapter will begin with the social psychology view of attitudes. The psychological stream of advertising literature indicates that attitudes are key in predicting consumer behavior and how consumers respond to advertising. Consequently, the role of attitudes in advertising and the ways in which advertisements are processed will be discussed in the final sections of this chapter.

2.1.1 Affect and cognition

The American Marketing Research Foundation defines consumer behavior as "the dynamic interaction of affect and cognition, behavior and the environment by which human beings conduct the exchange aspects of their lives (Bennett, 1995, p. 59). This definition implies that affect and cognition are important aspects in understanding consumer behavior and namely advertising. Affect and cognition are psychological responses that consumers have in different types of situations. Affect refers to feelings, moods, emotions and remembered sensations (Arnould, 2004) where as cognition is concerned with thinking, in other words mental processes and responses (Peter & Olson, 2005 p. 42). Affect and cognition are produced by separate and partially independent affective and cognitive systems which can, however, influence each other in a variety of ways (Zajonck, 1980).

The affective system is mostly reactive (Peter & Olson, 2005 p. 43). This means that the affective system usually reacts automatically to different situations and therefore a person has very little direct control over emotions and feelings. Mostly affective responses are learned through early socialization and classical conditioning (Peter & Olson, 2005 p. 44). Because of this, affective responses vary widely across cultures and social groups and therefore people tend to respond in a different way to the same stimulus.

The cognitive system, on the other hand, is in charge of thinking, understanding, evaluating, planning and deciding. Cognitive responses are more controlled when compared to affective responses since they are influenced by the availability of resources for cognitive processing (Shiv & Fedorikhin, 1999). The cognitive system helps people to interpret and make sense of their personal experiences. To this end, the cognitive system produces subjective meanings that represent personal interpretations of the objects people encounter (Peter & Olson, 2005 p. 45).

2.1.2 The nature of attitudes

Although attitudes have been widely studied in both social and advertising psychology, researchers have not been able to agree on a definition of the concept. In general, researchers seem to agree that attitudes reflect a person's response toward a given object. For example, Arnould (2002) states that an attitude is an overall, enduring evaluation of a concept or object, such as a person, a brand or a service. Shiu (2009) adds to this by stating that attitudes are state-

of-mind constructs that are not directly observable. However, the components that form an attitude have been widely disputed.

Thurstone (1928) was one of the first researchers to define attitudes. According to him attitudes are the sum of a person's feelings toward a given object. Later Allport (1935 cited in Peter & Olson, 2008) provided a broader definition for the concept: "Attitude is a mental and neural state of readiness to respond, organized through experience, and exerting a directive and/or dynamic influence on behavior". The first definition suggests that attitudes are affective responses to various objects where as the latter definition stresses the importance of the cognitive system.

Triandis (1971), on the other hand, combined the two previous definitions and proposed that attitudes, in fact, consist of three interrelated components:

1. cognition: the beliefs consumers have regarding the attitude object
2. affect: the feelings consumers have toward the attitude object
3. conation: the consumers intentions and actual behavior with regard to the attitude object

The tripartite model of attitudes has been widely accepted in advertising psychology (Aaker 1987, Arnould, 2002, Vakratsas & Ambler 1999). For example, Ruiz and Sicilia (2004) argue that the affective and cognitive systems are connected but may also work individually. Therefore a consumer's response to a certain object is dependent on his or her tendency to use these systems in processing information.

Muehling and McCann (1993) classify the conceptual definitions of attitude into two categories: unidimensional and multidimensional. According to the unidimensional view, attitudes are the function of one single determinant. In other words, attitudes are formed based on either the affective or cognitive system. Thurnston (1928) and Allport's (1935 cited in Peter & Olson, 2008) previously mentioned definitions are an example of the unidimensional view of attitudes. In his definition Thurnston highlighted the importance of affective responses whereas according to Allport attitudes are formed through cognitive processes.

Research by Triandis (1971), on the other hand, represents the multidimensional view since according to him the interplay between affection, cognition and conation is important in attitude formation. Peter and Olson (2008) argue that generally in modern research attitude is seen as a

unidimensional concept. Further they note that cognition and conation are seen to be related to attitude but are not a part of the concept itself. In this study, the unidimensional view of attitudes is assumed. However, in accordance to Peter and Olson (2008) it is noted that cognition and conation are tightly related to attitudes.

2.1.3 Attitude toward advertisement

Attitude toward advertisement can be thought of as an indicator of advertising effectiveness. In effect, studies concerning advertising effectiveness have demonstrated that advertisements influence brand attitudes by modifying consumer beliefs regarding product attributes (Moore, 1983). For example MacKenzie (1983) states that when people see an advertisement they develop an attitude toward it (A_{ad}) which influences the measures of advertising effectiveness such as brand attitude and purchase intentions.

Fishbein's multiattribute attitude model has been a popular tool for understanding the formation of attitude toward advertisement. According to Fishbein (1975, cited in Mitchell & Olson, 1981), an attitude is a function of a person's salient beliefs at a given point in time. Fishbein's view on attitudes has a strong emphasis on cognition since as Peter and Olson (2005 p. 51) state, beliefs are consumer's subjective understandings of information produced by interpretation processes. In other words, beliefs are formed by the cognitive system. This interpretation suggests that in the advertising context product attribute beliefs are the only variables affecting attitude formation and change. Since Fishbein's attitude model has mainly been used in marketing research studies the general concept of interest has been on consumer's attitudes toward brand attribute beliefs and their impact on purchase intentions (Mitchell, Olson 1981).

Further studies concerning attitudes and purchase intentions have showed that brand attributes may not be the only variables influencing brand choice. In their study, Mitchell and Olson (1981) aimed to validate Fishbein's proposition regarding attitude formation. Indeed they found that brand attribute beliefs act as a mediator to attitude formation. However, they discovered that, in effect, attitude towards ad (A_{ad}) seemed to explain brand attitude formation. Mitchell and Olson's (1981) preliminary findings on A_{ad} suggest that it accurately reflects a subject's overall evaluations of an advertising stimulus. Further, they state that the A_{ad} construct should be kept conceptually distinct from brand attribute beliefs and brand attitude. Mitchell and Olson's preliminary findings on A_{ad} and its relationship to brand attitude and purchase intentions is depicted in Figure 1.

ATTITUDE TOWARD THE ADVERTISIMENT

EXPOSURE TO ADVERTISEMEN

ATTITUDE TOWARD THE BRAND

ATTITUDE TOWARD ACT OF PURCHASING AND USING THE BRAND

BEHAVIORAL INTENTION

SALIENT BELIEFS ABOUT PRODUCT ATTRIBUTES
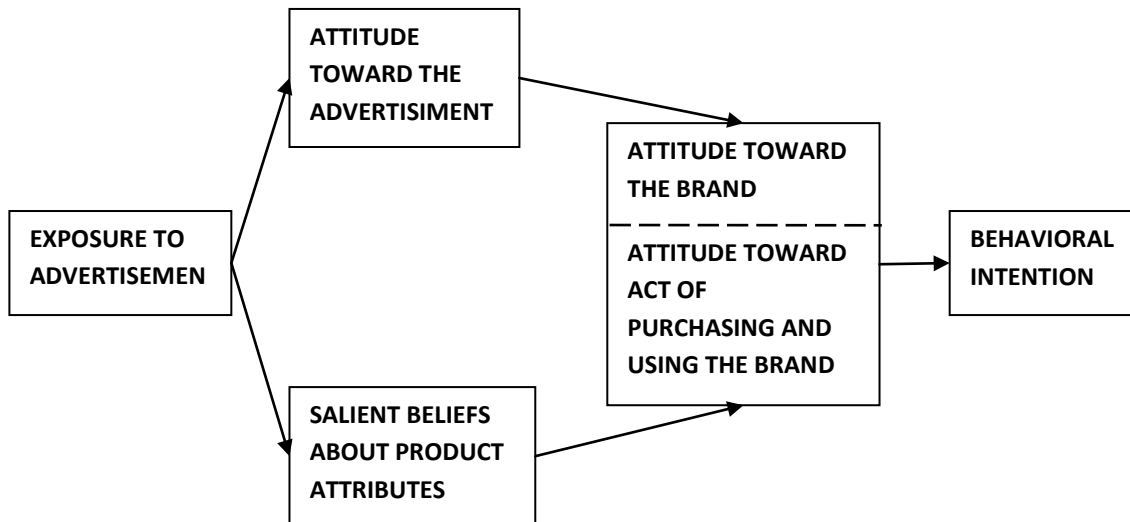
Figure 1. Observed mediators of advertising content on cognitive variables (Mitchell & Olson, 1981)

Shimp (1981) estimates that more is known about the mechanisms behind consumer brand choice than about the particular advertising methods that aid the consumer decision making process. In accordance with Mitchell and Olson's (1981) work, he emphasizes that previous attitude research has simply concentrated on attitude toward the brand (A_b). However, Shimp notes that there is a major limitation to using the A_b as an indicator of consumer brand choice. The use of A_b is constrained to those occasions when the advertised brand genuinely has superior attributes when compared to others. According to Shimp (1981) the A_{ad} construct offers a viable option when the advertised brand does not differ substantially from competing offerings. The findings by Shimp as well as Mitchell and Olson (1981) suggest that brand attribute beliefs are not the only determinants of brand attitude formation and purchase intentions more specifically.

Defining the A_{ad} construct is as manifold as defining the term attitude, mostly because researchers have not been able to validate any of the competing paradigms. Following the path of social psychology research discussed previously, attitude toward advertisement (A_{ad}) is divided into unidimensional and multidimensional streams. This means that some researchers view Aad as purely an affective or cognitive construct where as others think that both affection and cognition as well as conation are present. Therefore, despite the large body of research regarding attitude toward advertisement the definition of the construct is controversial. Lutz (1985 cited in Muehling and McCann 1993) defines A_{ad} as "a predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion." This definition is unidimiensional since Lutz specifically states that it does not include a cognitive or behavioral

component. Phelps and Thorson (1991) provide another unidimensional definition of A_{ad}. According to them A_{ad} is "a viewer's general liking or disliking of an advertisement".

Although Shimp's (1981) research on attitude is based on the affective component he recognizes that there may also be another component that influences A_{ad}. Shimp states that the A_{ad} construct has two central dimensions, cognitive and emotional. The cognitive dimension suggests that a consumer's attitude toward an advertisement is formed by consciously processing the executional elements of the ad. This is to say that a consumer may like an advertisement because he or she considers it to be informative or entertaining. On the contrary, an attitude may also be formed without any conscious processing simply because the advertisement evokes a feeling such as happiness or sorrow. Mackenzie and Lutz (1989) treat the A_{ad} construct as purely affective. However they also consider the role of the cognitive system by stating that that it is an important antecedent to A_{ad}.

On the basis of the above discussion it can be concluded that attitude, namely attitude toward advertisement, is a complex concept that is influenced by both the affective and cognitive systems. In this study A_{ad} is seen as a unidimensional concept which represents a person's favourable or unfavourable feelings toward an advertisement. Namely, it is considered that A_{ad} is formed by the affective system. Although cognition is an important concept in attitude theory its influence is not considered in this study. This is because measuring the cognitive component would require complete knowledge of all the salient beliefs stored in the memory of the consumer that are related to the advertised brand. This type of research would be outside the scope of the current study. However the influence of attitudes on purchase intentions is considered.

2.1.4 Attitude toward advertising in general

When talking about attitudes in marketing and advertising it is important to distinguish between attitude toward advertising in general (A_g) and attitude toward advertisement (A_{ad}). While it has been discovered that attitude toward a specific advertisement affects receptivity to the advertisement in question (Lutz 1985 cited in James & Kover, 1992), overall attitudes toward advertising seem to affect attitude toward an advertisement (Mehta, 1995). Lutz (1985 cited in Mehta, 1995) defines attitude toward advertising as "a learned predisposition to respond in a consistently favorable or unfavorable manner to advertising in general". Further, Mehta (2000) states that a consumer's pre-disposition toward advertising in general influences how he or she

will react to any given advertisement. More importantly in a study that focused on evaluating the performance of print advertising, Mehta (1998) found that people with more favorable attitudes towards advertising in general recalled a higher a number of advertisements the day after exposure and were more persuaded by them. Research has shown that in fact, A_g is an important antecedent of A_{ad} and therefore A_g has a significant impact on the success and effectiveness of advertisements (Singh & Vij, 2008).

In their study concerning overall attitudes toward advertising, James and Kover (1992) found that attitude toward advertising directly affects the degree of involvement in specific advertisements. Involvement refers to the amount of attention an individual pays to a certain advertising message and the level of energy devoted to comprehending the content of that message (Greenwald & Leavitt, 1984). The results of the study suggest that consumer involvement in advertising may not be classified by demographic variables such as age, sex and education. James and Kover (1992) suggest that instead consumers should be segmented based on their degree of involvement in advertising. More importantly the study demonstrates that attitude toward advertising affects involvement in advertisements. Therefore the researchers suggest that liking a particular advertisement is not enough. Instead efforts should be made to help consumers like advertising in general. According to James and Kover (1992), this could make all advertising more effective.

Mehta (1995) studied how consumer attitudes towards advertising in general influence advertising success. In the study, advertising success was measured by the persuasiveness of advertising and its intrusiveness, in other words the ability of an advertisement to break through the advertising clutter. In Mehta's (1995) research it was expected that when attitude towards advertising was favorable, consumers would recall more advertisements and be more persuaded by the advertisements. The results of the study confirm these expectations. It was found that the extent to which an individual likes to look at advertising influences how much attention they pay to advertising.

Research by Mehta (1995, 2000) as well as James and Kover (1992) suggests that attitude toward advertising in general is channel dependent. In other words, a consumer may like print advertising but at the same time he or she may dislike television advertising. Further (Parker, 2008) posits that even when the same advertisement is presented to the same audience, its effect may vary depending on the chosen channel. The reason for these channel dependent attitudes may be due

to varying degrees of control. According to Mehta (2000), the control of looking at print advertisements lies with the consumer since while reading a magazine it is easy to regulate the time one devotes to advertisements. However, as James and Kover (1992) state the situation is different when it comes to television advertising. The timing and length of advertisements have been predefined and in addition they interrupt television programs. This interruption may lead to general negative attitude toward television advertising. The above discussion concerning channel specific attitudes suggests that the advertising channel is an important determinant of attitude toward advertising in general. Therefore, attitude toward advertising in general should be studied channel dependently.

2.1.5 Consumer perceptions of advertising

Over the years, it has been suggested that attitudes toward advertising have become more and more unfavorable (Cheung, 2008). Therefore, various studies have attempted to explain the perceptions consumers have toward advertising in order to understand how it influences consumers (Bauer & Greyser, 1966; Zanot, 1984; Calfee & Ringold, 1994; Elliott & Speck, 1998; Shavitt & al, 1998; Coulter & al, 2001; Cheung & al, 2008). In a pioneering study concerning the development of perceptions over time, it was found that consumers tend to hold both positive and negative attitudes toward advertising (Bauer & Greyser, 1966). However, the study notes that while consumers criticize certain aspects of advertising, they do accept is a part of life and on the whole they are favorable toward advertisements. Moreover, the study concluded that attitudes toward advertising on average have not changed considerably over time. Studies conducted more recently have reported similar results (eg. Coulter, 2001; Cheung, 2008).

Calfee and Ringold (1994) attempted to find a consistent majority view of advertising perceptions over a period of six decades. An inspection of survey data revealed that on average two thirds of consumers thinks that advertising is untruthful and that it persuades people to buy things that they do necessarily need or want. Thus, consumers find that advertising should be more strictly regulated. However, at the same time consumers tend to find that advertising is informative. Moreover, when consumers were asked to indicate whether they considered advertising to be more informative or unreasonably persuasive, most respondents chose persuasion as a descriptive characteristic of advertising. Still, respondents seemed to feel that the benefits of advertising outweigh the negative aspects. Shavitt et al. (1998) report that three quarters of the respondents

in their study had either positive or neutral perceptions of advertising. In accorandce to Calfee and Ringold's (1994) results presented above, the study reveals that to a large extent attitudes are mixed. At the same time consumers consider that advertising is both entertaining and offensive. What is more, over half of the respondents say that in general they do not trust advertising since they recall having been previously misled by advertising claims. Still more than two thirds seem to use information from advertising to help guide purchase decisions.

Coulter's (2001) finding's are to a large extent in line with the results discussed above. In his study Coulter found that consumers seem to especially value the information dimension of advertising. In specific, consumers think that advertising is helpful when new products are introduced and when comparisons are made between competing offers. In addition, consumers considered advertising to be entertaining. Coulter's research showed that when people felt good about an advertisement they transferred the feeling to the advertised product. Moreover, entertainment seemed to lead to increased trust in advertisers, manufacturers and retailers. In his study, Coulter also found negative perceptions related to advertising. Particularly consumers felt that they received too much advertising. Therefore advertising was in many cases considered intrusive. Moreover, advertising was found to be manipulative and unrealistic. Advertising was considered to encourage excessive compulsive shopping and to promote unrealistic lifestyles.

The results of various studies in the area of consumer perceptions of and attitude toward advertising differ as to the proportion of positive and negative attitudes. Nevertheless, these studies reveal commonalities which are key factors in understanding the nature of attitudes toward advertising. Most importantly, the results indicate that advertising attitudes are multidimensional which means that at the same time consumers can have both positive and negative opinions related to various aspects of advertising. Therefore, while information and enjoyment are important antecedents of advertising attitudes, the studies have at the same time reported strong mistrust in advertising. For marketers and for the advertising industry as a whole, these results indicate that the credibility and trustworthiness of advertising needs to be lifted.

2.2 Understanding the consumer view of mobile marketing

Rapid technological development has led to strong media fragmentation which in turn has given rise to digital advertising channels such as the mobile phone. Even though present discussion indicates that the mobile channel is a cost effective method for communicating with customers marketers have not yet been able to fully embrace its potential. In order to gain more insight regarding the nature of the mobile channel, this section will focus on specific areas which influence the success of mobile advertising campaigns. Moreover this section will look at the mobile marketing from the consumer viewpoint suggested by Leppäniemi (2006). Thus the following chapters will concentrate specifically in areas such as acceptance, perception, responsiveness and attitude. These areas of mobile advertising are essential, since in order to use to use the mobile channel in a profitable way, advertisers need to understand how consumers perceive and evaluate the mobile phone as a an advertising channel (Haghirian & Madlberger, 2005).

2.2.1 Defining mobile advertising

During recent years, the popularity of text messaging (SMS) has grown exponentially, which has led to the rise of the mobile advertising phenomenon (James, 2004). Chang and Villegas (2008) argue that the mobile phone has tremendous potential for delivering advertisements because of its high penetration rate. In fact, it is the only advertising medium that consumers carry with them almost anywhere they go. The ubiquity of the mobile phone extends the time and space aspect of the traditional mass media advertising (Muk, 2007). Mobile advertisements can be delivered to consumers without limitations concerning time and space.

In its simplest form, mobile advertising can be defined as advertising and adverts that are sent to and received on mobile devices such as mobile phones and personal digital assistants (PDA). Typically, the term mobile advertising is used interchangeably with SMS or text message advertising, where marketing messages are sent via mobile phones in text format. This is perhaps because SMS advertising is the most popular form of mobile advertising (Scharl, 2005). However, mobile advertising offers many different options for implementing advertising campaigns. For example MMS messaging allows the marketer to send multimedia content such as pictures, audio or even animations to selected target groups. However, MMS messaging has been used modestly

in marketing even though positive branding effects have been found (Nysveen, 2005). Moreover, consumers seem to consider MMS adverts more appropriate than SMS messaging (Heinonen & Strandvik, 2007). When the number of mobile phones supporting MMS messaging grows, it can be expected that the usage of MMS messages for advertising purposes will expand.

Idean (2009) states that in addition to SMS-based adverts, there are many other methods for mobile campaign implementation. As an example the research identifies mobile advertising via Bluetooth or Infrared as well as marketing with games and search services. However, Idean remarks that to date these methods have not been significant. In order to further define mobile marketing, Idean divides the term into mobile advertising and customer relation communication. Mobile advertising consists of the afore mentioned methods for delivering advertisements where as customer relation communication refers to different forms of informative messages from companies and authorities to customers, consumers and other stakeholders. Notifying a customer of a package delivery, for example, can be considered customer relation communication. The research by Idean estimates that both types of mobile marketing will grow in the future. However, it is expected that customer relation communication will achieve higher growth rates. (see Figure 2).
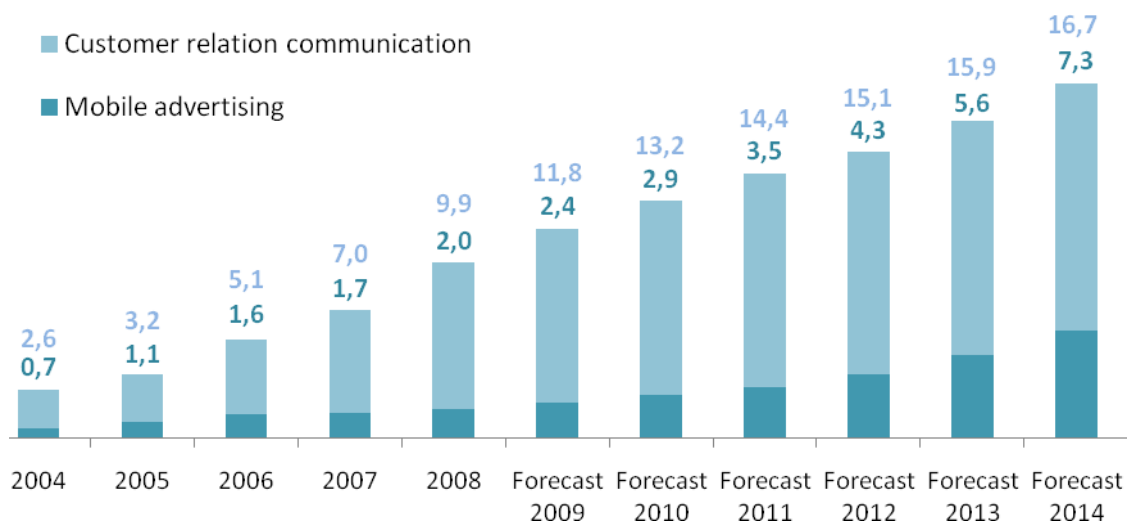
Figure 2. Mobile Marketing Expenditure in Finland 2004-2014 (M€) (Idean, 2009)

When defining mobile marketing a further distinction can be made between push and pull marketing campaigns. Lawer and Knox (2006) describe push marketing as company centric marketing strategies that push the benefits of company offerings to specific marketing segments.

Pull strategies, on the other hand, are seen as marketing tactics that encourage the consumer to be active (Salmenkivi & Nyman, 2007). Further, pull marketing combines information and advertising which blurs the line between marketing and service (Katz-Stone, 2001 cited in Scharl, 2004). In effect, the success of pull marketing lies in its ability to give power to the consumer. Heinonen and Strandvik (2007) argue that mobile marketing consists of SMS and MMS messages used in push campaigns. This definition seems to contradict with the perception of the mobile channel as an interactive marketing tool that aims to activate and engage consumers. In fact, Salmenkivi and Nyman (2007) state that many of the success stories in mobile marketing have been in the domain of pull marketing. Rettie (2005) supports the view of Salmenkivi and Nyman by stating that mobile marketing involves both push and pull elements.

To sum up, the discussion above implies that mobile advertising consists of interactive and customized advertisements and messages concentrating on customer relation communication which are delivered to mobile devices. In addition, this study will include event invitations as a third form of mobile marketing. By definition event invitation is similar to customer relation communication because its ultimate purpose is to build and sustain customer relationships. However, because the event itself has a central role, event invitations will be considered separate from customer relation communication. According to Idean's (2009) definition MMS, Bluetooth, Infrared and the mobile internet are only used in pure mobile advertising. Departing from this definition this study assunmes that these methods can be used for the purposes of customer relation communication and event invitations as well. In addition, this study assumes that mobile advertising can be either company centric push campaigns or customer centric pull campaigns. While it is noted that mobile advertising can utilize many different techniques, due to time and resource constraints this study focuses only on SMS advertisements. The elements of mobile marketing discussed in this chapter have been summarized in figure 3.

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                    ┌──────────────┐
                    │    Mobile    │
                    │  advertising │
                    └──────────────┘
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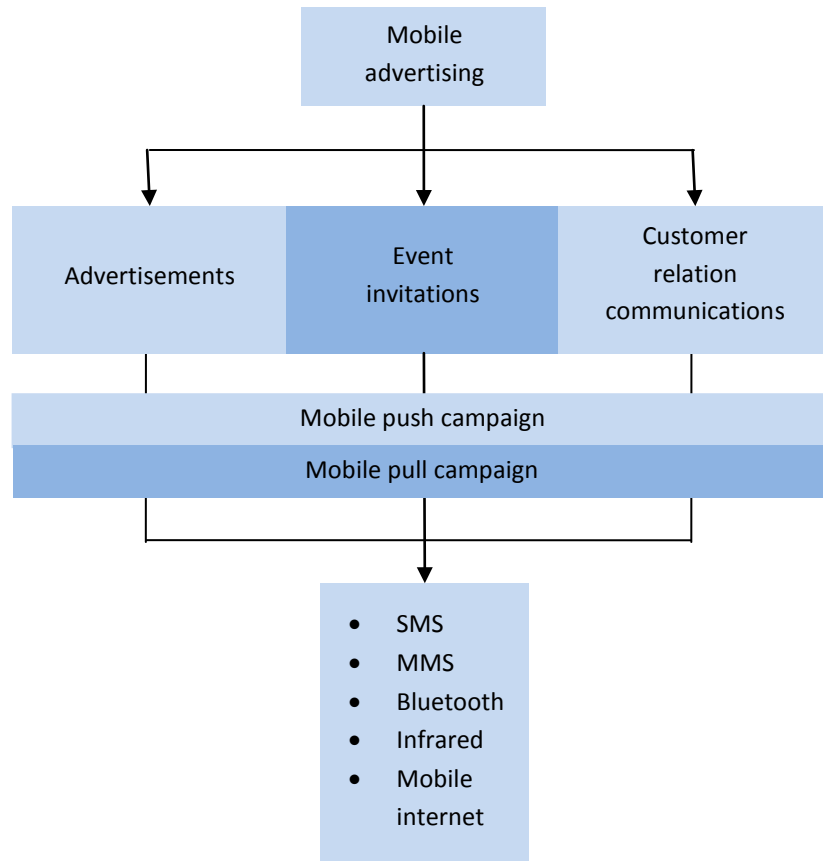
Figure 3. The Elements of Mobile Advertising

2.2.2 Mobile as an advertising medium

Traditionally, the purpose of advertising has been to communicate brand messages to consumers. In order to understand the communication process behind advertising, Shannon's (1948) mathematical theory of communication has been widely used. Shannon's (ibid.) theory is based on the sender who plans and sends the message to the receiver through a chosen channel. During message transmission noise may occur which influences the understanding of message content. The proposed communication theory represents a one way communication process where the company is seen as the active party and the consumer is the passive recipient. Today, Shannon's communication theory has been under a considerable amount of critique. For example, Tuominen (2007) points out that consumers do not receive marketing messages passively. In fact, today it is increasingly popular to take marketing messages, modify them and post them online.

When compared to traditional advertising channels, such as the television, print and radio, the mobile phone offers possibilities for an entirely new consumer experience. Sultan and Rohm (2005) divide marketing approaches along two dimensions: 1) the interactivity enabled by advertising channel and 2) the degree of location specificity offered. According to Sultan and Rohm (2005), the value of the mobile channel comes from its ability to allow both interactivity and location specific marketing communication (see figure 4.).
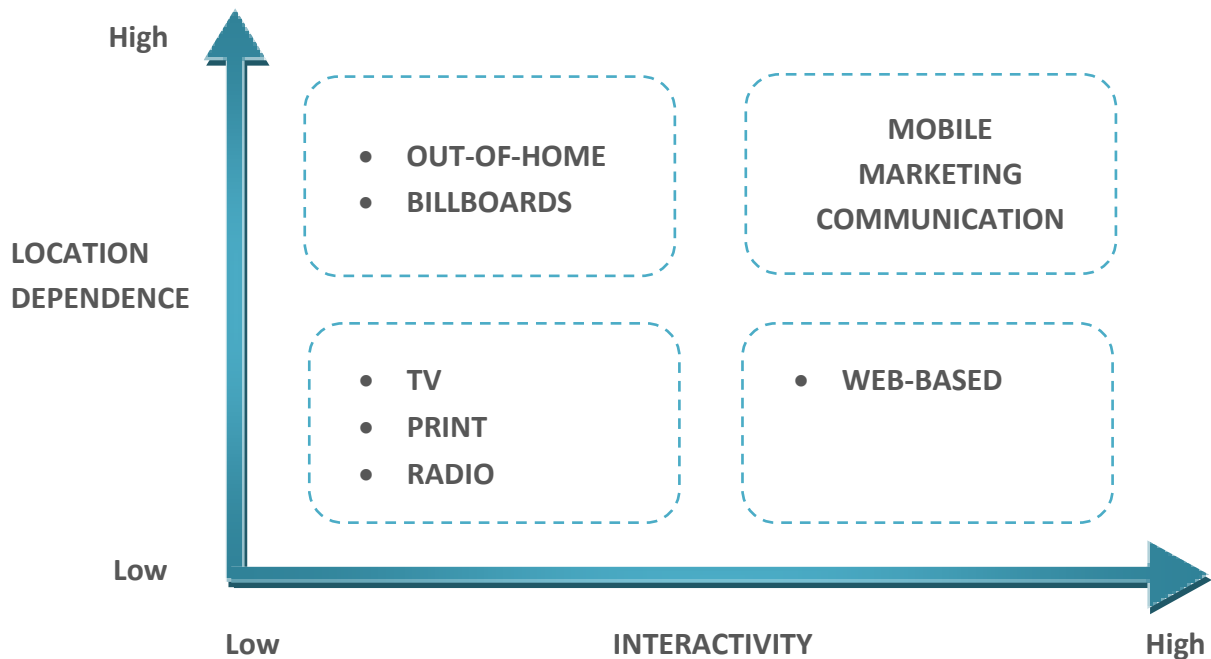
Figure 4. A Comparison of Marketing Communication approaches (Sultan & Rohm, 2005)

Rafaeli (1997 cited in Gao 2010) concluded that interactivity has often resulted in positive attitudes and cognitive responses. Moreover, a study by Macias (2003) indicates that interactivity, in effect, aids message comprehension. These findings strongly indicate that advertising should break away from the one-way communication model suggested by Shannon (1948) and become more interactive. The mobile phone offers a bi-directional and individual connection to the consumer (Park, 2008) which makes it a highly interactive marketing channel. Because of its interactivity, the mobile channel can be considered a noteworthy medium in the changing field of advertising.

Moreover, the mobile phone offers the possibility for accurate targeting as well as highly personalized content, characteristics that are typical to the internet as well. However, in the mobile context these characteristics have a more significant impact because identification is

facilitated by the personal mobile phone number (Park, 2008). Salo and Tähtinen (2005) argue that mobile advertising should only be used to deliver advertisements that are different from the traditional ones. This means that as the mobile phone allows interactivity and customization the most successful campaigns are those that exploit these special features. Salo and Tähtinen (2005) specify that traditional advertising is designed for a certain target group or segment, whereas mobile advertisements are targeted to an individual.

According to Merisavo (2007) the effectiveness of mobile marketing campaigns is dependent on the type of product in question. Barwise and Strong (2002) argue that mobile marketing works best for inexpensive and simple products. Merisavo (2007), on the other hand, posits that mobile advertising may also be suitable for products and service that are contextually familiar or related to the same channel, such as mobile services. Merisavo continues that these types of services and products allow instant response and consumers may in fact find it convenient to use only one channel. The conflicting results of previous research indicates a need for further study regarding the influence of product type on mobile marketing effectiveness.

2.2.3 Motivations and perceptions

The way that consumers use their mobile phones influences how mobile advertisements are perceived (Salo, Tähtinen 2005). Therefore understanding why consumers use their mobile phones is an important determinant of successful advertising on the mobile medium (Chang & Villegas, 2008). Research by Jun and Lee (2007) posits that motivational uses of the mobile medium influence consumer attitudes toward mobile advertising. Many researchers have used the uses and gratifications model to gain more understanding about why and how consumers use their mobile phones (Leung & Wei 2000, Jun & Lee 2007, Chang & Villegas 2008). The model aims to explain how and why consumers use communications, among other resources in their environment to satisfy their needs and reach their goals (Blumler & Katz 1973). Jun and Lee (2007) argue that uses and gratifications have been used to guide research and help decision making regarding emerging media because it guides the evaluation of consumer motivations for media use. Therefore, as the mobile is a relatively new medium the uses and gratifications model is useful in understanding mobile consumer behavior.

Leung & Wei (2000) found that the uses and gratifications of mobile phone use were similar to those of the traditional telephone. These uses and gratifications can be divided into three categories:

1. Intrinsic or social: using the mobile phone to socialize with friends and family
2. Instrumental: using the mobile for utility, for example to make appointments
3. Psychological reassuring: using the mobile phone to fulfill the psychological need for feeling safe

In addition, Leung and Wei (2000) discovered uses and gratifications that are specific to the mobile phone. These were mobility and immediate access. The authors stress that wireless technology maximizes freedom through mobility and allows immediate access anywhere, which are important factors for facilitating the life of consumers today. The study by Jun and Lee (2007) confirms the findings of Leung and Wei (2000) but they propose that mobile specific uses and gratifications are more important in determining why consumers use the mobile.

Salo and Tähtinen (2005) state that media goals define why an individual chooses to use a particular media. According to Salo and Tähtinen a media goal is a person's cognition of what he or she is trying to achieve by using media. Further, the authors argue that the type of goal a person is aspiring to has an impact on how he or she is going to process advertisements. For example, if a person is looking for entertainment, he or she will be more interested in entertaining advertisements. Salo and Tähtinen note however, that a person may try to achieve different types of goals at the same time and that the goals may change depending on the situation. The media goal theory proposed by Salo and Tähtinen is similar to the uses and gratifications theory but it sheds some more light on how the motivations behind mobile phone use influence the processing and effectiveness of mobile advertising.

2.2.4 Permission, privacy and control

Despite the fact that targeting the right audience is a central concept in marketing, traditional mass media has not been able to target consumers with acceptable precision (Mishra, 2000). In contrast, the mobile channel has enormous potential for marketing because it allows advertisers to target customers precisely and customize their offerings based on customer preferences. In addition, the mobile channel makes it possible to reach consumers regardless of time and space

restrictions. However, effective use of the mobile as marketing channel requires that consumers provide personal data to marketers (Jayawardhena et al, 2009). This information can be used to build consumer profiles that serve as a basis for targeting. The growing popularity of such database marketing has made consumers conscious about how companies use their personal information (Lähteenmäki, 2004).

Personal information has been used to guide marketing decision making and campaign planning for some time. Phelps (2000) notes that in principle, marketers have relied on market-level or modeled data in contrast to individual-specific data. Market-level or modeled data concerns information related to general characteristics of a consumer group or geographical region whereas individual- specific data provides personal information such as names, addresses, demographics, shopping preferences and purchase histories (Phelps, 2000). The concerns regarding the use of customer information have, in particular, focused on individual-specific data.

The mobile phone is considered to be a personal device which people carry with them almost anywhere they go (Barnes, 2002). When marketers began using the mobile phone for marketing purposes, the personal nature of the channel brought out issues concerning privacy and permission. In the mobile marketing context permission is regarded as the commencement of two-way mobile communications between the customer and the mobile marketer (Jayawardhena et al, 2009). In Europe, mobile marketing is subjected to governmental regulation and therefore prior permission is required before mobile messages may be sent to consumers. However, when a customer relationship exists, mobile marketers are allowed to advertise similar products or services if it is possible for the customer to easily opt-out of the communication (Leppäniemi & Karjaluoto, 2005).

Barwise and Strong (2002) state that there is a high risk of irritation if no explicit permission for mobile marketing has been obtained from the consumer. In such a case irritation will eventually influence brand perceptions. Therefore, it has been suggested that permission marketing should be applied in the mobile marketing context (Kavassalis, 2003). Permission based marketing influences mobile marketing effectiveness in two essential ways. Primarily it allows consumers to have more information control and secondly it significantly reduces advertising clutter and reduces marketing costs.

In a study concerning privacy and the willingness to provide personal information, Phelps (2000) found that consumers want control over their personal information. In practice, this means clearly stating the purpose for collecting information and providing an opt-out option. Further, the study by Phelps (2000) revealed that providing more control over personal information influences purchase intentions significantly. These findings suggest that when applied to the mobile marketing context, granting consumers more control over personal information will essentially increase purchase likelihood and therefore lead to more profitable campaigns.

The marketing environment today is cluttered with marketing messages and advertisers are competing for the attention of consumers. Since consumers are constantly bombarded with advertisements little by little they have learned to filter commercial messages. Although generally it is thought that targeting provides benefits for the consumer, Mitchell (2003) argues that in some industries consumers are already over-targeted. Further, James (2004) hypothesizes that consumers who believe they already receive too much advertising are more likely to react negatively to advertising in the future. According to Godin (1999), asking for permission to market is beneficial from both the customer and company point of view. From the customer's perspective permission marketing reduces advertising clutter because it allows consumers to educate the company about the products and services that they are interested in. The company on the other hand benefits because permission marketing reduces the search costs for new customers and increases targeting precision.

Jayawardhena et al. (2009) studied the impact of antecedent factors of consumer's willingness to participate in permission-based mobile marketing. The authors postulate that there are four significant variables that are direct antecedents of permission. *Personal trust* emerges from the interaction between a customer and a company. It is composed of an individual's relationship with the company as well as the experiences of friends and family. *Institutional trust* on the other hand is concerned with a wider trust that a consumer has on the institutional environment. In the context of mobile marketing, institutional trust refers to the consumer's media perception of the organization implementing mobile advertising. Because mobile advertising is a relatively new phenomenon, a majority of consumers may consider it to be risky. Therefore consumers rely mainly on their prior *experience.* Consumers who have a limited amount of prior experience with mobile advertising are consequently more risk-averse and may be less willing to grant mobile marketing permission. If consumer's *perceived control* over the number and type of mobile

messages is high, it is more likely that mobile marketing advertising permission will be granted. Perceived control is seen as a substitute or complement to trust which means that if trust is high, a lower amount of perceived control in required and vice versa.

Jayawardhena et al. (2009) conducted a cross cultural survey in Finland, Britain and Germany in order to study the influences of the aforementioned variables on permission. The results concluded that institutional trust was the main factor impacting consumer's willingness to give permission for mobile marketing. The influence of the remaining three factors was not significant. However, it was found that the more experience consumers had with mobile marketing the less influence perceived control had on permission. In addition, perceived control seemed to be a more important antecedent for men than for women. The authors suggest that as company presence, in other words institutional trust, has a more significant effect on willingness to provide permission than personal experience, mobile marketers should focus on building a stronger media image, which will help to gain consumer trust.

Maneesoonthorn and Fortin (2006) studied the role of permission and control in a mobile advertising context. The results indicate that consumers in general have a neutral attitude toward mobile marketing but they support permission-based advertising. In addition, the results revealed differences regarding message control between two mobile user groups; heavy and light users. Heavy users of the mobile phone demand more ability to control incoming text messages where as light users demand less control. The authors hypothesize that as light users receive less text messages they are less inclined to be irritated by text message advertising. Heavy users, on the other hand, may wish to receive more precisely targeted text message advertisements.

Leppäniemi (2008) hypothesizes that permission to receive mobile advertising messages and privacy of personal data are factors which influence consumer intentions to receive mobile advertising. The results of a survey study conducted in Finland confirmed that a negative relationship exists between permission and intention. This indicates that there is a strong need for prior permission. In addition, Leppäniemi found that when privacy of personal data was ensured, intention to receive mobile advertising was high. In his research Vatanparats (2010), nevertheless, found that consumers are not as concerned with privacy issues as they were some years ago. According to him this may be due to the fact that consumers are little by little getting used to the mobile as an advertising channel.

The discussion related to permission and privacy issues clearly indicates that in mobile advertising the concept of permission is extremely important. Firstly, permission seems to be strongly related to attitude toward mobile advertisement as well as intention to receive advertisements in the future. Secondly, marketers may be reluctant to advertise on the mobile medium because there is a fear of invading the privacy of consumers. However, consumers seem to be getting acquainted with the mobile as advertising channel and therefore they are also more receptive to mobile advertisements.

2.2.5 Consumer acceptance and responsiveness

User acceptance is considered to be a critical success factor of mobile advertising (Amberg, 2004). Rettie's (2005) empirical research concerning response rates and branding effects utilized 26 mobile advertising campaigns in the UK. Interviews and survey research indicated that overall 44 per cent of the respondents considered mobile advertising to be acceptable where as only 21 per cent found it fairly or very unacceptable. Acceptance was significantly correlated with campaign interest, campaign relevance and monetary incentives. In addition it was found that age was inversely related to acceptability. In other words the younger the respondents were the more accepting they were toward mobile advertising. Further, Merisavo (2007) states that the usefulness, relevance, monetary incentives, entertainment value and information value form the total utility that consumers perceive in mobile advertising. Moreover, he postulates that consumer's perceived utility of mobile advertising is positively related to their willingness to accept mobile advertising.

Heinonen and Strandvik (2007) suggest a framework for evaluating the consumer responsiveness to mobile marketing (see figure 5). They state that responsiveness refers to a consumer's willingness to respond and receive marketing communication. Furthermore they argue that every marketing channel should be evaluated based on its responsiveness because this approach helps to understand the effects and effectiveness of communication. Heinonen and Strandvik (2007) also hypothesize that consumer responsiveness is even more important than permission because it considers the attention of the receiver rather than just permission.
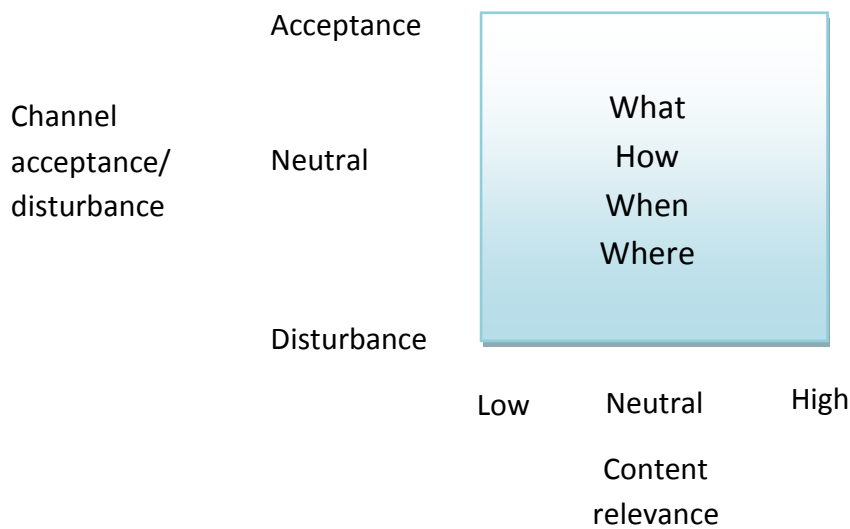
Figure 5. Factors influencing the consumer's responsiveness to marketing communication (Heinonen & Strandvik, 2007)

In the proposed framework by Heinonen and Strandvik (2007) (see figure 5), consumer responsiveness to mobile marketing is seen as a function of content relevance and channel acceptance/disturbance. Content relevance refers to the content of communication and the kind of value the consumer gets from the marketing communication. Channel acceptance/disturbance represents the context of the communication. It includes such aspects as how, when and where the consumer has received the communication. The framework suggests that content relevance and channel acceptance/ disturbance are not directly related to high responsiveness. For example, high content relevance may result in low responsiveness if the channel is considered disturbing.

The results of empirical research in Finland by Heinonen and Strandvik (2007) showed that there were differing opinions among consumers about mobile marketing. Three groups of responsiveness were found; those that are not responsive, those that are neutral and those that are responsive and are therefore willing to receive mobile advertising. Consumers between the ages 21 and 30 were found to be most responsive and consumers above the age 31 were the least responsive. Heinonen and Strandvik (2007) conclude that their empirical research confirmed that the mobile is considered more personal than traditional media and for this reason marketers should focus especially on the relevance of their messages on the mobile medium.

Leppäniemi (2008) studied how responsiveness to mobile marketing is related to demographic variables such as gender, age and income. The results of a survey study in Finland demonstrate that men and women differ in respect to responses to mobile marketing. Moreover, in general women tend to more actively participate in SMS competitions. Leppäniemi also found that age has a significant impact on responsiveness. According to the results consumers in the age group of 36-45 years were the most responsive. However, income seemed to have no effect.

The results of studies concerning responsiveness to mobile marketing seem to provide significantly contradicting results. Rettie's research in Britain suggested that younger consumers responded more positively toward mobile advertising where as in Finland the situation is the opposite. However, the differences between these results may in large part be due to cultural differences. The contradicting results in Finland indicate that more research is needed to fully understand differences in responsiveness between Finnish consumers.

2.2.6 Consumer perceptions of mobile advertising

Attitudes toward advertising have been studied widely because as discussed earlier, they have a considerable impact on the effectiveness of advertising. A study by Zanot (1984) reported negative attitudes toward advertising due to the increasing amount of advertising and commercial clutter. However, other studies have found that consumers, in fact, like advertising. In specific consumers feel that advertising is helpful in guiding purchase decisions (Shavitt, 1998). Also, it seems that attitudes towards advertising are strongly dependent on the advertising channel. For example, Schlosser (1999) found that attitudes toward advertising on the internet are more positive when compared to advertising in general. More specifically Schlosser demonstrated that as opposed to advertising in general, internet advertising was considered informative, trustworthy and entertaining. This complex nature of advertising attitudes suggests a need for understanding consumer attitudes towards advertising on the mobile channel.

Barwise and Strong (2002) studied the attitudes toward mobile advertising in a permission marketing context. In other words, participants for the study were recruited by asking whether or not they were willing to receive advertisements on their mobile phone. After consent was given, the participants filled out a form where they specified their lifestyle factors and interests. Based on these details recipient profiles were formed which were used to target messages to participants. The results of the study revealed that the 51 % of the recipients were favorable

toward the adverts they had received and 42 were fairly satisfied. Moreover, because the adverts had been carefully targeted over seventy percent of the recipients agreed that the advertisements had been relevant to them. The results also reported that sixty-three percent of the respondents had responded to at least one of the adverts they had received. Moreover, the results of the study indicate that messages which were entertaining, informative and concise received the most responses. From a campaign planning perspective this means that consumers respond to mobile advertisements that grab their attention by being straight to the point and either informative or entertaining.

Tsang (2004) studied attitudes toward SMS advertising and their impact on intentions to receive further mobile advertisements. Tsang presented a framework (see figure 6) that presents the factors affecting attitudes and the relationship between attitudes, intention to receive mobile advertisements and user behavior. In Tsang's framework behavior refers to the extent to which the mobile advertisement would be read and the timing for reading the message after it has been received.
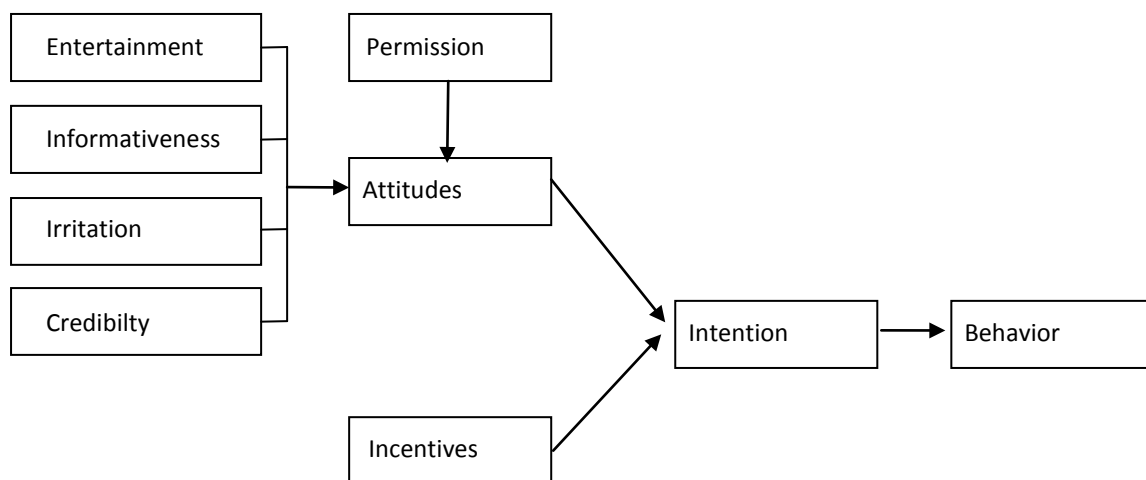
Figure 6. Consumer attitudes toward mobile marketing (Tsang, 2004)

The results of the study by Tsang (2004) indicate that in general consumer attitudes toward mobile advertising are negative unless prior permission has been obtained. In addition, the results demonstrate that entertainment, informativeness and credibility are positively correlated to overall attitude where as irritation results in negative correlation. Further, it was found that entertainment was the main factor contributing to overall attitude followed by credibility and irritation. The study also specifies that consumers with a positive attitude are more willing to

accept mobile advertisements. Moreover, those who intended to receive further mobile advertisements tended to read the immediately read the entire message. In addition, it seems that incentive-based advertising is positively related to intention.

Jun and Lee (2007) studied consumer attitudes toward mobile advertising from a uses and gratifications view point. They claim that even though attitudes in general are negative, there should be functions of uses and gratifications that positively moderate attitudes toward mobile advertising. The results of the study imply that the reasons for using the mobile phone influence attitudes. More specifically, the researchers found that consumers who use the mobile phone because of mobility and convenience have more positive attitudes towards mobile advertising. In addition, the results indicate that usage of multimedia services such as, ringtones, music and video, is related to attitudes. In contrast to the findings by Tsang (2004) Jun and Lee found that entertainment did not have a significant impact on attitudes. This may be because Tsang studied consumers in Taiwan where as Jun and Lee conducted their research in the United States. This difference indicates that attitudes toward mobile advertising are culture dependent and should be studied separately in different cultures.

2.3   Research overview and hypothesis

The purpose of this research is to examine how attitudes towards mobile advertising are formed and how these attitudes impact purchase intentions. The discussion drawing from social psychology concerning attitudes towards advertising in general and attitude toward the advertisement has shown that there is a strong relationship between the two concepts. Thus it is proposed that:

H1   *Attitude toward mobile advertising general has a positive effect on attitude toward a particular mobile advertisement*

Quite a few recent studies have focused on consumer attitudes towards mobile advertising (eg. Barwise & Strong, 2002; Tsang, 2004; Jun & Lee, 2007). However these studies have mainly been concerned with finding antecedents to successful mobile advertising. In turn, only a few studies have looked deeper into the relationship between attitudes and purchase intentions. In this study the findings from literature in advertising psychology have been adapted into the context of mobile advertising in order to gain a more profound understanding regarding consumer attitudes.

Numerous studies in the fields of general consumer and advertising research have indicated that attitude towards advertisement has an impact on attitude toward the brand which in turn influences purchase intentions (Shimp, 1981; MacKenzie, 1983). However, the mediating role of brand attitude in the formation of purchase intentions has previously been confirmed in the context of traditional advertising media such as print and television. However, the role of brand attitude in the formation of purchase intentions in mobile advertising has not been studied previously. Therefore, on the basis of research concerning traditional advertising it is hypothesized that:

H2   *Attitude toward mobile advertisement has a positive effect on attitude towards advertised brand*

H3   *Attitude towards advertised brand has a positive effect on purchase intentions*

H4   *Attitude towards mobile advertisement has a positive direct effect on purchase intentions*

Research concerning attitude toward mobile advertising has demonstrated that permission is a significant factor contributing to the effectiveness of advertisements on the mobile medium (eg. Kavassalis, 2003; Leppäniemi& Karjaluoto, 2005; Jayawardhena, 2008). However the current studies have not looked deeper into what impact different types of permission databases have on attitude toward mobile advertising. This study aims to look into the differences between three different permission databases, namely customer permission database, customer database and external permission database:

H5   *The type of the permission has a direct effect impact on attitude toward mobile advertisement*

Advertising research has concentrated on various message content strategies and their impact on campaign success and consumer responses (van den Putte, 2009). However, limited research exits on how campaign type and message content influences consumer attitudes in the mobile marketing context. This study will look at how three different campaign types influence consumer attitudes:

H6 *Campaign type has a direct influence on attitude toward mobile advertisement*

According to Chin (2003) the ability to detect and estimate the size of interaction effects are important issues in the domain of social sciences. With interaction effects Chin refers to moderating variables which create conditions under which theoretical assumptions may vary. Due to the importance of detecting and understanding interaction effects in social science research this study aimed to look into how permission and campaign type moderate the other variables presented in the research framework (see figure 7). Thus the following hypotheses were formulated:

H7 *The type of permission has a moderating impact on the relationships between attitude toward mobile advertising in general, attitude toward mobile advertising, brand attitude and purchase intention*

H8 *Campaign type moderates the relationships between attitude toward mobile advertising in general, attitude toward mobile advertising, brand attitude and purchase intentions*

A considerable amount of research has concentrated on consumer attitudes toward mobile advertising in general (eg. Tsang, 2004; Jun & Lee, 2007; Leppäniemi, 2008). However, only a few studies have looked at attitudes in an authentic campaign environment with research related to mobile advertisements received by consumers (Barwise & Strong, 2002; Rettie, 2005). The results of these studies have been, to some extent, controversial which suggests that consumer attitude toward mobile advertising in general may be related to whether one has received a mobile advertisement or not. Therefore it is hypothesized that:

H9 *Whether a mobile advertisement has been received or not has an effect on attitude toward mobile advertisement.*

The research framework presented in Figure 7 demonstrates the central concepts of this study and their expected relationships.
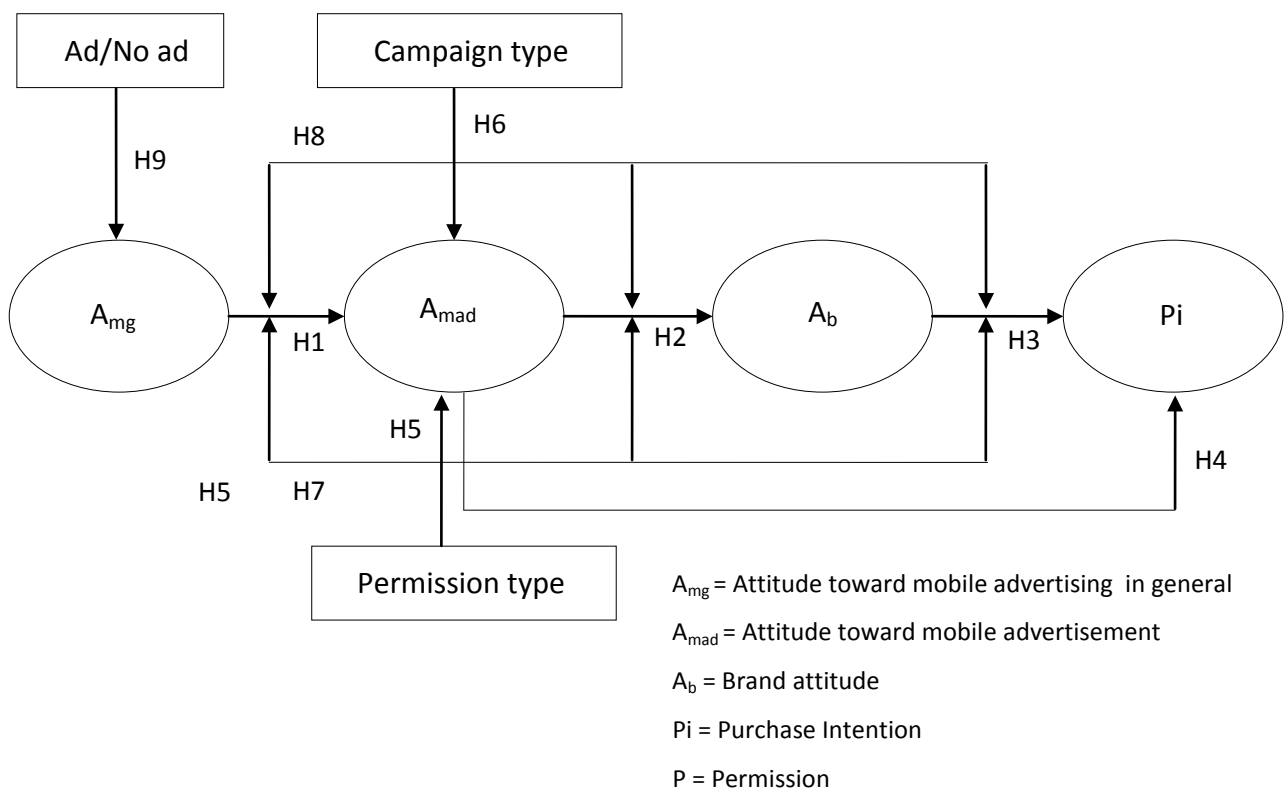
Figure 7. *Research Framework*

2.4 Summary

In this chapter, the theoretical background for this study has been established. The first part of the literature review concentrated on attitudes and attitude formation. In chapter 2.1.1 the affective and cognitive systems were discussed in order to establish an understanding of their role in consumer behavior. Next, in chapter 2.1.2 the concept of attitude was discussed from the view point of social psychology. The definitions in this section laid a foundation for discussing attitudes in the context of advertising in chapter 2.1.3. On the basis of the research presented in chapters 2.1.2 and 2.1.3, a conceptualization of attitude toward advertisement (A_{ad}) was formed. It was established that in this research, a unidimensional affective approach is used. In chapter 2.1.4 attitude toward advertising in general was discussed. In this research, attitude towards advertising in general is seen as an important antecedent to attitude toward advertisement. As suggested by previous research in the context attitude toward advertising in general, people with more favorable feelings towards advertising are likely to react more positively to a specific advertisement than those who dislike advertising altogether. In chapter 2.1.5 consumer

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perceptions concerning advertising were reviewed. In this section it was concluded that at the same time consumers may hold positive and negative attitudes toward advertising. This means that while a consumer may consider advertising to be informative and entertaining at the same time he or she may also think that advertising in manipulative and intrusive.

In the second part of the literature review the consumer view of mobile advertising was discussed. In chapter 2.2.1 a definition for the term mobile advertising was established. In this research mobile advertising is seen to consist of advertisements, event invitations and customer relation communication in the form of push or pull marketing. Mobile advertising can utilize various techniques enabled by the mobile phone such as SMS, MMS, Bluetooth, Infrared and the mobile internet. However, this study concentrates only on mobile advertising in the form of SMS. In chapter 2.2.2, the unique features of the mobile phone as an advertising channel were discussed. It was noted that from the various advertising channels the mobile is the only one which can combine high interactivity as well as location dependence. In addition, the mobile phone offers unique possibilities for targeting and personalization due to the fact that the recipient can be identified based on the mobile phone number.

In chapter 2.2.3 the motivations for using mobile phones were discussed since they are seen to influence how consumers perceive mobile advertisements. Then chapter 2.2.4 focused on the role of permission and privacy in the mobile advertising context, since these issues have raised a lot of concern amongst consumers and marketers alike. Because user acceptance is considered to be a critical success factor of advertising, this area of research was discussed in chapter 2.2.5. Finally, in chapter 2.2.6 previous research on attitudes toward mobile advertising was reviewed. The results of the research highlight the role of permission in the formation of attitudes toward mobile advertisement. Also, it was found that consumers tend to like mobile advertisements that are informative and entertaining. In the third chapter of the literature review the research framework and hypotheses for this research were presented.

3 METHODOLOGY

The purpose of this study is to describe the attitudes of consumers toward mobile marketing in the context of Finland and to understand the relationships between the variables regarding attitude formation. Since there already exists body of research concerning mobile marketing and its relevant variables a conclusive research design was adopted as opposed to a more exploratory design. Conclusive research is characterized as formal and structured and it is based on samples which are subjected to quantitative analysis (Malhotra & Birks, p. 65). To meet the requirements of a conclusive research design, the survey method was chosen for data collection. In order to gain deep insight of the research data, both descriptive and causal analysis methods were used. The formulated hypotheses were tested using analysis of variance as well as partial least square path modeling to determine whether relationships exist between variables presented in the research framework. Next, descriptive cluster analysis was used to find similarities and dissimilarities existing naturally between the research objects.

3.1 Data collection

The data collection for the empirical part of this study took place during the fall of 2009 as part of a study made for SN4Mobile, a Finnish company providing mobile solutions and mobile marketing services. During the data collection period, the customers of SN4Mobile could participate in the research by integrating the study into their mobile marketing campaigns. The data were collected through a questionnaire which could be accessed online or on a mobile device. In order to construct a full picture of attitudes toward mobile advertising, two samples were collected. The primary sample consisted of consumers who received a mobile advertisement whereas the secondary sample acted as a control group and consisted of consumers who did not receive advertising. The purpose was to compare the attitudes of consumers who had received a mobile advertisement to those who had not. The questions for both samples were similar to each other in order to allow consistency and ease of comparison.

To reduce sampling error, random sampling was used. The target group of each participating campaign acted as the sampling frame for the primary sample. A sample was selected from each campaign target group by simple random sampling. This method ensured that a comprehensive sample was collected from each campaign. For the control group the sampling frame consisted of a group of consumers or customers with characteristics and demographics similar to the primary

sample. The same sampling method was used for the control group as for the primary sample in order to allow consistency of results.

In the case of the primary sample, the process for answering the questionnaire began with sending the mobile advertisement to the selected sample. After two to three hours the recipients of the advertisement received a text message inviting them to answer a questionnaire concerning the advertisement. The delay was utilized to ensure that the advertisement had been received and read. The control group, on the contrary, received only a text message which invited them to the questionnaire. The respondents of both samples could directly follow the personalized link on their mobile phone or alternatively they could choose to answer on the computer. Both mobile and online questionnaires were utilized so that participating would be as effortless as possible. The survey was constructed in a way that did not allow submission of the questionnaire without answering all questions. Therefore there were no challenges related to missing answers.

Altogether 13 companies, both Finnish and International, from diverse industries participated in the study with 18 campaigns. The survey was sent to 15 572 people and 848 questionnaires were completed representing a response rate of 5,45 %. In the case of the control group 3 836 questionnaires were sent and 448 responses were received. Thus, the response rate for this group was 11,7 %. All in all, considering that the mobile survey is a new method for survey data collection the response rate can was considered fair.

3.2 Survey construction and development

The survey was designed to measure the constructs presented in research framework. The latent constructs were operationalized by adapting items from previous studies in the same field. Some of the adopted items were, however, modified so that they would better suit the needs of this study. Normally adopting items used in previous research is used in order to ensure the validity and reliability of the research. Therefore, validated items from previous research were utilized in order to ensure high quality of this empirical research. For the purpose of reducing order bias, in other words the possibility that prior questions influence how latter questions are answered (Aaker, 2004 p. 325), the items were not presented in the order proposed by the research framework. In addition, to ensure that respondents paid attention to the questions they were answering some items were reverse coded (DeCoster, 2004).

For the primary sample brand attitude and attitude toward mobile advertisement were measured on a five point semantic differential scale, which is a typical scale for studying attitudes (Holbrook & Batra, 1987; Aaker, 2004 p. 294). The following items for measuring the unidimensional affective nature of attitude toward mobile advertisement were adopted from previous research (Singh & Vij, 2008; Mitchell & Olson 1981): informative/uninformative, entertaining/boring, interesting/uninteresting. However, some minor alterations were made to the adjective pairs to better describe exact opposites. The remaining two items measuring A_{ad} were developed by the researcher based on literature concerning mobile marketing. The item credible/not credible was based on Tsang's (2004) findings that credibility is an important determinant of attitude toward mobile advertisement. Barwise and Strong's results, on the other hand, implied that consumer respond to mobile adverts that grab their attention by being relevant. Therefore the item useful/useless was developed.

To measure brand attitude three items were adopted from Batra and Stayman (1990): positive/negative, high quality/low quality, valuable/worthless. The attitude scales for measuring attitude toward mobile advertisement and attitude toward brand were constructed so that they reflected variables of interest in previous research. Therefore, different scales were developed to measure these constructs (Holbrook & Batra, 1987). Attitude toward mobile advertising in general and purchase intentions were measured on a five point likert scale with the score of one indicating completely disagree and five indicating completely agree. The score of three was considered neutral. The items for general attitude were adopted from literature concerning attitude toward advertising in general (Singh, 1998 & Mehta, 2000) and were modified to suit the mobile marketing context. The items regarding purchase intention were adopter from research by Axelrod (1968) and modified by the researcher to suit the context of the study. The constructs and their corresponding operationalized items are presented in table 1. The questionnaire for the primary sample is demonstrated in appendix 1.

Table 1. Operationalizations of latent constructs: primary sample

Constructs and items	Scale	Adopted from
Attitude toward mobile advertisement		
The mobile advertisement that I received was		
a) boring/entertaining	5-point semantic differential	Singh & Vij, 2008
b) uninformative/informative	5-point semantic differential	Singh & Vij, 2008
c) useless/useful	5-point semantic differential	By researcher
d) interesting/uninteresting	5-point semantic differential	Mitchell, 1981
c) credible/not credible	5-point semantic differential	By researcher
Brand attitude		
In my opinion company X is		
a) negative/positive	5-point semantic differential	Batra, 1990
b) low quality/high quality	5-point semantic differential	Batra, 1990
c) Worthless/valuable	5-point semantic differential	Batra, 1990
Purchase intention		
I am interested in getting more information on the product, service or event in question	5-point Likert scale	By researcher
I am interested in purchasing the product or service mentioned in the text message or taking part in the event	5-point Likert scale	By researcher
I will probably buy the product or service mentioned in the text message or take part in the event	5-point Likert scale	Axelrod, 1968
Attitude toward mobile advertising in general		
Overall, I like mobile advertising	5-point Likert scale	Sing & Vij, 2008
Mobile marketing helps me keep up-to-date about products and services that I am interested in	5-point Likert scale	Mehta, 2000
Mobile marketing is disturbing	5-point Likert scale*	Heinonen, 2007
Mobile advertising is more manipulative than it is informative	5-point Likert scale*	Mehta, 2000
In general, I am interested in receiving mobile advertising	Yes/no	By researcher

Reverse coded items

For the control group, a set of questions concerning experience with mobile advertising was added in order to grasp how familiar the respondents were with the mobile phone as a marketing medium. Three items were adopted from research by Leppäniemi (2008) and they were measured on a yes/no basis. The statements from the questionnaire of the primary sample concerning attitude toward mobile advertising in general and brand attitude were used for the control group as well in order to allow comparison of responses. In addition, the bipolar adjective pairs were

used for the control group for the purpose of further measurement of general attitudes. Table 2 demonstrates the constructs and their operationationalized items for the control group. The corresponding questionnaire is presented in appendix 2.

Table 2 Opeationalization of latent constructs: control group

Items	Scale	Adopted from
Experience with mobile advertising		
I have received mobile advertising in the past six months	Yes/No	Leppäniemi, 2008
I have bought a product or service upon receipt of a text message	Yes/No	Leppäniemi, 2008
I have sent a text message to a number shown in an advertisement during the last six months	Yes/No	Leppäniemi, 2008
Attitude toward mobile advertising in general		
Mobile advertising is		
a) boring/entertaining	5-point semantic differential	Singh, 2008
b) uninformative/informative	5-point semantic differential	Singh, 2008
c) useless/usefull	5-point semantic differential	
d) interesting/uninteresting	5-point semantic differential	Mitchell , 1981
e) credible/not credible	5-point semantic differential	
Overall, I like mobile advertising	5-point Likert scale	Singh, 2008
Mobile marketing helps me keep up-to-date about products and services that I am interested in	5-point Likert scale	Mehta, 2000
Mobile marketing is disturbing	5-point Likert scale	
Mobile advertising is more manipulative than it is informative	5-point Likert scale	Mehta, 2000
In general, I am interested in receiving mobile advertising		
	Yes/no	By researcher
Brand attitude		
In my opinion, company X is		
a) negative/positive	5-point semantic differential	Batra, 1990
b) low quality/high quality	5-point semantic differential	Batra, 1990
c) Worthless/valuable	5-point semantic differential	Batra, 1990

3.3 Research data

The demographic variables for both samples were obtained automatically by using the ACORN star classification, a widely used consumer classification method for targeting advertising. ACORN star classifies consumer into segments based on their area of residence. These segments have been formed on the basis of statistical data from Statistics Finland concerning the key demographic variables, such as income level and average age of residents in a certain geographical area (Itella Asiakkuusmarkkinointi, 2010). As a result, Finland has been divided into 7 main classes and 26 subclasses. Brief descriptions of the main classes are listed beneath and broader descriptions of are presented in appendix 3. The names and descriptions have been translated by the researcher from material provided by Itella Asiakkuusmarkkinointi (2010).

- Boardroom Street: family suburbs with high level of income and education

- Family Road: families with medium income living in rental suburbs

- Master's Alley: Well educated city centers

- Wage-earner's Grove: modest suburbs

- Apple tree Slope: high income areas in small cities

- Ankdammsvägen: Swedish speaking population centers and rural areas

- Barn Avenue: quiet rural areas

Table 3. Distribution of ACORN Star classes: primary sample

Legend: ■ ACORN classes in the sample ■ ACRON classes in the Finnish population

Data labels (left to right, sample / population):
- Boardroom Street: 20,22 % / 10,40 %
- Family Road: 9,26 % / 8,00 %
- Master's Alley: 28,26 % / 22,00 %
- Wage-earner's Grove: 9,38 % / 19,70 %
- Appletree Slope: 21,92 % / 22,50 %
- Ankdammsvägen: 1,34 % / 3,20 %
- Barn Boulevrad: 4,99 % / 13,10 %
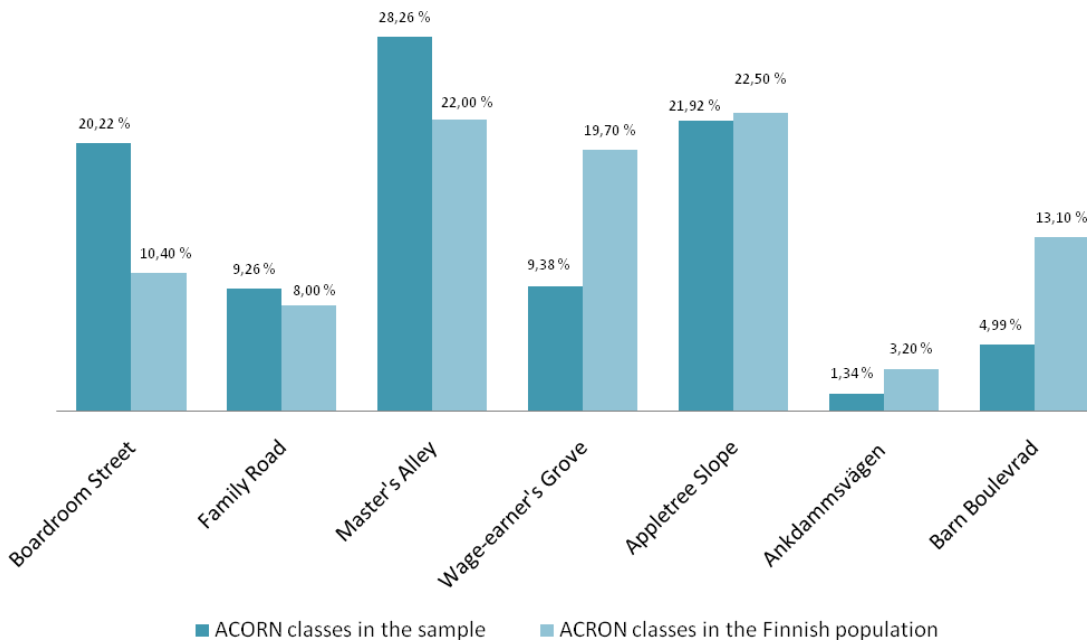
Table 4. Distributions of Acorn Star classes: control group

Legend: ■ ACORN classes in the sample ■ ACRON classes in the Finnish population

Data labels (left to right, sample / population):
- Boardroom Street: 20,22 % / 10,40 %
- Family Road: 9,26 % / 8,00 %
- Master's Alley: 28,26 % / 22,00 %
- Wage-earner's Grove: 9,38 % / 19,70 %
- Appletree Slope: 21,92 % / 22,50 %
- Ankdammsvägen: 1,34 % / 3,20 %
- Barn Boulevrad: 4,99 % / 13,10 %
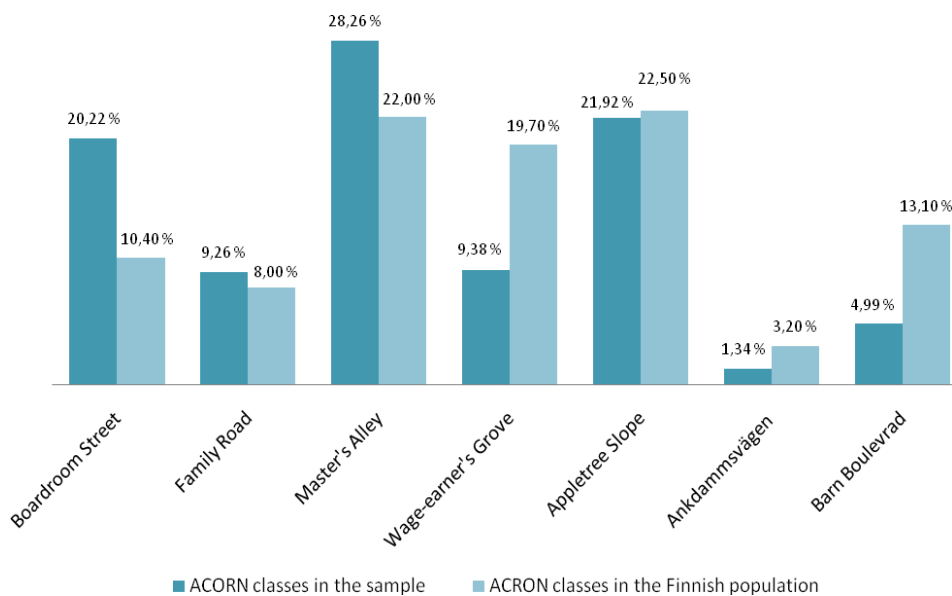
The distributions of ACORN Star classes in the primary sample and the control group are very similar to each other. Therefore both samples represent the same types of consumer groups and lifestyles. Thus, comparison between the primary sample and control group is likely to provide

valid results. When compared to ACORN class distributions of the Finnish population, the wealthiest class is over represented in both samples. In addition, the wage-earners and rural residents seem to be under represented to some extent. However, the rest of the classes in both samples reflect the ACORN class distribution in the Finnish population extremely well. Therefore it can be concluded that the samples collected for this research provide an adequate representation of the demographic characteristics of the Finnish population.

3.4 Analysis methods

The research data was first subjected to basic analyses such as frequency distribution and t-tests. This provided insight into the data and guided further data analysis. Analysis of variance was conducted to test whether a statistically significant relationship exists between permission type and attitude as well as campaign type and attitude. Followed by this, partial least squares path analysis was performed to assess the relationships between attitudes toward mobile marketing in general, attitude toward mobile advertisement, brand attitude and purchase intention. Finally cluster analysis was used to better understand the nature of attitudes and to find different attitude profiles for Finnish consumers.

3.4.1 Analysis of Variance

Analysis of variance (ANOVA) is used to test the differences between the mean values of the dependent variables associated with the effect of the controlled independent variables The null hypothesis is that all means are equal. In its simplest form ANOVA contains one metric dependent variable and one or more independent variables, also known as factors. ANOVA with one independent variable is called one-way analysis of variance where as ANOVA with more than one independent variable is called n-way analysis of variance. An advantage of applying the n-way analysis of variance is that it enables the examination of interactions between factors. Interactions occur when the effects of one factor on the dependent variable depend on the category of the other factors. (Malhotra & Birks, 2006 p. 485.)

The null hypothesis that the population means are equal is tested by the F statistic based on the ratio of mean square related to the categorical independent variable and mean square related error. The ANOVA F statistic only determines whether there is an overall difference between means. However, it does not denote which differences specifically are statistically significant. To

further examine the source of the differences, appropriate contrasts or comparisons can be specified. (Malhotra & Birks, 2006 p. 485-503.) In this study a posteriori contrasts were made after the analysis. Fischer's least significant difference test (LSD) was chosen because it is the most powerful multiple comparisons test (Malhotra & Birks, 2006 p. 503).

3.4.2 Partial Least Squares path analysis

Causal modeling techniques have permitted researchers to examine theory and measures simultaneously which makes them powerful when compared to techniques such as multidimensional scaling (Hulland, 1999). Structural equation modeling (SEM) is a causal technique which today has become a popular method in business research for validating instruments and testing linkages between models (Henseler, 2009). SEM techniques can be further divided into two families: covariance-based techniques and variance-based techniques such as partial least squares path analysis (PLS) (Ringle, 2009). PLS is a general method for estimating path models which involves latent constructs measured through multiple indicators (Sellin, 1995). The focus of the technique is on prediction rather than explanation and therefore it requires no well-understood relationships between the dependent and independent variables (Garson, 2009a).

PLS path models consist of two types of linear equations: the inner model and the outer model. The inner model is concerned with relationships between unobserved or latent variables. The outer model on the other hand specifies the relationships between a latent variable and its observed or manifest variables. In PLS path modeling there are two different types of outer models. The reflective model denotes causal relationships from the latent variable to the manifest variables whereas the formative model expresses causal relationships from the manifest variables to the latent variable. In other words, the formative model suggests that a latent variable is defined as a combination of its manifest variables. (Henseler et al. 2009.) Therefore an increase in the value of one manifest variable causes an increase in the value of the latent variable. In the case of the reflective model, an increase in the latent variable would increase the value of all the manifest variables. In this study, the reflective model was chosen because a respondent with a positive attitude toward an advertisement is likely to give high scores to all of the variables concerning the advertisement. Therefore, it is assumed that all the manifest variables reflect the same unidimensional construct. The same logic holds true for the remaining latent variables as well.

PLS is an extension of the linear multiple regression model and therefore it shares many assumptions related to multiple regression. However, a major difference is that PLS can handle muticollinearity. It must be noted that multicollinearity does not disappear. If original variables are multicollinear, PLS will lack a simple factor structure and PLS factors will be difficult to interpret. In addition, PLS is a distribution free approach to regression and path modeling. However, it has been noted that moderate non-normality of data will require a larger sample size in PLS. (Garson, 2009a).

3.4.3 Cluster analysis

Cluster analysis aims to classify objects into similar groups called clusters based on a chosen set of variables (Malhotra & Birks 2006, p. 596). Cluster analysis is used when the researcher does not know the number of groups in advance but wishes to form groups and analyze them (Garson, 2009b). The analysis is based on finding groups that minimize variation within a specific group and maximize variation between groups (*ibid*.). In marketing, cluster analysis can be used for example in segmenting markets, understanding buyer behavior or identifying test markets. In this study, cluster analysis is used to group the respondents based on their attitude toward mobile marketing.

 The objective of cluster analysis in this study is to understand similarities and dissimilarities between different consumer groups and to build attitude profiles based on the analysis. Malhotra & Birks (2006 p. 599) state that if even one irrelevant variable is included in the analysis, it may distort an otherwise viable clustering solution. Therefore, nine similar attitude variables ($\alpha=0.88$) were chosen as the basis for the cluster analysis. The chosen variables consisted of the statements regarding attitude toward mobile advertising in general and attitude toward mobile advertisement. Compared to the PLS analysis described above, the constructs in this analysis are seen to be formative. Therefore, an advertisement may be considered informative but at the same time it may not be considered particularly entertaining.

Garson (2009b) suggests that when dealing with small samples (typically <250) hierarchical clustering should be used. Because the dataset for this study is large, the non-hierarchical *k*-means clustering method was chosen. As the purpose of cluster analysis is to group similar objects together a measure is needed to assess the similarity or difference between objects (Malhotra &

Birks 2006, p. 600). Because the euclidean distance is the most common distance measure (Garson, 2009b), this measure was used.

In *k*-means clustering the researcher specifies in advance the number of cluster to be formed. Initial cluster centers are chosen randomly during the first inspection of the data. Then each of the following iterations groups objects based on the nearest Euclidean distance to the mean of the cluster. In *k*-means clustering cluster centers change during each inspection and the process continues until there is no change in the cluster means. (Garson, 2009b.) The *k*-means clustering method allows objects to leave a cluster and join another one if the clustering criterion is improved by doing so (Aaker, 2004 p. 577). Therefore the results of *k*-means clustering tend to be more reliable when compared to hierarchical clustering.

3.5   Validity and reliability

Validity and reliability are central concepts that reflect how accurate measurements are. A measurement does not represent the true value of the characteristic of interest. Instead it is an observation of it and therefore a variety of factors may cause measurement error. Measurement error can be broken down into two parts; systematic error and random error. Systematic error refers to stable factors that affect the observed score in the same way each time a measurement is made. Random error on the other hand is caused by factors that may change each time a measurement is made. (Malhotra & Birks, 2006 p. 312-313.)

Reliability refers to the correlation of an item, scale or instrument with a hypothetical one which measures what it is supposed to (Garson, 2009c). In other words, high correlation means that results are consistent and therefore they are reliable. Cronbach's alpha is a common way to assess the reliability of scales. The coefficient alpha is the average of all possible split-half coefficients resulting from different ways of splitting scale items (Malhotra & Birks, 2006 p. 314). The value ranges between 0 and 1. Generally it is thought that an alpha value of 0.60 is satisfactory, 0.70 is adequate and 0.80 represent a good scale (Garson, 2009c). In this study, four latent constructs were each measured with three to five indicator variables. The coefficient alpha for the scales measuring each of these constructs is represented in table 5. Since all the values are above 0.80 it can be concluded that the scales are reliable.

Table 5. The Reliability of Measurement Scales: Cronbach's alpha

Construct	Coefficient alpha
Attitude toward mobile advertising in general	0.85
Attitude toward mobile advertisement	0.86
Brand attitude	0.87
Purchase intention	0.87

Validity refers to how well a measurement truly represents characteristics that exist in the phenomenon being investigated (Malhotra & Birks, 2006 p. 737). In order to guarantee external validity, measures were taken to collect a sample that is as representative as possible. However, the sampling frame of this study was limited to those Finnish companies who were willing to participate in the study. When taking into consideration the resources and time constraints for this study collecting a sample that would have represent all Finnish companies would not have been purposeful. However, based on a confidence level of 95 % and confidence interval of +/- 4% the total sample size of 1300 respondents is considered representative of the Finnish population (Creative Research Systems, n.d) and therefore the results of this study can be generalized to the context of Finland. Nevertheless, some care must be taken when generalizing the results of this study because the customers of all Finnish companies are not represented in this study.

Content validity refers to the extent to which the questionnaire adequately covers the entire domain of what is being measured (Malhotra & Birks, 2006 p. 314). To maximize content validity, a comprehensive literature review was done in order to grasp the domain of attitudes and more specifically attitudes in mobile marketing. The final questionnaire was constructed around four central dimensions which were drawn from prior research. These four dimensions are represented in the research framework as attitude toward mobile advertising in general, attitude toward mobile advertisement, brand attitude and purchase intention. Validity can also be increased by adopting questions already validated in previous research. Thus, most of the scales have been selected from various studies in the field of social psychology, advertising and mobile marketing. In addition the questions were carefully worded to ensure that all respondents would understand the questions in the way that was intended.

3.6 Summary

This chapter focused on explaining the methodology for the study in order to allow transparency of research methods. Since the conclusive research design was chosen, quantitative data analysis methods were central for the study. Chapter 3.1 explained how data was collected for the purpose of quantitative analysis. The survey method was chosen and data was collected through a questionnaire which could be accessed though the mobile phone or the internet. Simple random sampling was used to select the sample in order to reduce sampling error. In addition to the primary sample, a control group was chosen. The primary sample received a mobile advertisement where as the control group did not. This method allowed examination of how receiving a mobile advertisement influenced attitudes. In chapter 3.2, the process of survey construction was described. The latent constructs presented in the research framework were operationalized by adapting items from previous research. Some items were modified to better suit the needs of this research and some items were developed by the researcher based on research results from the domain of mobile advertising.

In chapter 3.3 the demographics of the research sample were described. The demographic variables were obtained by using the ACORN Star classification, a method used for targeting consumers for the purposes of direct marketing. In chapter 3.4, the research methods for this study were elaborated on. Analysis of Variance (ANOVA) was used to test the statistical differences between the mean values of dependent variables and independent variables. More specifically, ANOVA was used to test whether differences in attitudes exist between different demographic groups, the primary sample and control group as well as permission database types and campaign types. Partial least squares (PLS) path analysis was used to simultaneously test all the relationships presented in the research framework. Next, consumer attitude profiles were identified though cluster analysis. In chapter 3.5 the validity and reliability of the study were discussed.

4   RESULTS

In this chapter the results of the statistical analysis discussed in the previous chapter are presented. To gain insight in to the data and to guide data analysis, averages and frequency distributions were first calculated. Since these results only served as a backbone for further analysis, the figures are not presented in much detail.

4.1   Analysis of demographic variables

The analysis of demographic variables began by adding the ACORN Star classification to the research data based on the street address provided by the respondents. Next, one-way ANOVA tests were conducted with both the primary sample and the control group. The ACORN class was considered as the independent variable and the summated attitude variable was the independent variable. The results of the ANOVA indicate that there are no differences in attitude toward mobile advertising in general and attitude towards mobile advertisement between different consumer groups. Thus, in the mobile advertising context demographic variables such as level of income and education as well as area of residence seem to have no influence on attitude toward mobile advertising. The results of the ANOVA tests are presented in Appendix 4.

Next, a two-tailed t-test was preformed to examine differences in attitudes between men and women. For the primary sample, statements concerning the advertisement and mobile marketing in general were included. Since the control group had not received an advertisement, only statements concerning mobile marketing in general were included. The test revealed that in the case of the primary sample, differences exist to some extent (see table 6). The results show that in general men and women seem to have similar attitudes toward mobile advertising. Both men and women consider that mobile advertising is helpful in finding information concerning interesting product and services. In addition, they find mobile advertising equally disturbing and manipulative. However, concerning a particular mobile advertisement received (rather than mobile advertising in general) there were statistically significant differences in average attitudes between men and women. Thus, when the primary sample was asked about issues related to a specific campaign, women seemed to find the campaign more positive. Specifically, it seems that according to women, mobile marketing is more credible and useful. These findings are in line with Leppäniemi's (2006) results indicating that women are more responsive to mobile advertising.

When it comes to the control group, no statistically significant differences exist in attitude toward mobile marketing in general (see table 6).

Table 6. T-test: Differences Between Men and Women in the Primary Sample

	Male		Female		Significance
	Mean	SD	Mean	SD	
ATTITUDE TOWARD MOBILE ADVERTISEMENT					
Entertainment	3,00	0,79	3,13	0,87	0,0220*
Informativeness	3,74	0,91	4,01	0,89	<0,0001*
Usefulness	3,34	1,14	3,59	1,13	0,0019*
Interest	3,27	0,99	3,50	1,03	0,0010*
Credibility	3,82	0,96	4,10	0,88	0,0002*
Preferred Channel	4,22	1,01	4,22	1,00	0,9384
BRAND ATTITUDE					
Positivity	4,02	0,74	4,30	0,69	<0,0001*
Quality	4,07	0,73	4,29	0,72	<0,0001*
Value	3,80	0,78	4,06	0,76	<0,0001*
PURCHASE INTENTION					
Interest for information	3,29	1,06	3,34	1,07	0,5007
Purchase interest	3,09	1,05	3,01	1,19	0,0272*
Purchase likelihood	2,92	1,17	3,01	1,19	0,2872*
ATTITUDE TOWARD MOBILE ADVERTISING IN GENERAL					
Positivity	2,90	1,08	2,85	1,11	0,5511
Helpfulness	3,02	1,13	3,07	1,10	0,4565
Disturbance	3,15	1,05	3,10	1,02	0,4857
Manipulativeness	2,89	0,92	2,87	0,89	0,9074
Interest	6,47	0,50	6,44	0,50	0,4585

* significant at 95 % confidence interval

Table 7. T-test: Differences Between Men and Women in the Control Group

	Male		Female		Significance
	Mean	SD	Mean	SD	
EXPERIENCE WITH MOBILE ADVERTISING					
I have recieved mobile advertising	6,8	0,4	6,8	0,42	0,5504
I have purchased based on mobile advertising	6,2	0,39	6,2	0,4	0,9868
I have sent a text to a number in an advertisement	6,3	0,45	6,3	0,45	0,9565
I am willing to recieve mobile advertising in the future	6,4	0,48	6,3	0,46	0,2088
ATTITUDE TOWARD MOBILE ADVERTISING IN GENERAL					
Positivity	2,9	1,04	2,8	1,03	0,3099
Helpfulness	2,8	1,08	2,8	1,09	0,9562
Disturbance	3,5	1,07	3,5	1,02	0,9877
Manipulativeness	3,24	0,96	3,25	0,9	0,9643
Entertainment	2,15	0,99	2,44	0,9	0,4916
Informativeness	2,7	1,04	2,83	1,08	0,292
Usefulness	2,7	1,07	2,6	1,05	0,4961
Interest	2,6	1,01	2,5	1,05	0,253
Credibility	2,6	0,93	2,8	0,94	0,1165

* significant at 95 % confidence interval

4.2 Attitude toward mobile advertising in general

After studying the differences between demographic variables means for each of the variables were calculated and the statistical significance of the differences was tested using the t-test. For the primary sample the summated mean variable representing attitude toward mobile advertising in general was 2,99 where as for the control group the corresponding figure was 2,69. The difference between these means was statistically significant and therefore the results confirmed that the group who has received an advertisement on average had a slightly more positive attitude toward mobile advertising (t = 4.84, p = <0,000). Table 8 presents the results of the test for each measured variable separately .

Table 8. T-test: Differences Between Primary Sample and Control Group

	Advert		No advert		Significance
	Mean	SD	Mean	SD	
ATTITUDE TOWARD MOBILE ADVERTISING IN GENERAL					
Positivity	2,88	1,09	2,81	1,04	0,2932
Helpfulness	3,04	1,17	2,74	1,08	<0,0001*
Disturbance	3,13	1,04	3,49	1,06	<0,0001*
Manipulativeness	2,88	0,91	3,23	0,94	<0,0001*

* significant at 95 % confidence level

The results indicate that the control group thinks mobile advertising is more disturbing and manipulative. Moreover, they do not think that mobile advertising helps to find interesting products. Both samples were asked if they were willing to receive mobile marketing in the future. The results demonstrate that from the control group only 39 % were willing to receive further advertisements on their mobile phone where as 46 % from the primary sample were willing (t = 3.87, p=<0,0001). Again this finding demonstrates that consumers react more positively to mobile advertising if they actually have received an advertisement.

To further study how experiences regarding a mobile advertisement influence attitude toward mobile advertising in general, the control group was divided into two parts based on whether the respondents had received a mobile advertisement in the past six months or not. The results indicate that the respondents who recalled receiving a mobile advertisement had a more positive attitude toward mobile advertising in general when compared to those who did not remember receiving an advertisement (see table 9).

Table 9. T-test: Differences in A_{mg} in the control group

	Not received		Received		
	Mean	SD	Mean	SD	significance
ATTITUDE TOWARD MOBILE ADVERTISING IN GENERAL					
Positivity	2,31	1,08	3,00	1,00	p=0,001*
Helpfulness	2,14	1,00	2,91	1,04	p=0,001*
Disturbance	4,09	1,03	3,33	1,01	p=0,001*
Manipulativeness	3,57	0,91	3,15	0,91	p=0,001*
Entertainment	2,09	1,02	2,58	0,92	p=0,001*
Informative	2,30	1,00	2,87	1,03	p=0,001*
Useful	2,18	1,05	2,78	1,03	p=0,001*
Interesting	2,14	1,10	2,68	1,00	p=0,001*
Credible	2,12	1,16	2,65	0,97	p=0,001*

*Significant at 95% confidence level

Next the attitudes of those who had not received mobile advertising during the past six months were compared to the attitudes of the primary sample. Here it was evident that in the respondents in the primary sample felt more positive toward mobile advertising when compared to those who had not received advertising for a considerable amount of time (see table 10).

Table 10. T-test: Differences in A_{mg} between primary sample and control group (no ad)

	Primary sample		Control group no ad		
	Mean	SD	Mean	SD	significance
ATTITUDE TOWARD MOBILE ADVERTISING IN GENERAL					
Positivity	3,31	1,06	2,31	1,08	p=<0,001*
Helpfulness	3,16	1,08	2,14	1,00	p=<0,001*
Disturbance	2,95	1,17	4,09	1,03	p=<0,001*
Manipulativeness	2,88	1,09	3,57	0,91	p=<0,001*

*Significant at 95 % confidence level

These results indicate that people hold considerable prejudices against mobile marketing because they fear that their personal mobile phone will be bombarded with irrelevant advertisements. If

the respondent did not recall receiving an advertisement his or her attitude toward mobile advertising in general was weaker when compared to those who had received an advertisement. Moreover, when the attitudes of those who had just received a mobile advertisement were compared to the control group it was clear that the primary sample felt more positive towards mobile advertising. Perhaps this is because in the case of the control group the responses are affected by the general predisposition that mobile advertising in disturbing. However, in the case of the primary sample attitude toward mobile advertising in general is affected by the advertisement which had just been received. When the advertisement has been relevant and interesting also attitude toward mobile advertising in general is higher. This means that positive experiences related to mobile advertisements lead to more positive attitudes toward mobile advertising in general. On the basis of this discussion hypothesis 9 is confirmed.

4.3   The influence of permission and campaign type on A_{ad}

Analysis of variance was used to test whether campaign and permission type have an impact on attitude toward mobile advertisement in the primary sample. For the analysis, the five measures of attitude toward mobile advertisement were first summated to describe total attitude. Then a one-way ANOVA was conducted to test hypotheses 5 and 7 with permission and campaign type as independent variables and attitude as the dependent variable. The results of the one-way ANOVA indicate that permission type does have an impact on how consumers perceive mobile advertising (p=<0,0001) and therefore hypothesis 5 is supported (see table 11). Further the Fischer's least significant difference test reveals that differences between all permission types are statistically significant (see table 12)

Table 11. Attitude Toward Mobile Advertising and Permission type: One-way ANOVA

	Mean	Standard deviation
Customer permission base (N=167)	3,83	0,71
Customer database (N=615)	3,60	0,94
External permission base (N=63)	2,89	1,00
Total	3,59	0,93
F		24,65
Significance		p=<0,0001

Table 12 Multiple Comparisons Test: Attitude Toward Mobile Advertising and Permission Type

Permission Base Comparisons	**Difference Between Means**	**95 % Confidence Limits**		
Customer permission base vs. Customer database	0,22	0,06973	0,37972	*
Customer permission base vs. external permission base	0,94	0,67483	1,20009	*
Customer database vs. external permission base	0,71	0,47776	0,94771	*

* significant at the 0,05 level>

The results of the one-way ANOVA indicate that when prior consent for mobile marketing has been obtained, consumer attitudes toward the advertisement were most positive. It also seems that consumers welcome mobile marketing that is based on an existing customer relationship. However, mobile marketing that is based on external databases seems to result in the least positive attitude. At first, this result may appear surprising since in the case of external databases consumers have voluntarily indicated their willingness to receive mobile advertising in general. Nevertheless, this permission type makes personalization and targeting harder because the consumers have limited possibilities to express what type of marketing they would like to receive. In the case of the customer permission base and customer database, the company has the opportunity to use existing customer data and predict what types of products and services the customer may be interested in. This increases the possibility that the advertisement will be of interest to the consumer.

In the case of campaign type, one-way ANOVA shows that differences between attitudes exist (see table 13). Moreover, the Fischer's least significant differences test reveals that customer relationship communication and advertising are the source for these differences. (see table 14). Thus, it can be concluded that when it comes to customer relation communication, it seems that consumer attitudes are slightly more positive compared to pure advertising messages. In the case of event invitation, the difference between means is not statistically significant. However, it must be noted that the number of cases in the event invitation category is relatively low compared to the two other categories, which may influence the results of the test.

Table 13. One-Way ANOVA: Attitude Toward Mobile Advertisement and Campaign type

	Mean	Standard deviation
Customer relation communication (N=423)	3,65	0,93
Advertising (N=341)	3,49	0,92
Event invitation (N=81)	3.70	0,97
Total	3,59	0,93
F	3.63	
Significance	p=0,0268	

Table 14. Multiple Comparison's Test: Attitude Toward Mobile Advertisement and Campaign Type

Campaign Type Comparisons	**Difference Between Means**	**95 % Confidence Limits**	
Event invitation vs. Customer relation communication	0,05	-0,17184	0,26956
Event invitation vs. Advertising	0,21	-0,01096	0,43889
Customer relation communication vs. Advertising	0,17	0,03268	0,29754*

* significant at the 0,05 level

4.4 Consumer attitude profiles of mobile marketing

For the primary sample, cluster analysis was used to identify homogeneous groups of consumers based on their attitudes toward mobile advertising. Altogether nine attitude statements measuring the same concept were chosen as the basis for the k-means cluster analysis. In non-hierarchical cluster analysis, the number of clusters is determined in advance. In order to define the appropriate number of clusters the analysis was performed using 3-5 clusters and the pseudo F statistic was compared. The pseudo F statistic reached its culmination of 284,21 at three clusters and therefore this solution was chosen. The cluster centroids which represent the mean values of each chosen variable are displayed in table 15.

Table 15 Cluster Centroids of Consumer Groups

	Cluster 1 *(N = 436)*	**Cluster 2** *(N = 133)*	**Cluster 3** *(N = 276)*
1. The mobile advertisement was:			
a) Entertaining	3,34	2,08	3,07
b) Informative	4,09	2,71	4,04
c) Useful	3,79	1,77	3,7
d) Interesting	3,69	1,99	3,51
e) Credible	4,12	2,77	4,16
2. In general I like mobile marketing	3,65	1,72	2,22
3. Mobile marketing helps me keep up-to-date about products and services that I need	3,83	1,71	2,44
4. Mobile marketing is intrusive	2,47	4,26	3,64
5. Mobile marketing is more manipulative than informative	2,45	3,51	3,24

The cluster centroids act as a basis for further analysis and formation of consumer profiles (Malhotra & Birks, 2006 p. 606). Based on the cluster analysis three different attitude profiles can be extracted from the data. The analysis of the cluster centroids in table 15 enables the characterization and naming of the clusters. In order to ease this process the most central cluster centroids are explained in detail in table 16.

Table 16. The Interpretation of the Cluster: Crucial Cluster Centroids

	Cluster 1	Cluster 2	Cluster 3
The mobile advertisement was	• informative • useful • interesting • credible	• not useful • not interesting • not entertaining	• informative • useful • interesting • credible
In general mobile advertising	• is somewhat likeable • is not very intrusive • is not very manipulative • helps me keep up-to-date about interesting products	• is not likeable • is intrusive • is manipulative • does not help me keep up-to-date about interesting products	• is not very likeable • does not help keep up-to-date about interesting products • is somewhat intrusive • sometimes more manipulate than informative

The clusters were named and interpreted on the basis of table 16 and the following attitude profiles of mobile marketing were formed:

- *Mobile marketing positives:* These consumers consider that mobile advertisements are especially informative and credible. In addition they feel that advertisements are somewhat useful and interesting. In general the positives feel that mobile marketing is neither intrusive nor manipulative. Instead mobile marketing can help in finding interesting products and services.

- *Mobile marketing negatives:* This group feels that mobile advertisements are not useful or interesting. However, they think that advertisements may be informative and credible. Generally these consumers consider that mobile marketing is very intrusive and not likeable.

- *Mobile marketing skeptics:* The cluster centroids of the skeptics were very close to those of the positives when it comes to attitude statements concerning attitude toward the particular mobile advertisement that they received. However, when it comes to

statements concerning attitude toward mobile advertising in general the centroids were close to those of the negative. Therefore it can be concluded that the skeptics appreciate well planned, targeted and informative mobile advertising but in general feel uncertain about mobile marketing.

The cluster analysis provides results that are somewhat surprising. Firstly, in contrast to prior expectations the cluster analysis did not reveal a consumer group with neutral attitudes toward mobile advertising. Instead the results revealed a group of consumers who seem to be skeptic about mobile advertising. This observation suggests that in profitable mobile marketing careful campaign planning exploiting the unique benefits of the mobile channel is vital. It seems that even though the skeptics generally have negative feelings toward the concept of mobile marketing, they welcome advertisements that meet their needs.

Because the ANOVA experiment performed earlier concerning the impact of permission type on attitude revealed differences between in attitudes, the cluster analysis was performed separately for each permission type. The purpose was to examine whether the results are similar to the clustering of the whole population. The results of the cluster analysis for each permission type are presented in Appendix 3. On average, the results of the cluster analysis based on permission type point to similar results as in the case of the entire sample. In other words, positives, negatives and skeptics are identifiable in almost all permission types. However, some minor differences exist. It seems that attitude toward mobile marketing in general and attitude toward mobile advertisement are the lowest in the case of the external permission database. In this case, the people have given their consent to mobile marketing and they may have received numerous mobile advertising messages that have not addressed their needs. Therefore, over time the attitude of these people toward mobile marketing may have grown negative.

Another dissimilarity between the complete clustering solution and the clustering by permission type is that in the case of the customer permission database, the attitudes of the most negative cluster seem to be leaning more towards neutral, a profile that is not present in any of the other permission types. All in all it seems that compared to the other permission types, this group on average exhibits the most positive attitude; a finding that is consistent with the ANOVA experiment in chapter 4.2.

Previous research concerning mobile advertising has indicated that generally consumers have negative attitudes toward mobile marketing (Tsang, 2004; Jun & Lee, 2007). However, the results of the cluster analysis demonstrate that in fact the mobile marketing negatives form the smallest cluster (N=133) and respectively the positives form the largest (N=436). In addition, when compared to the negatives the skeptics form a considerably large cluster (N=276). This means that the mobile marketing negatives represent a mere 15,7 % of the research sample. The number of observations in each cluster and the nature of each cluster yield promising information in respect to consumer attitudes toward mobile marketing. It seems that the majority of respondents were satisfied with the advertisements that they received.

4.5 The interplay between attitudes and purchase intentions

Partial least squares path analysis was used to examine the relationships presented in the research framework and to test H1, H2, H3, H4, H5 and H8. Since it can be expected that, for example, an increase in attitude toward mobile advertisement will increase the value of all manifest variables, a reflective model for PLS was chosen. The interpretation of a PLS model proceeds in two stages (Hulland, 1999). First, the reliability and validity of the model is estimated for the purpose of ensuring that the measures are reliable and valid before drawing conclusions. In the second stage the structural model is assessed.

The reliability of individual items is estimated by examining the loadings of measures with their construct (Hulland, 1999). Generally, items with loadings over 0,7 are accepted. However, it is common to find measurement items with loadings below the cut off. Hulland (1999) suggests that items with loadings less than 0,4 or 0,5 should be rejected. In this study, only one item loaded below the 0,70 threshold with a value of 0,67. Because it was just below the acceptable level, it was not rejected from the model. The rest of the items ranged from 0,74 to 0,93 and were therefore considered reliable measures of the constructs.

Table 17. Quality Criteria for PLS path analysis

	AVE	Root AVE	Composite Reliability	R Square	Cronbach's Alpha
B_a	0,7979	0,8933	0,9221	0,1652	0,8731
A_{mad}	0,6397	0,7998	0,8986	0,3163	0,8587
A_{mg}	0,6951	0,8337	0,9001		0,8517
Pi	0,7951	0,8917	0,9208	0,1083	0,8708

The validity of the path model was estimated by various quality criteria presented in table 17. When constructs are measured with multiple items, the degree to which the items are related to each other, in other words convergent validity, should be assessed (Hulland, 1999). Convergent validity is typically examined through Cronbach's alpha and Composite reliability. By convention Cronbach's alpha should be 0.80 or over for a good scale and 0.70 for an average scale (Garson, 2009). For this model, the scales measuring all of the constructs demonstrate values above 0,8. Therefore the scales can be considered appropriate for measuring the constructs. Composite reliability is an alternative to Cronbach's alpha. Often composite reliability is preferred because Cronbach's alpha commonly tends to underestimate the reliability of scales (Garson, 2009). The acceptable cutoff for composite reliability is the same as for Cronbach's alpha. Therefore based on composite reliability all scales in this study can be considered reliable.

Discriminant validity reflects the degree to which measures of a given construct differ from measures of other constructs in the same model (Hulland, 1999). Discriminant validity of a PLS model can be assessed by the Average Variance Extacted (AVE), which reflects the average communality for each latent factor and it is used to establish convergent validity (Garson, 2009). Since the AVE value for an adequate model should exceed 0.5 (see table 15) it can be concluded that the discriminant validity of the constructs used in this research is acceptable. In addition, AVE should be greater than the variance shared between the construct and other constructs in the model (Hulland , 1999). This can be demonstrated in a correlation matrix where the diagonal elements represent the square root of AVE. To establish discriminant validity, the diagonal

elements should be higher than the values in the corresponding rows and columns (Birkinshaw, 1995). Table 18 demonstrates that in this sense discriminant validity is established.

Table 18. Partial Least Squares: Discriminant Validity

	Latent variable correlations			
Brand attitude	**0,8933**			
Attitude toward mobile advertising in general	0,2948	**0,8337**		
Attitude toward mobile advertisement	0,4064	0,5559	**0,7998**	
Purchase intention	0,3291	0,4518	0,6207	**0,8917**

R^2 measures the overall effect size of the PLS model (Garson, 2009). The model indicates that 31 % of the variance of the A_{mad} variable is explained by the model. Chin (1998 cited in Garson, 2009) proposes results above the cutoffs 0.67, 0.33 and 0.19 to be substantial, moderate and weak respectively. Based on these cutoffs the R^2 coefficients for this model are moderate or weak (see table 15). The low R^2 value for brand attitude (R^2=0,209) indicates that the construct may depend on other variables not considered in this study (Drenger, 2008). For example, brand attitude is not only determined by the advertisement itself but factors such as previous experience with the brand and exposure to other advertisements from the same brand.

To test the hypotheses the path coefficients of the model were examined. The statistical significance of the paths was estimated by extracting the t-values through a bootstrapping procedure. The bootstrap procedure was tested multiple times with 200, 500 and 1000 samples. The 1000 sample solution was chosen because it gave the most consistent results. Next the significance of the paths was calculated in Microsoft Excel. The simplified PLS model with all statistically significant paths is presented in figure 8. A list of all path coefficients and their significance levels are presented in Appendix 7.
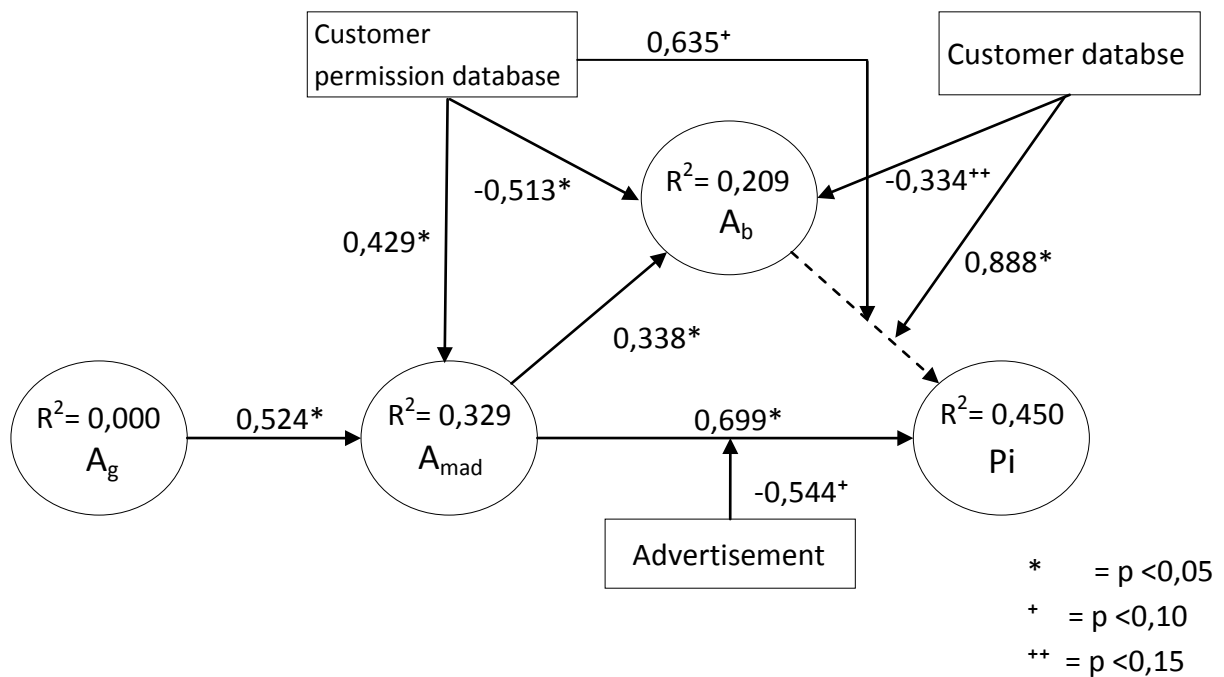
Figure 8. PLS Path Model

The results of the PLS path model indicate that there is a strong positive correlation between attitude toward mobile advertising in general and attitude toward mobile advertisement. Therefore, a person who likes mobile advertising in general is likely to have a positive attitude towards a particular mobile advertisement. This result is in line with previous research concerning the role of attitude toward advertising in general in the formation of attitude toward a specific advertisement. Thus H1 is confirmed. The model also confirms a positive relationship between attitude toward advertisement and brand attitude therefore validating H2.

However, the relationship between brand attitude and purchase intentions could not be confirmed as expected and therefore H3 is only partially supported. The model depicts that brand attitude influences purchase intentions only when the permission type is customer permission database and customer database. In the case of external permission base, brand attitude has no effect on purchase intentions. The interpretation of this result is that in the mobile advertising context, the brand influences purchase intentions only when there is an existing customer relationship and therefore the recipient of the advertisement has a bond with the brand. In this case mutual learning might have taken place during the lifetime of the customer relationship and

thus mobile advertisements can be targeted more precisely. The discussion above implies that H3 and H6 are only partially supported.

In addition, the model reveals a negative effect from customer permission database and customer database to brand attitude. This result indicates that when compared to the external permission database, the customer permission database and customer database have less impact on brand attitude. The result seems plausible because in the case of advertising based on the external database, the recipient of the advertisement may not have any tie with the advertised brand. Therefore the direct influence of external database on brand attitude is stronger and weaker when it comes to customer database and customer permission base.

Contrary to the results of attitude research regarding traditional advertising (Shimp, 1981; MacKenzie; 1983; Brown & Stayman, 1996), the results of this research indicate a strong direct relationship between attitude toward mobile advertisement and purchase intentions, thus confirming H4. The result implies that in the mobile marketing context the role of brand attitude may not be as significant as in the context of traditional advertising. Based on the above discussion, brand attitude mediates the relationship between attitude toward mobile advertisement and purchase intention only in the case of a previously existing customer relationship. Thus, when there is no prior customer relationship, the mobile advertisement has mostly a direct influence on purchase intentions. Regarding H8, the only moderating effect concerning campaign type was the negative influence of product-centric advertisements on the relationship between attitude toward mobile advertisement and purchase intentions. The result indicates that product and sales centric advertisements weaken the influence of attitude toward the mobile advertisement on purchase intentions. Event invitations on the other seem to strengthen the intention to participate in the event where as customer relation communication has no moderating effect.

4.6 Summary

In this chapter the results of this study were presented. The chapter began with an analysis of the demographic variables and their influence on attitude toward mobile advertising in general and attitude toward mobile advertisement. Based on a series of one-way ANOVA tests with the ACORN Star consumer class as independent variable and attitude as dependent variable no differences were found. However, a two-tailed t-test revealed differences between how men and women

react to mobile advertisements. In specific,women seemed to think that mobile advertising was more credible and useful. Next, differences in attitude toward mobile advertising in general between the primary sample and the control group were examined. The results indicate that when a person has just received a mobile advertisement he or she is likely to have a more positive attitude to mobile advertising.

In the following section the influence of permission and campaign type on attitude toward mobile advertisement was tested. Based on the results consumers have the most positive attitude toward mobile advertisements when there is an existing customer relationship and prior permission for mobile advertising has been obtained. In the case of campaign type, consumers react in a slightly more positive manner to customer relation communication than to pure advertising. Next cluster analysis was used to group respondents together based on their attitude toward mobile marketing. The analysis revealed three attitude profiles: the negatives, the positives and the skeptics. The skeptics have a negative attitude toward mobile marketing in general but nevertheless seem to like the mobile advertisements they receive. Finally the entire model was tested using the Partial Least Squares method. Most of the hypothesized relationships were confirmed. However, the role of brand attitude seems to be different than in previous research concerning traditional advertising. Moreover, the model emphasizes a strong direct relationship from attitude toward mobile advertisement directly to purchase intention.

5   CONCLUSIONS

This study has looked into the consumer view of mobile marketing. Specifically, the focus of the research has been on consumer attitudes and their impact on purchase intention. The contribution of this research for the field of mobile advertising lies in the fact that it is among the first studies to focus on different types of permission. The findings provide unique information as to how the use of existing customer data influences attitude toward mobile advertising when compared to consumer data provided by a third party. The results of the study highlight the importance of customer data in the design of mobile advertising campaigns. A large number of the campaigns participating in this study were designed to address a relevant consumer need by analyzing and refining consumer data. The results of this study indicate that when the mobile advertiser has the possibility to target actual needs of customers based on existing customer data, attitudes toward mobile advertisements are likely to be high. This implies that mobile advertising should be based on service rather than selling.

5.1   Summary and discussion

The theoretical part of the study began by discussing attitudes in the context of social psychology and advertising psychology. Based on literature from both research streams attitude toward advertisement was defined as an affective construct. Next attitude toward advertising in general was discussed since it is seen to influence they way consumers perceive advertisements. When considering consumer perceptions of advertising, previous research suggests that at the same time the same consumers may hold both positive and negative attitudes toward advertising. In specific, consumers tend to think advertising in informative and entertaining. However, they also consider it to be misleading and untruthful.

Next, theories related to the consumer view of mobile advertising were discussed. It was established that in the changing advertising environment the mobile is the only advertising channel which simultaneously offers location specificity and interactivity. This unique combination offers an entirely new consumer experience. When implementing mobile advertising campaigns issues such as permission and privacy need to be considered. According to legislation in the European Union in the case of an existing customer relationship no prior permission for mobile advertising is needed. However, research has confirmed that allowing control over personal information has an impact on purchase intentions.

Based on the literature review a research framework was constructed to represent the research problem at hand. The research framework represents the constructs central to the study and their expected relationships. The purpose of the research framework was to guide statistical analysis and to answer the following research question:

What are the underlying factors which characterize the attitudes of Finnish consumers towards mobile advertising and what is the impact of attitudes on purchase intentions?

The research question was approached through a series of sub questions. Next the results of the study will be presented in light of these questions. In addition the results will be reflected on in the light of research results from previous research.

How do demographic variables influence attitude toward mobile advertising?

The demographic variables for the sample were obtained by using ACORN Star classifications. The classifications include the average age, level of income and education as well as lifestyle preferences of people living in certain geographical areas. The results of this study indicate that these factors have no influence on attitude toward mobile advertising in general or attitude toward mobile advertisement. However, gender seems to influence specifically attitude toward mobile advertisement. While men and women have a neutral attitude toward mobile advertising in general women seem to respond more favorable to the advertisements they receive. This result is in line with Leppäniemi's (2008) findings that women are more responsive to mobile advertising. In addition Leppäniemi's results indicated that income level had no influence on attitude which was also implied by the results of this study.

Leppäniemi (2008) as well as Rettie (2005) found that age is related to perceptions of mobile advertisements. However, this study found no inference to such relationship. The results of previous research together with the results of this study point toward the fact that demographic variables may not determine how consumers view advertising or how they make purchase decisions. In effect, as discussed in chapter 2.1.4. James and Kover (1992) suggest that demographic variables do not work as the basis for segmentation. As Urban (2004) states, modern consumer behavior is increasingly hard to predict. Perhaps the reason for this lies in the notion that demographics do not provide accurate representations of contemporary consumers and their lifestyles. Therefore it is increasingly important to target the actual needs of consumers. When an

advertisement reaches a consumer at the right time and in the right place it is likely that he or she will respond.

How does permission and campaign type influence attitude toward mobile advertisement?

Research by Tsang (2004) indicates that in general consumers have a negative attitude toward mobile advertisements unless prior permission has been obtained. In Finland mobile advertising is regulated by legislation and thus mobile advertising in almost all circumstances requires permission. However, if a customer relationship exists and the advertisement concerns products or services purchased by the customer no explicit permission is needed. This research studied how consumer attitudes differ when a customer relationship exists and explicit permission has been obtained in contrast to a situation where mobile advertising is based on the above mentioned exception.

The findings of this study conflict with those of Tsang's (2004). In effect, it was found that attitudes toward the advertisement were the most positive when a customer relationship existed and prior permission had been obtained. However, when mobile advertising was based on an existing customer relationship and previously purchased products or services attitude was nearly as positive. However, if data for mobile campaign implementation has been obtained from a third party, attitude was slightly negative. Because campaigns which utilized data from the customer base but required no prior permit generated positive attitudes, it can be said that it is not necessarily the permission that influences attitude but the relevancy and usefulness of the message itself. In the case of permits obtained from a third party, the advertiser may not have the relevant customer information to target the advertising accurately. The messages in this case may not be relevant to the receiver because he or she may not have any prior knowledge of the company. In addition, he or she may not be interested in the offering presented. When existing customer data and purchase history can be used as the basis for campaign planning the effectiveness of the campaign escalates.

In the case of campaign type the results imply that when the mobile advertisement is concerned with issues related to the customer relationship, attitude is more positive than in the case of pure product centric advertisements. Research in the domain of advertising as well as mobile

advertising has emphasized the role of information and relevancy in attitude formation (Calfee & Ringold, 1994; Coulter, 2001; Tsang 2004). Because advertisements focusing specifically on the customer relationship are often informative and relevant, it is natural that people generally like to receive them. However, the difference between pure product centric messages and messages focusing on the customer relationship was not major. In the case of the third campaign type, event invitation, no statistically significant differences were found. However, this may be due to the fact that the sample for event invitation was relatively small.

Do attitudes differ between consumers who have received mobile advertising and those who have not?

In the mobile advertising context, a considerable amount of research has been conducted on a general level (eg. Tsang, 2004; Jun & Lee, 2007), in other words by asking opinions concerning mobile advertising if the respondents were to receive an advertisement. Some studies in contrast have studied how consumers react to mobile advertisements which they have received (Barwise & Strong, 2002; Rettie, 2005). Because of contradicting results this study focused on examining attitudinal differences between consumers who received an advertisement and those who did not. The results indicate that when an advertisement has been received, attitude toward mobile advertising is positive. However, when an advertisement has not been received on average attitude toward mobile advertisement is less positive.

The results support the claim of Vatanparast (2010) that little by little consumers are getting used to mobile advertising. Because the mobile is a new channel in advertising there are certain prejudices related to it. However, when consumers continue to have positive experiences with the channel attitude towards mobile advertising in general is bound to increase. In order to ensure positive experiences in the future, mobile advertising campaigns should be planned and executed according to carefully implemented plans and extra attention should be guided toward segmentation and targeting.

What impact does attitude toward mobile advertising in general have on attitude toward a specific mobile advertisement?

The results of PLS path modeling demonstrate that there exists a strong positive correlation between attitude toward mobile advertising in general and attitude toward specific mobile

advertisement. The finding is in inline with the research from the field of advertising psychology (eg. James & Kover, 1992; Mehta, 1995). Thus, it can be concluded that when a person has a positive attitude toward mobile advertising in general he or she is more likely to have a positive attitude toward a specific mobile advertisement. Therefore, the concept of attitude toward mobile advertising in general is an important determinant of mobile advertising success. To aid the success of mobile advertising campaigns, efforts should be made to raise public perceptions regarding mobile advertising on a general level. As was noted above, people who have received a mobile advertisement tend to like mobile advertising more when compared to those who haven't received an advert. Consequently, it can be stated that even the mere use of the mobile channel as a part of advertising campaigns has an impact in public perceptions of the channel.

How does attitude toward mobile advertisement influence attitude towards advertised brand?

Previous research in the field of advertising psychology has consolidated the influence of attitude toward advertisement on brand attitude which in turn has been found to influence purchase intentions (Shimp, 1981; MacKenzie; 1983; Brown & Stayman, 1996). However, the results of this study question the role of the brand in the mobile advertising context. The PLS model depicts a moderate correlation between attitude toward advertisement and brand attitude. However, the relationship between brand attitude and purchase intention exists only in the case of an existing customer relationship. Moreover, when a customer relationship exists the direct influence of permission type on brand attitude is negative in contrast to the external database. The reason for this may be that if a person has given general consent for mobile marketing, he or she may generally have a more positive attitude toward advertising and brands.

The result implies that in the case of an existing customer relationship an attitude toward the brand has already been formed during the lifetime of the relationship. Thus when the person receives a mobile advertisement, it has little impact on the brand attitude. However, when there is no customer relationship or no prior perceptions related to the brand, the mobile advertisement may have a stronger influence on brand attitude. Although the PLS model revealed no moderating effects of permission base on the relationship between attitude toward mobile advertisement and brand attitude, the respondents answered the questionnaire under the influence of a received advertisement. Therefore the effects of the advertisement may also be reflected in the negative

correlation between customer permission base, customer database and brand attitude. In conclusion, it can be said that the direct impact of mobile advertisement on brand attitude is weaker than expected. Instead the extent to which a customer relationship exists seems to determine brand attitude in the mobile advertising context. A possible implication could be that when using personal information from an external database, branded content may be more effective. However, when a customer relationship exists messages focusing on customer relation communication will yield better results.

Is there a relationship between attitude toward advertised brand and purchase intentions?

As discussed above, brand attitude does not mediate purchase intentions in the same way as in the context of traditional advertising. Instead, the PLS model confirmed a strong positive relationship directly from attitude toward advertisement to purchase intention. This result implies that when it comes to mobile advertising, brand attitude may not have such a central role in the formation of purchase intentions as suggested by previous research. Instead, the advertisement itself influences purchase intentions. The reason for the strong relationship between attitude toward advertisement and purchase intention may be that the mobile phone encourages direct response. Therefore if the offer presented in the advertisement is interesting or relevant enough, the respondent may react immediately regardless of the brand.

The implications discussed above have given insight in to the nature of the attitudes Finnish consumers have toward mobile marketing and how these attitudes influence purchase intentions. However, in order to gain more profound information concerning the underlying characteristics of consumer attitudes toward mobile advertising in Finland, consumer attitude profiles were formed. Three profiles were found. The positives accounted for 52 % of the sample where as the negatives represented only 16 %. 32 % of the sample were skeptics. These people felt uncertain about mobile advertising in general but liked the message they received regardless. Therefore the skeptics can be considered receptive to mobile advertising.

The negatives may be individuals who have limited experience with mobile advertising or they may dislike advertising altogether. Moreover, when compared to the promising attitude profiles the proportion of negatives is minor. In effect, the results revealed that over 80 % liked the advertisement they had received. In specific, the advertisements were considered extremely

informative as well as useful. These perceptions are similar to those found in research concerning traditional advertising (Calfee & Ringold, 1994; Coulter, 2001; Tsang 2004). However, traditional advertising literature has confirmed significant concerns related to mistrust in advertising. This study on the other hand indicates that the majority of respondents found mobile advertisements to be credible. The clustering of the respondents therefore implicates that mobile advertising attitudes in Finland are more positive than expected.

5.2 Managerial Implications

Regardless of the possibilities that the mobile phone could offer for marketers, the uptake of the channel has been slower than anticipated. Greenville (2005 cited in Jayawardhena et al, 2008) states that the perceived lack of consumer trust is among the principal reasons for this prolonged progress. In his study, Greenville found that companies are hesitant to try mobile advertising since they fear how consumers will respond. The results of this study indicate that there is no need for such hesitation. When care has been taken to plan and target the campaigns accordingly consumer attitudes are mostly positive.

In order to get the most out of mobile advertising, marketers should concentrate on collecting customer data which can be used as a basis for mobile advertising. When the customer relationship matures the company can learn about the customer and provide better solutions to meet their needs. In addition, obtaining explicit mobile marketing permission can influence mobile campaign success. However, if the advertisement is related to products and services previously purchased by the customer, no permission in necessary. Since research has shown that demographic variables may not function well in segmenting for the mobile phone, the role of identifying actual consumer needs is emphasized. The modern consumer wants to buy solutions for their various problems and the marketer needs to provide these solutions at the correct time.

When planning the content for mobile campaigns, similar principles seem to apply than in the context of traditional advertising. Consumers especially value the information given by advertisements. Therefore mobile campaign planning should mainly focus on information relevant to the consumer. Messages with the focus of maintaining the customer relationship resulted in the most positive attitudes. Therefore these types of messages are bound to be the most profitable. Based on the results of this study it can be concluded that in mobile advertising the success lies in serving the customer rather than in selling.

5.3   Limitations and future research

The purpose of this research was to study the attitudes of Finnish consumers toward mobile advertising. However, the sample collected for this study represents only the customers of the 13 companies who participated in the research. Even though based on the ACORN Star classifications the sample is an adequate representation of the Finnish demographics, a few consumer groups are under or over represented. Therefore, the results of this study are not confirmatory as such but rather they give an idea of where mobile advertising is heading in the future. In addition, since the sample was collected in Finland, it can be seen to represent only the population of Finland. Therefore any generalizations in the international context should be made with caution.

The literature review for this study concentrated on the theoretical fields of social psychology, advertising psychology and mobile advertising. Based on literature in these fields, a research framework was constructed. The results of the study indicate that the role of brand attitude in the mobile advertising context is not as evident as suggested by research concerning advertising psychology. This difference in results raises questions regarding how well the research framework represents the different dimensions related to brand attitude. To confirm the results of this study more research should be conducted on the branding effects of mobile advertising.

The results of this study have given some indication as to what types of mobile marketing campaigns consumer are most willing to receive. It seems that campaigns which aim to serve the customer received the most positive responses. This result could be studied further by looking into the effect of push and pull marketing strategies discussed earlier in chapter 2.2.1. Previous research seems to agree that both push and pull strategies are used in mobile marketing (Scharl 2005; Rettie 2005; Salmenkivi & Nyman, 2007). However, there has been contradicting results as to which strategy is more effective. Quah and Lim (2002) argue that push marketing will be the dominant form in mobile marketing since consumers do not have to ask for the information that they need. Instead useful content is provided to them automatically. According to Quah and Lim (ibid.) pushing information in to a mobile device will save the time of consumers and keep them well-informed. This idea supports Lawer and Knox's (2006) idea of the active and informed contemporary consumer but it fails to consider the disturbance aspect of push marketing. In effect, Salmenkivi and Nyman (2007) suggest that pull strategies will be the most effective. Because of these contradicting views further research should be done to determine which strategy

is most effective in mobile advertising and under which conditions these strategies should be applied.

The results of this study reported differences in the attitudes toward mobile advertising in general between consumers who were exposed to a mobile advertisement and those who were not. It would be interesting to conduct further research concerning the attitudes of these two groups toward all advertising in general. This would reveal whether positive attitudes toward mobile advertising are related to positive attitudes toward all advertising in general or is there some unique variable related to mobile advertising which causes a positive attitude. In addition, as discussed in chapter 2.1.4 Kover (1992) and Mehta's (1995, 2000) research suggested that attitude toward advertising in general is channel dependent. Therefore it would be interesting to study how attitude toward advertising in general differs between different channels and how the mobile channel is situated in this context. Moreover, since this study concentrated only on SMS advertising, future research could focus on how consumers perceive the other possibilities offered by the mobile phone.

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Questionnaire: Primary sample

1. The message that I received was
   a. Entertaining /Boring   5   4   3   2   1
   b. Informative/Uninformative   5   4   3   2   1
   c. Useful/Useless   5   4   3   2   1
   d. Interesting/Uninteresting   5   4   3   2   1
   e. Credible/Not credible   5   4   3   2   1

2. In my opinion company X is
   a. Positive/Negative   5   4   3   2   1
   b. High quality/Low quality   5   4   3   2   1
   c. Valuable/Worthless   5   4   3   2   1

	Strongly agree				Strongly disagree

3. I am interested in getting more information   5   4   3   2   1
   concerning the product, service or event
   mentioned in the text message

4. I am interested in buying the product or   5   4   3   2   1
   service mentioned in the text message or
   taking part in the event

5. I will probably buy the product or service   5   4   3   2   1
   mentioned in the text message or take part
   in the event

6. In general I like mobile advertising   5   4   3   2   1

7. Mobile marketing helps me keep up-to-date   5   4   3   2   1
   about products and services that I am
   interested in

8. Mobile marketing is disturbing   5   4   3   2   1

9. Mobile marketing is more manipulative than   5   4   3   2   1
   it is informative

10. In general I am willing to receive mobile marketing   yes   no
    in the future   1   2

Questionnaire: Control group

1. I have received a mobile advertisement   Yes   No
   during the last six months   1   0

2. I have purchased a product or service upon   Yes   No
   receipt of text message   1   0

3. I have sent a text message to a number that   Yes   No
   I saw in an advertisement during the last   1   0
   six months

	Strongly agree				Strongly disagree
4. In general I like mobile advertising	5	4	3	2	1
5. Mobile marketing helps me keep up-to-date about products and services that I am interested in	5	4	3	2	1
6. Mobile marketing is disturbing	5	4	3	2	1
7. Mobile marketing is more manipulative than it is informative	5	4	3	2	1

8. In general I am willing to receive mobile marketing   yes   no
   in the future   1   2

9. Mobile advertising is

a. Entertaining /Boring	5	4	3	2	1
b. Informative/Uninformative	5	4	3	2	1
c. Useful/Useless	5	4	3	2	1
d. Interesting/Uninteresting	5	4	3	2	1
e. Credible/Not credible	5	4	3	2	1

10. In my opinion company X is

a. Positive/Negative	5	4	3	2	1
b. High quality/Low quality	5	4	3	2	1
c. Valuable/Worthless	5	4	3	2	1

ACRON Star classifications

ACORN Star main classes

<u>Boardroom Street A 1-4, families with high level of income and education</u>

Age:	35-49
Household size:	3-5 persons
Children:	2
Residence type:	detached house, town house
Income level:	upper quartile (over 36 000 €/year)

These areas are populated by people with the highest level of income and education in Finland. Because of their high income level they have a considerable amount of purchasing power and ability to invest. These families usually shop in specialty stores or high quality department stores. Even though consumption is a natural part of their everyday life, these families still value traditional values. They like to spend their free-time at their summer cottage but they also like to travel to exotic locations. These families may own more than one car. Typical car choices are, station wagons, SUVs and minivans.

Hobbies:

- culture, eg. theatre, opera, concerts and art galleris
- gardening
- golf and fitness

10,4 % of all households

<u>Family Road B 5-6, families with medium level of income living a rented residence</u>

Age:	18-39
Household size:	3-4 persons
Children:	1
Residence type:	rented appartment
Income level:	upper medium quartile (over 26 100 €/year)

Families living on the Family Road are active consumers, young families and single parents. However, also singles and pensioners live in this neighborhood. The residences have usually been rented or purchased as a first home. Usually the residences are apartments or townhouses. The children are usually in school-age and the parents are educated office workers. These families prefer to shop in affordable stores and supermarkets and they usually have one small car which is normally changes when family size grown.

Hobbies:

- Movies
- Music
- Gym

8,0 % of all households

Master's Alley C,D 7-11, well educated families living in central locations

Age: 18-29
Household size: 1-2
Children: usually none
Residence type: apartment
Income level: upper quartile (over 36 000 €/year)

People living on Mater's Alley have high income levels and they are well educated. A number of these people are Swedish speaking. The apartments which are owned by the residents are located in centers and in prestigious areas. However, a number of these consumers live more modestly in rented two-room apartments. They have considerable purchasing power and credit cards are used impulsively. They like to travel and they are interested in culture. Because these people live in city centers they often use public transportation. If they have a car it is normally a mid priced premium class car.

Hobbies:

- music and concerts
- culture such as movies, theater and art
- self education
- reading

22,0 % of all households

Wage-earner's Grove E.F.G 12-16, modest suburbs

Age: 18-29
Household size: 1-2 persons
Children: usually none
Residence type: rented apartment
Income level: lowest quartile (over 15 400 €/year)

These areas are populated with various types of people usually in small and modest rental apartments or student dorms. Some are young couples but most live on their own. Because of the modest income level, money is usually spent on daily needs. However, many of these people are aiming to purchase their own house some day. Most of the people in these areas use public

transportation. If a car is purchased, it is usually pre-owned and financed with credit from the dealer.

Hobbies:

- Self education
- Sports events

19,7 % of all households

Appletree slope H,I 17-21, high income areas in small cities

Age:	40-59
Household size:	4+
Children:	3+
Residence type:	detached house or townhouse
Income level:	upper medium quartile (over 26 100 €/year)

In these areas large detached houses, tidy gardens and a new family car in the garage are typical. The parents usually work in the manufacturing or service industries. Also, many of them are entrepreneurs. The children are teen-agers which is also evident in the way that they spend money. These families are wealthy with a good salary and often income from rent and dividends. Money is spent on renovating the home, computers and travelling. Many of the families have more than one car.

Hobbies:

- renovating the home
- gardening

22,5 % of all households

Ankdammsvägen J 22, Swedish speaking population centers

Age:	45-69
Household size:	5+
Children:	3+
Residence type:	detached house
Income level:	lower medium quartile (over 20 800 €/year)

These Swedish speaking areas are normally located in rural areas and population centers. In these households the most value is placed on the family. Education is appreciated and money is used wisely. Many of the residents in these areas are entrepreneurs, office workers or farmers. In addition to their home they usually own a summer cottage. Also travelling is valued during their free-time. These families choose large family cars.

Hobbies:

- gardening
- summer cottage
- golf

3,2 % of all households

<u>Barn Boulevard K23-26, quiet rural areas</u>

Age:	60+
Household size:	5+
Children:	3+
Residence type:	rented apartment
Income level:	lower medium quartile (over 15 000 €/year)

These areas are located in quiet rural areas and on the sides of small cities. The residents are usually older couples, workers and pensioners who appreciate comfort. Their low income is mostly spent on daily expenses as well maintaining their home and car. They shop in inexpensive stores and local grocery shops. Credit cards are hardly used. These people like to renovate their old and modest house and they are not planning to move even though their children don't live at home anymore. The family car has been chosen from the mid price range and it has been driven for a long time. It was new at purchase but care has been taken to maintain it.

Hobbies:

- picking berries
- car repair
- handicrafts

13,1 % of all households

ACORN Star subclasses

A1 Executive families with high income living in detached houses
A2 Wealthy trendsetters in townhouses
A3 Wealthy families with children in population centers
A4 Families with children living in new residential areas
B5 Families with good income living in the suburbs
B6 Households with low income living in detached houses
C7 Wealthy individuals with purchasing power living in city centers
C8 Well educated families with good income living in city centers
C9 Wealthy couples living in prestigious suburban areas
D10 Working class families living in apartments in old suburban areas
D11 Families with low income living in cities

E12 Households with low income living on hire in cities

E13 Young singles living in old apartment buildings in suburban areas

F14 Singles living in small cities

F15 Singles living in old suburban areas

G16 Residents in institutions and dorms

H17 Working class families with medium income living in small localities

H18 Wealthy families with children living in the centers of rural areas

H19 Wealthy families living close to industrial centers

H20 Residents living in detached houses in small cities

J22 Swedish speaking families in rural areas and the suburbs

K23 Aging households with low income living in quiet villages

K24 Singles living in scattered settlements

K25 Aging landowners in rural areas

K26 Households with medium income living in parishes

(Source: Itella Asiakkuusmarkkinointi, 2010)

	Mean	Standard deviation
Boardroom Street (N=170)	3,55	0,92
Family Road (N=83)	3,54	0,93
Master's Alley (N=232)	3,64	0,92
Wage-earner's Grove (N=77)	3,64	0,97
Appletree Slope (N=180)	3,63	0,89
Ankdammssvägen (N=11)	3,27	1,1
Barn Boulevard (N=41)	3,56	1,07
TOTAL	3,6	0,93
F		0,49
Significance		p=0,8154

Table 1. One-way ANOVA: the influence of consumer class on attitude toward mobile advertisement in the primary sample

	Mean	Standard deviation
Boardroom Street (N=170)	2,92	0,57
Family Road (N=83)	2,95	0,56
Master's Alley (N=232)	2,99	0,52
Wage-earner's Grove (N=77)	3	0,63
Appletree Slope (N=180)	2,97	0,53
Ankdammssvägen (N=11)	2,63	0,67
Barn Boulevard (N=41)	3,15	0,53
TOTAL	3	0,55
F		1,17
Significance		p=0,1157

Table 2. One-way ANOVA: the influence of consumer class on attitude toward mobile advertising in general in the primary sample

	Mean	Standard deviation
Boardroom Street (N=98)	3,02	0,58
Family Road (N=55)	3,15	0,56
Master's Alley (N=99)	3,1	0,61
Wage-earner's Grove (N=47)	3,15	0,55
Appletree Slope (N=95)	3,07	0,53
Ankdammssvägen (N=6)	3,17	0,41
Barn Boulevard (N=32)	3,25	0,62
TOTAL	3,01	0,56
F		0,84
Significance		p=0,5446

Table 3. One-way ANOVA: the influence of consumer class on attitude toward mobile advertising in general in the control group

	Positives (N=62)	Negatives (N=28)	Skeptics (N=74)
The mobile advertisement was:			
a) Entertaining	3,43	2,54	3,27
b) Informative	4,05	3,71	4,15
c) Useful	3,78	2,93	3,85
d) Interesting	3,58	2,89	3,91
e) Credible	4,14	3,61	4,15
In general, I like mobile advertising	4,11	1,82	3,09
Mobile marketing helps me keep up-to date about products and services that I need	4,2	2,04	2,04
Mobile marketing is intrusive	2,03	3,96	3,96
Mobile marketing is more manipulative than informative	1,95	3,25	2,68
In the future I would like to receive mobile advertising	6,89	6,1	6,69

Table X. Cluster analysis: Customer permission database

	Positives (N=247)	Negatives (N=121)	Skeptics (N=247)
The mobile advertisement was:			
a) Entertaining	3,49	2,25	2,98
b) Informative	4,38	2,7	3,91
c) Useful	4,22	2,04	3,45
d) Interesting	4,04	2,22	3,29
e) Credible	4,41	2,67	4,06
In general, I like mobile advertising	3,71	2,39	2,16
Mobile marketing helps me keep up-to date about products and services that I need	3,86	2,3	2,43
Mobile marketing is intrusive	2,47	3,6	3,7
Mobile marketing is more manipulative than informative	2,49	3,24	3,26
In the future I would like to receive mobile advertising	6,78	6,26	6,16

Table X. Cluster analysis: Customer database

	Positives (N=74)	Negatives (N=28)	Skeptics (N=62)
The mobile advertisement was:			
a) Entertaining	3,8	1,82	3,1
b) Informative	4,2	2,36	3,74
c) Useful	4,2	1,54	2,65
d) Interesting	3,9	1,68	2,77
e) Credible	4,7	2,59	3,84
In general, I like mobile advertising	3,9	1,32	2,54
Mobile marketing helps me keep up-to date about products and services that I need	3,6	1,5	2,55
Mobile marketing is intrusive	3	4,72	3,26
Mobile marketing is more manipulative than informative	3,3	3,63	2,87
In the future I would like to receive mobile advertising	6,7	6	6,19

Table X. Cluster analysis: External permission base

	Positives Group 1			Negatives Group 2			Skeptics Group 3		
	P1 (N=62)	P2 (N=247)	P3 (N=74)	P1 (N=28)	P2 (N=121)	P3 (N=28)	P1 (N=74)	P2 (N=247)	P3 (N=62)
The mobile advertisement was:									
a) Entertaining	3,43	3,49	3,8	2,54	2,25	1,82	3,27	2,98	3,1
b) Informative	4,05	4,38	4,2	3,71	2,7	2,36	4,15	3,91	3,74
c) Useful	3,78	4,22	4,2	2,93	2,04	1,54	3,85	3,45	2,65
d) Interesting	3,58	4,04	3,9	2,89	2,22	1,68	3,91	3,29	2,77
e) Credible	4,14	4,41	4,7	3,61	2,67	2,59	4,15	4,06	3,84
In general, I like mobile advertising	4,11	3,71	3,9	1,82	2,39	1,32	3,09	2,16	2,54
Mobile marketing helps me keep up-to date about products and services that I need	4,2	3,86	3,6	2,04	2,3	1,5	2,04	2,43	2,55
Mobile marketing is intrusive	2,03	2,47	3	3,96	3,6	4,72	3,96	3,7	3,26
Mobile marketing is more manipulative than informative	1,95	2,49	3,3	3,25	3,24	3,63	2,68	3,26	2,87
In the future I would like to receive mobile advertising	6,89	6,78	6,7	6,1	6,26	6	6,69	6,16	6,19

Table X. Cluster analysis: Customer permission database

P1 = Customer Permission database

P2 = Customer Database

P3 = External Database

PLS path model: central statistics

	Path coefficient	Sample Mean	Standard Deviation	Standard Error	T Statistics
Ab -> Pi	-0,1342	-0,1057	0,1829	0,1829	0,7336
Ab * CDB -> Pi	0,888	0,8047	0,4719	0,4719	1,8818
Ab * CRC -> Pi	-0,0871	-0,0963	0,3473	0,3473	0,2509
Ab * Ad -> Pi	0,1357	0,1335	0,386	0,386	0,3517
Ab * CPDB -> Pi	0,6346	0,5594	0,3937	0,3937	1,6119
Ag -> Amad	0,524	0,5162	0,1336	0,1336	3,9227
Ag * CDB -> Amad	0,0364	0,0251	0,1924	0,1924	0,1894
Ag * CRC -> Amad	-0,0606	-0,0337	0,1656	0,1656	0,3662
Ag * Ad -> Amad	0,0601	0,0194	0,1406	0,1406	0,4278
Ag * CPDB -> Amad	-0,2853	-0,2683	0,2122	0,2122	1,3445
Amad -> Ab	0,3377	0,3425	0,1627	0,1627	2,0752
Amad -> Pi	0,6989	0,6641	0,184	0,184	3,7985
Amad * CDB -> Ab	0,0355	0,0964	0,2598	0,2598	0,1367
Amad * CDB -> Pi	-0,1207	-0,0471	0,3314	0,3314	0,3642
Amad * CRC -> Ab	0,1898	0,0827	0,3283	0,3283	0,5781
Amad * CRC -> Pi	-0,2092	-0,2011	0,3289	0,3289	0,6361
Amad * Ad -> Ab	0,1683	0,1129	0,3283	0,3283	0,5127
Amad * Ad -> Pi	-0,5444	-0,5488	0,3423	0,3423	1,5904
Amad * CPDB -> Ab	0,2926	0,3327	0,275	0,275	1,0641
Amad * CPDB -> Pi	-0,031	0,0365	0,2816	0,2816	0,11
CDB -> Ab	-0,3345	-0,382	0,2227	0,2227	1,502
CDB -> Amad	0,0929	0,1056	0,1623	0,1623	0,5723
CDB -> Pi	-0,4975	-0,471	0,4044	0,4044	1,2303
CRC -> Ab	-0,1513	-0,0448	0,3231	0,3231	0,4682
CRC-> Amad	0,0775	0,0514	0,172	0,172	0,4503
CRC -> Pi	0,2617	0,2631	0,2706	0,2706	0,967
Ad -> Ab	-0,1017	-0,0415	0,3532	0,3532	0,288
Ad -> Amad	-0,103	-0,1029	0,1113	0,1113	0,9257
Ad -> Pi	0,311	0,3169	0,3207	0,3207	0,9698
CPDB -> Ab	-0,513	-0,545	0,2552	0,2552	2,0104
CPDB -> Amad	0,4293	0,4132	0,1762	0,1762	2,4357
CPDB -> Pi	-0,3737	-0,3542	0,3618	0,3618	1,0331

Abbreviations:

Ab	Brand attitude
Ad	Advertisement
Pi	Purchase intentions
Amad	Attitude toward mobile advertisement
Ag	Attitude toward mobile advertising in general
CDB	Customer database
CRC	Customer relation communication
CPDB	Customer permission database