Smart Marketing In Smartphones

- A Quantitative Study on Mobile Advertising Effectiveness -

The rise of smartphones is creating smarter consumers - introducing opportunities for smarter marketing. Mobile media investments in Sweden skyrocketed by 23.3% from 2009 to 2010, exhibiting the strongest growth across all media investments. The main purpose of this thesis is to investigate which type of mobile advertising format is most effective - mobile coupons or mobile banners - and whether or not location based advertising can increase the effectiveness, while factoring in different levels of product involvement. The results from the experimental study with 365 participants from Sweden suggest that mobile coupons can strengthen purchase intentions and word-of-mouth intentions more effectively than mobile banners. Location based services in mobile advertising can also increase purchase intentions. The effectiveness was moderated by stronger associations of innovativeness and perceived advertising value.

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Keywords: Mobile Advertising Effectiveness, Signal Effects, Location Based Advertising, Product Involvement, Mobile Coupons

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1. Introducing Opportunities for Smart Marketing

"Smartphones have become the ultimate shopping companion - transforming us into more savvy consumers."

– Google, 2011

1.1 The New Era of Mobile Marketing

Run through a typical day in your mind, from the alarm going off in the morning to the lights being turned off before your head hits the pillow at night. What exactly are the steps you take, the daily routines that are a central part of your life? Whether you're moderately interested or expertly in-the-know when it comes to technology, the mobile phone is most likely involved in these routines. What wakes you up in the morning, how do you keep busy on the subway, how do you meet friends for a cup of coffee? The mobile phone is becoming increasingly vital to our everyday lives, as it serves as an intensely functional tool through calls, texting, picture taking, and now, the internet. This new mobile phone – the smartphone - is not only functional, but now a source of entertainment through games, music and interesting applications, as well as ultimately an expression of our own personalities (Yahoo!, 2011). This personal attachment to mobile phones is evident when looking at how, when and where smartphones are being used. Consumers are using smartphones at all times in all places, even while consuming other media; 33% use their smartphones while watching TV and 22% while reading newspapers (Google, 2011). Mobile advertising has become the new point-of-purchase (Kunur, 2010), with 79% of smartphone owners using a smartphone to help with shopping (Google, 2011) and 70% using a smartphone while in the store (Google, 2011).

The rise of smartphones is creating smarter consumers - introducing opportunities for smarter marketing (Google, 2011). Consumers are now using smartphones to compare prices, get promotions and coupons, read reviews and product information, check whether the product is in stock, and most frequently, to locate a retailer (Google, 2011). Finding local information is one of the most popular smartphone activities, as the data shows that 95% of smartphone owners look for local information (Google, 2011). Geographic positioning based on satellites is now regularly used by smartphones to help with directions, location information, and more

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recently, local deals and offers. No other medium is constantly in our possession the way mobile phones are, making location based services incredibly relevant and useful.

But exactly how deep has the mobile phone become entrenched in the world? In July 2010, the BBC reported over 5 billion mobile phone subscriptions worldwide, which at a world population of 6.9 billion, means a penetration rate of 72.6% (BBC News, 2010). In December 2010 in Sweden alone, the penetration rate was 111.5%, with 10.5 million mobile phone subscriptions (Mansfield, 2010). Smartphones are also on the rise, where in the US in the first quarter of 2010, 25% of mobile phones were smartphones (Shein, 2010). Nielsen research firm projects that by the end of 2011 in the US, over 50% of mobile phones will be smartphones (Shein, 2010). As for Sweden, in the first quarter of 2010, smartphone sales rose 244% compared with the same period in 2009, which was 31% of all mobile phones sold (Thoresson, 2010). However, in the last months of 2010 in Sweden, 50% of all mobile phones sold were smartphones (Thoresson, 2010). This rapid increase is only going to continue as smartphones become the standard, with mobile advertising also growing at a substantial rate.

It is predicted that in the year 2011, advertisers will spend $13-14 billion on mobile advertising worldwide (Farley, 2011). 90% of all smartphone users on five continents have made a purchase through their cell phones, and whether it is through applications, public transportation or a purchase through the internet, the capability and behavior exists (Farley, 2011). Mobile media investments in Sweden skyrocketed by 23.3% from 2009 to 2010, exhibiting the strongest growth across all media investments (IRM, 2011). In 2011, 28% of advertisers in Sweden intend to boost spending in the mobile marketing arena, which places mobile marketing third among the most increasing type of marketing activity after the internet and PR (Sveriges annonsörer, 2010).

While the investments in mobile marketing are increasing, so are marketers' need to produce tangible results to demonstrate their contribution on the financial performance and firm value (Srinivasan & Hanssens, 2009; O'Sullivan & Abela, 2007). The inability to account for marketing contribution has undermined the standing of the marketing discipline within firms (O'Sullivan & Abela, 2007). While the power of the marketing department within firms is declining, by strengthening both innovativeness and accountability, marketers can increase their influence and produce effective and measurable marketing plans (Verhoef & Leeflang, 2009). Smartphone marketing has the tools to enable measurable results, providing a detailed

analysis of the target group and media (Dahlén, et al., 2010) as well as tracking click-through and conversion rates (Zeitoun, 2011).

Mobile marketing has the features and characteristics to deliver effective advertising, but the question remains- what type of mobile marketing plan should a brand engage in so they maximize their desired impact on the business?

1.2 What has been explored?

Previous research on the topic of mobile marketing includes attitudes towards the mobile phone as a marketing medium, the effectiveness of SMS and MMS marketing (see definitions below), and responses to location based marketing.

Consumers have a special relationship with their mobile phones, as exemplified earlier in describing how central the mobile phone has become in our lives. Research by Kolsaker (2009) shows that the emotional attachment users have to their mobile phones is because the device provides communication which is so essential and adds such a high level of value to the user's life that people feel a bond with their mobile phones like no other product. Because of this attachment, Kolsaker suggests that mobile phone users are actually more welcoming to receiving messages via this medium. On the contrary, several studies propose that consumers generally have negative attitudes towards SMS advertisements (Tsang, Ho & Liang, 2004; Drossos, et al., 2007), however, research has also shown that attitudes towards advertisements in general, regardless of the media or various features, are negative (Mittal, 1994, cited in Xu, et al., 2009). The mobile phone engages with a captive audience (Farley, 2011), which Malthouse & Calder (2010) determine enhances consumer responses to advertising. The mobile medium is also unique compared to traditional media, since it allows for personalized, location based, interactive messages to reach a specific target audience (Sultan & Rohm, 2005).

Figure 1. A Comparison of Marketing Communication Approaches (Sultan & Rohm, 2005, p.85).
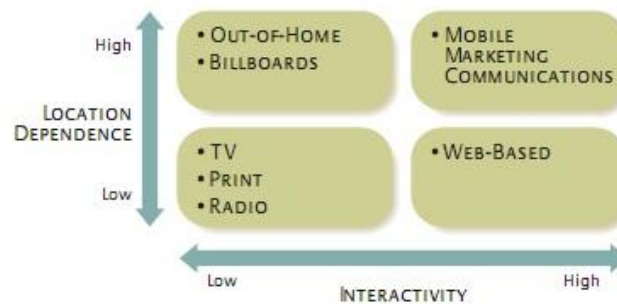
Various studies have been conducted in regards to the previously dominant mobile marketing tactics of SMS or MMS and the attitudes towards this type of mobile advertisement, best practices, and effectiveness. Scharl, Dickinger & Murphy (2004) identify two critical areas for success in mobile marketing; the medium and the message. Success factors for the medium include the technology of the device, the cost of buying and participating in this medium, and the integration with other marketing communication efforts. Success factors related to the message in SMS advertising include content, personalization, and permission from consumers. The message content will be successful if it consists of the following characteristics: short and to the point, entertaining, relevant to the target group, eye catching, and informative about prices and promotions. In relation to the entertaining aspect of message content, according to a case study by Brandweek (2009) on the automobile company Jeep's mobile marketing investments, advertisements in mobile games increased both brand awareness and purchase consideration. Personalization refers to sending timely, location based messages customized according to consumer preferences, while consumers increasingly expect tailored and location based advertising. There is, however, a trade-off between personalized messages and privacy concerns. Recent studies suggest that if a consumer gives permission to receive SMS advertisements, this increases attitudes towards the advertisement (Tsang, et al., 2004), brand attitudes, and purchase intentions (Smutkupt, Krairit, & Esichaikul, 2010). Consumers are also more likely to respond to the advertisement if they receive a discount or a promotional offer in exchange for making themselves available to advertisers (Rettie, et al., 2005).

Drossos et al. (2007) conducted an experiment regarding determinants of effective SMS advertising. They tested whether location, time, interactivity, incentive, credibility of ad source (individual or company), message appeal (emotional or rational), product involvement, and attitudes towards mobile advertising resulted in more positive attitudes towards the

advertisement/brand or higher purchase intentions. The most relevant results from Drossos et al. (2007) indicate that advertisements with incentives such as price discounts resulted in more positive attitudes towards the advertisement as well as higher purchase intentions versus advertisements without any incentives. Regarding product involvement, the study found that attitudes towards the advertisement, attitudes towards the brand, and purchase intentions were less favorable when the SMS advertisement involved a high involvement product versus a low involvement product. Also worth mentioning is that purchase intentions were higher when consumers were exposed to mobile advertisements with a rational message with informative content rather than emotional (Drossos, et al., 2007).

The results from Drossos et al. (2007) suggest that time and location does not affect attitudes towards the advertisement, attitudes towards the brand, nor purchase intentions. This is contradictory to earlier studies by Kang, Herr, & Page (2003), who found that targeting consumers in the right time and place allows for minimum perceived effort for the receiver in making the actual purchase of the advertised product, hence increasing purchase intentions. More recent studies on MMS advertising also indicate that location based messages lead to more favorable attitudes towards the advertisement, increase the intention to respond to the location based advertisement, and can stimulate purchase intentions (Xu, Ho, & Teo, 2009). Overall, the mobile marketing format has developed at an intensely fast pace, making it necessary to investigate the impact of advertising in the current mobile marketing climate.

1.3 What is the problem?

As these are still the early days of mobile marketing, advertisers have yet to explore and understand the best methods for interacting with consumers through this medium. As previously discussed, prior to smartphones, mobile marketing meant permission based SMS or MMS marketing. The trend in mobile marketing is moving away from SMS marketing, as consumers view texts as communication for personal use only, and more towards advertising in applications (Shein, 2010). The new way of mobile marketing, which on a smartphone is seen mostly through applications, allows for interactivity and location based services. But while theory dictates the new features of advertising should result in a higher level of effectiveness, the role these new characteristics actually play in mobile marketing has yet to be tested.

Inspired by companies that have shown early adoption of location based marketing such as Starbucks with Foursquare in the United States and Gina Tricot with Facebook places in the Swedish market, the authors wanted to test the effectiveness of location based advertising in smartphones. Previous research on the topic of mobile marketing effectiveness has found that location does not contribute to the effectiveness of SMS advertising (Drossos et al., 2007). Academic research on location based effectiveness covers only advertising and promotions through SMS with regards to mindset effectiveness measures (Unni, 2007). Companies such as Rabble in Sweden have been on the forefront of location based marketing using couponing, where consumers sign up to receive deals from businesses, and based on their relative geographic location, find the deals closest to them. This utilizes the relevance of location based marketing and the value added services of couponing.

Most statistics regarding the effectiveness of modern mobile marketing are presented by the companies selling advertising space; hence the data could be slightly biased. Mobilab, the agency behind Facebook places' mobile coupons, report their mobile coupons both build the brand and drive sales (Bonnier, 2011). Rabble has recently moved into the number four spot on iPhone's top free downloaded applications in iPhone app store in Sweden by relying mainly on word-of-mouth marketing (Rabble, 2011). This is an indication that this type of mobile marketing is highly effective in terms of word-of-mouth intentions (Realtid, 2011). Rabble further states that this type of mobile marketing is effective in increasing sales by driving new customers to the stores (Zeitoun, 2011).

In a study conducted by InsightExpress, it is proposed that mobile banner ads from companies across multiple industries are five times more effective in terms of purchase intentions than online banner ads (Widespace, 2010). A distinction is made between different industries; retail products show the highest purchase intentions for mobile banner ads- eight times more effective than online ads. This is followed by the technology industry which determines mobile banner ads to be seven times more effective. Showing the lowest relative increase in terms of purchase intentions over online banner ads is the consumption industry which is three times more effective, as well as the car and entertainment industries which are four times more effective versus online banner ads (Widespace, 2010). However, comparing mobile banner ads with online banner ads does not help marketers in deciding what type of mobile marketing strategy to apply. Nor does the industry categorization help to determine what type of products can benefit from this form of advertising. Academic research is

therefore needed to determine the difference in effectiveness levels between mobile marketing characteristics. Previous research also fails to explain the reasons behind increasing purchase intentions when a company uses various mobile advertisement formats and features, which can be determined by measuring the relationship between associations and purchase intentions.

Eye doctors, car companies, beverages and junk food manufacturers, and clothing brands… what do they all have in common? In one way or another, they are all making the leap into mobile advertising. This begs the question- what type of product benefits the most from mobile marketing? Is mobile marketing equally effective for both high and low involvement brands or will there be differences among ad formats or level of geographic targeting based on product involvement? In the Stockholm School of Economics master's thesis from Rebecca Lucander and Johan Radojewski from 2009 'Investigating Mobile Inertia', it is suggested that future research is needed to determine what industry or product is best suited for the mobile marketing format.

The question this thesis aims to explore is how businesses and advertisers can benefit from the uniqueness of the relationship we have with our smartphones through mobile marketing. The fact that the mobile phone is ubiquitous in nature, meaning it allows us to be reached everywhere at all times, is a characteristic not shared by any other marketing channel (Dahlén, et al., 2010), hence the importance of establishing the best practices behind reaching consumers through their mobile phones. Gaining an understanding of the most effective way of using mobile advertising is an essential task for today's marketing gurus, brand champions, and advertising geniuses alike.

This leads to the following research questions:
1. What type of mobile marketing creates stronger associations of innovativeness and caring to a brand?
2. What mobile advertising format is most effective?
3. Can location based advertising in the mobile marketing format increase effectiveness?
4. What level of product involvement is most effective in the mobile marketing medium?
5. Will there be differences in the perceived advertising value based on advertising format or level of geographic targeting?
6. Can the associations and the perceived advertising value from mobile marketing explain the higher effectiveness?

1.4 What is the purpose?

The main purpose of this thesis is to find out which characteristics of mobile marketing are most effective based on the type of advertising format- mobile coupons or mobile banners- and the level of geographic targeting, measuring against products with varying levels of involvement. The sub purpose is to investigate if there are any associations created from these types of mobile advertising which drive the effectiveness - purchase intentions and word-of-mouth intentions. From this information, advertisers will be directed to which type of mobile advertising (ad format and level of geographic targeting) is most effective for the type of product being advertised- high or low involvement.

1.5 What will this bring to the marketing world?

Currently, there is a lack of studies investigating how location based mobile marketing affects consumer behavior in different ways, as well as a lack in research on the effectiveness of mobile promotions versus mobile advertising. Nor has research been done which might suggest that mobile marketers should carefully choose the type of advertising format or level of geographic targeting based on the product they are advertising. Also important to understand is how these criteria interact with each other- whether a certain combination of advertising and targeting is best for a certain type of product. In this new media, marketers are simply learning by doing. The goal is to figure out a formula for providing the most effective mobile marketing tactics for advertisers and brands so they reach their consumers in a positive way that translates to increased sales- both in the short term through direct measures and in the long term through customer mindset metrics.

This research into the effectiveness of different types of mobile marketing should help advertisers understand if couponing or banners or location or non-location based messages is best suited for their high or low involvement products. The objective is to provide evidence to give confidence to mobile marketers that they are creating the most effective campaign for their product. From this study, advertisers should understand the result of using a particular type of mobile marketing campaign and how it would affect the signal effects, attitudes towards ads, purchase intentions and impulse buying intentions, and word of mouth intentions.

1.6 Holding Back

This study has a few limitations due to a lack of resources- time, money, and people. First, this thesis focuses on two types of advertising formats- coupons and banner advertisements, and two levels of targeting- with or without location based advertising. As there are a number of various features of mobile marketing, focusing on these formats leaves other types of mobile marketing unexplored. Second, this study did not have a control group, which would have measured mobile advertising in relation to alternate types of media, such as the internet or print. This would have allowed for an overall indication of the effectiveness of mobile advertising using banners or coupons verses other advertising media using banners or coupons. However, this would have required a much more in-depth survey and would only measure the type of advertisement and product involvement, not the location or non-location based variable.

The target group was also very specific- students living in Stockholm mainly between the ages of 19 and 28. Alternate characteristics, such as employed, older, non-Swedes might have had a much different reaction to the survey. However, it was known that the people in our chosen demographic were likely to be familiar with smartphones, therefore the data would be more relevant and realistic. Also, the aim of the study is to find out if there is variation of the effectiveness based on the types of mobile advertising, not based on different groups of people.

1.7 Words to Know

It is important to understand terms being used in this discussion, as many definitions vary for certain concepts. The following provides the necessary terminology for the words critical for this thesis:

Mobile marketing   "Mobile marketing is a set of practices that enables an organization to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network." (Mobile Marketing Association, 2008)

Mobile advertising   Mobile advertising is the efforts of brands through companies or agencies which produce material to attract consumers to their products via the mobile phone. This is mostly seen through banner advertisements in applications or SMS advertising, and

for the purpose of this thesis, applications offering mobile coupons or discounts via smartphone are considered a form of mobile advertising. (Mobile Marketing Association, 2008)

SMS

SMS stands for short message service, which allows for messages to be instantly received in a text format via mobile phones. As the first form of mobile marketing, companies obtained permission from cell phone users before sending information via SMS regarding their product or service. (Mobile Marketing Association, 2009)

MMS

MMS stands for Multimedia Messaging Service and enables images, audio, and video files to be transmitted with a text message to a mobile phone. (PC Magazine encyclopedia, 2011).

Smartphone

'A cellular telephone with built-in applications and Internet access. Smartphones provide digital voice service as well as text messaging, e-mail, web browsing, still and video cameras, MP3 player and video viewing. In addition to their built-in functions, smartphones can run a myriad applications, turning the once single-minded cell phone into a mobile computer.' (PC Magazine encyclopedia, 2011).

Applications

Mobile applications consist of software that runs on a mobile device and performs certain such functions such as Communications (email, social networks), Games, Multimedia (audio/video players), Productivity (calculators, word processors), Travel (city guides, GPS, weather), and Utilities (address book, call manager). (Mobile Marketing Association, 2009)

Mobile Banner

"A banner advertisement is a static or animated image, text, or combination of these that can be placed in defined areas within the application. Users should be able to navigate and click on the banner ad to access more information from the advertiser, a design that's known as a dynamic banner ad" (Mobile Marketing Association, 2009, p. 19).

Mobile coupons

Mobile coupons are discounts and deals for products or services which are available through a number of services such as SMS, MMS, applications, web, etc. For the purpose of this thesis, the focus is on coupon applications which the mobile phone user has previously downloaded. These mobile coupons can be seen either through text messages which are sent out by the company

directly to the consumer or by the consumer accessing the application on their own. (Mobile Marketing Association, 2011)

High Involvement Products	High involvement products are those which hold a great deal of relevance, importance, and value to the consumer. (Zaichkowsky, 1985)
Low Involvement Products	Low involvement products are those which do not hold a great deal of relevance, importance, and value to the consumer. (Zaichkowsky, 1985)
Location Based Advertising (LBA)	Location Based Advertising is a form of marketing which uses geographic location information to target consumers based on where they are at a given point in time. This function often requires the consent of the user and requires an internet connection in order to be activated (Mobile Marketing Association, 2008).
Non-Location Based Advertising	Non-location based advertising refers to marketing which does not employ geographic positioning to target consumers. (Mobile Marketing Association, 2008)
Level of Geographic Targeting	For the purpose of this thesis, 'level of geographic targeting' refers to whether or not the advertisement uses location based capabilities.

1.8 Thesis Outline

This thesis is divided into five sections- introduction, theory, methodology, results and analysis, and discussion. The above introduction included the current background on the topic as well as previous research and areas for further exploration in this thesis. This section also included the reasons why this topic needs to be examined as well as expected contributions to the marketing world. The limitations in this study were also addressed and the reasoning behind the choices justified. Finally, relevant definitions were covered, which will be useful for understanding this thesis.

Chapter 2, the theory section, will take an in-depth look at the supporting evidence behind the hypotheses. Chapter 3, the methodology section, will explain how the respondent base was chosen and the overall approach to the study. Further descriptions of the experiment design, manipulations, questionnaire, sampling, and pre-tests will be included. This chapter will also

consist of an explanation behind the analytical tools used such as Qualtrics and PASW (formerly SPSS), and an examination of the data quality in terms of validity and reliability. In Chapter 4, the results and analysis section, the hypotheses will be listed, as well as a discussion around the significance levels and whether or not the hypotheses are supported. In Chapter 5, the discussion section, the conversation will include how the analysis of the results can be used to determine overall conclusions as well as the practical implications of the results. Potential criticism of the experiment and analysis, as well as opportunities for future research will also be examined in this final section.

2. Theory & Hypotheses Generation

This chapter presents theories regarding the independent variables of ad format, level of geographic targeting and level of product involvement as well as the dependent variables, the potential signal effects (innovativeness and caring) and perception of advertising value that smartphone marketing can evoke. To determine the effectiveness of the different practices of mobile advertising, the measurements include the intended behavior (purchase intentions and word-of-mouth intentions). Each theory is first presented in general, followed by the corresponding hypotheses.

2.1 Independent Variables Background

The independent variables for this study were chosen based on their importance to the mobile marketing media format. The authors found that these are the most relevant characteristics to consider in making decisions from a mobile advertising perspective due to their newness and uniqueness to this format. In looking at the matrix presented in Figure 1 (Sultan & Rohm, 2005), the two measurements are directly related to the independent variables of geographic targeting and ad format, where ad format varies in terms of interactivity. Mobile marketing is unique in comparison to other forms of media, as it allows for the qualities to be manipulated on a number of levels. Hence, it is important to determine which levels are most effective for which products, and the characteristics and benefits of each variable are discussed below.

2.1.1 Mobile Advertising Format

In looking at the definitions of mobile coupons and banners, it is clear that the two ad formats have a number of different defining characteristics. Interactivity, value added qualities, and information levels are three main points of distinction found between mobile banners and mobile coupons.

The majority of studies have confirmed that a higher level of interactivity commands more favorable attitudes towards the ad and brand, higher purchase intentions, and higher degrees of comprehension of the advertisement (Gao, et al, 2010). Therefore, understanding how the two ad formats vary in terms of interactivity is key, with the variation mostly seen in the initial stages of advertising. Mobile coupons in applications by definition require active

participation by having consumers sign up to receive these deals and notifications prior to receiving the message, while banners simply send out unsolicited messages to the consumer. Spreadability is also a type of interactivity that differs between the two; mobile coupons typically offer and encourage posting to social media or sharing with friends, while banner advertisements often do not highlight this option (Pawlowski, 2011). However, both formats allow for interactivity when consumers take the next steps- either by clicking on the banner or viewing the coupon, thus being routed to another page, further promoting interactivity between the consumer and brand (Mobile Marketing Association, 2009).

Value added qualities also vary between the two. Mobile coupons provide the discounts which allow for assistance in purchase decision making through lowering the financial risk of trying new products (Keller, Apéria, & Georgson, 2008). While coupons offer tangible financial rewards, banners can offer more intangible and subjective benefits. More design-oriented advertisements are shown to increase positive attitudes towards the ad (Pieters, Wedel, & Batra, 2010). Banners allow for a more aesthetically pleasing advertisement by including pictures and graphics, while messaged coupons are strictly text in their initial form.

Information differs among the formats as well- banners not only include graphics, but also address a brand's features and benefits, while coupons simply state that an offer or deal is active for a particular brand. In our study, neither banners nor coupons discussed pricing; however coupons do suggest a level of savings that could lead to a general conclusion on what the pricing might look like. Therefore, the level of information included in banners and coupons might be similar, while the variation in informational content is the key differentiator.

2.1.2 Level of Geographic Targeting

One of the major advantages of mobile marketing to smartphones is that it can use geographic satellite positioning technology to target the location of a mobile user (Scharl, et al., 2005). However, this feature must be activated with consent from the user, and not all agree to this parameter due to privacy concerns (Xu, et al., 2009). Understanding the location of a consumer can lead to more relevant messages, taking into consideration the area of town and therefore general assumptions on the demographics of the consumer. Habits and preferences

can also be determined based on a number of smartphone location based activities, such as 'checking in' to locations via Facebook places or Foursquare or gathering data on purchases made using mobile coupons. Relevant messages are proven to increase attitudes towards the brand and increase purchase intentions among the target group (Keller et al., 2008). However, not all mobile marketing advertisers are taking advantage of this feature; therefore this experiment aims to test the potential importance of using location based services in mobile advertising.

2.1.3 Product Involvement

In any marketing decision, it is necessary to consider the type of product as well as the end goal of the communication at the start of the process. The products in this thesis have been categorized based on their level of involvement, which from the pre-study was determined to be a car at the high involvement end of the spectrum, and toilet paper on the opposite end (Appendix 1). There are many factors that differentiate high involvement products from low involvement products. As noted earlier in the definitions section, the involvement level of products is determined by the degree of relevance, importance, and value to the consumer (Zaichkowsky, 1985). The level of risk (fiscal or psychological) is also a component of involvement (Percy & Elliot, 2009), which can vary significantly based on the target audience, but remains similar among homogenous groups (Clarke & Belk, 1979, cited in Gupta, Brantley & Jackson, 2010). There is also evidence that the brand is more important for high involvement purchases, as it eliminates risk in purchase (Keller, et al., 2008).

Involvement levels affect multiple aspects of the decision making process (Dahlén, et al, 2010), from how much time a person will take for information search prior to purchase, to the number of people involved in the decision, to the importance of a post-purchase evaluation for future purchases (Percy & Elliot, 2009). Understanding how a target group will rate the involvement level of a product helps to determine the ways in which they will process the message regarding that product, and therefore how that message should be communicated (Chang & Huang, 2002). Therefore, mobile advertisers must understand that mobile communication decisions may vary based on where their product is situated on the involvement scale.

2.2 Dependent Variables Background

2.2.1 Signal Effects/Associations & Advertising Value

In a world of information overload, consumers are not able or willing to process all the information exposed to them, but seek signals that can help them evaluate a brand (Kirmani & Rao, 2000). These signals include all of the marketing strategies and activities associated with the brand, for example, name, price, marketing expenses (Kirmani & Rao, 2000), type of media, and level of creativity (Dahlén, Friberg & Nilsson, 2009). Hence, marketers should be aware of signal effects and how brand associations can be added or enhanced. Previous research suggests that using creative media can lead to stronger brand associations (Dahlén, 2005), as well as create spillover associations of innovativeness and caring to the brand (Kocken & Skoghagen, 2009; Tesch & Zeng, 2010). As Dahlén, Rosengren and Törn (2008) discuss, marketing signals can arise from the execution and clever presentation of the brand. This thesis builds on these execution signal effects by showing that the features of varying mobile marketing characteristics can lead to certain brand associations. Due to the features of mobile marketing such as interactivity and the potential for relevant location based messages, the signal effects chosen to focus on in this study are innovativeness and caring.

How consumers evaluate the advertisement may affect their intentions to purchase the brand (Fishbein & Ajzen, 1975), and are therefore relevant to study in the mobile context. Consumers' perceptions of the advertising value are evaluated using the following variables: valuable, entertaining, informative, and irritating (Ducoffe, 1995). These variables were also tested and confirmed in a study of advertising on the web, which support its suitability in the mobile context (Ducoffe, 1996). Previous research reveals that the type of media can influence the perceived value of the advertisement, for example, newspapers are expected to carry the most informative and valuable advertisements while TV commercials are perceived as the most entertaining and irritating media (Larkin, 1979). This suggests that the mobile format in general will affect the perceptions of the advertising value, however the goal remains to find the difference between the mobile formats- couponing and banner advertisements. Also important in measuring the perceptions of advertising value is the variation based on the level of geographic targeting. Xu, Oh, & Teo (2009) state that previous research on how location based advertising affects consumers' evaluations of the advertisement is lacking, therefore, this study aims to contribute to this field of this research. The overall findings in Xu et al. (2009) indicate that consumers' perceptions of the

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advertisements are significantly affected based on whether or not the brand utilizes location based advertising in MMS and SMS mobile marketing.

2.2.2 Effectiveness Measurements: Purchase Intentions, Impulse Buying Intentions, Word-of-Mouth Intentions

Marketing effectiveness can be evaluated according to the brand value chain: marketing campaign investment → consumer mindset → market performance → shareholder value (Keller et al, 2008). Value is created through marketing activities (Keller et al., 2008), in this case the mobile advertisements- coupons and banners. The ability of the campaign to affect the consumer mindset depends on the quality of the campaign, which is determined by the clarity, relevance, distinctiveness, and consistency of the campaign (Keller, et al., 2008). In this thesis, relevance and distinctiveness are of major importance. The former determines how meaningful the campaign is to the receiver, while the latter concerns how unique, creative, or differentiating the campaign is in comparison to competitors (Keller et al., 2008). This affects the mindset of the consumer, both in terms of feelings towards the brand and knowledge gained from the campaign. The consumer mindset is measured by the level of awareness, associations created, attitudes towards the brand, and attachment towards the brand (Keller et al., 2008). In this thesis, the identity of the brand is kept anonymous to avoid bias, and respondents can only judge the brand from the manipulation shown to them. Therefore, respondents are forming brand associations based solely on manipulation shown in the experiment. The awareness of the brand as well as attitudes towards the brand are therefore not relevant in this study.

Consumer mindset metrics will have an outcome on the market performance (Srinivasan, et al., 2010), evaluated by measures such as price premiums, price elasticities, market share, cost structure and profitability (Keller et al., 2008). In this thesis, purchase intentions are measured and used as a proxy variable for actual purchase (Young, DeSarbo & Morwitz, 1998) and market performance. The variable is derived from the Hierarchy of Effects Model which consists of the following measurements: category interest → brand knowledge → brand attitude → brand buying intentions (Dahlén & Lange, 2009). The measurement of purchase intentions is generally an indication of actual purchase intentions, although many consumers make purchases without having previous intentions to buy (Young, et al., 1998). This connection between purchase intentions and actual purchases is suggested both in regards to higher involvement purchases such as a vehicle (Juster, 1966, cited in Young, DeSarbo &

Morwitz, 1998) and lower involvement purchases such as a fast moving consumer goods (Jamieson & Bass, 1989, cited in Young, et al., 1998). The market performance based on purchase intentions will in turn affect the shareholder value such as stock price and Price/Earnings ratio (Keller et al., 2008); however these measurements are out of the scope of this thesis.

While the Hierarchy of Effects Model shows category interest, brand knowledge, and brand attitude as the first stages of communication goals, the focus here is on the end stage- brand buying intentions, which in this thesis is referred to as purchase and impulse buying intentions. As the need for marketing accountability is growing, measuring purchase intentions becomes more important as it can explain future sales performance (Srinivasan, et al., 2010). Purchase intentions can be measured through direct questions but also explored through the potential impact of consumer mindset metrics, such as brand associations and the perceptions of advertising value. This thesis aims to measure purchase intentions using both methods, as it is one of the most important indications of the effectiveness of advertising. Impulse buying intentions is defined as "a sudden, often powerful and persistent urge to buy something immediately" (Rook, 1987, p. 191). This is an important factor to explore as the decision making process varies based on the type of purchase (planned or spontaneous), therefore the factors going into the decision will differ (Dahlén, et al., 2010). Hence, it is necessary to examine how the independent variables in this study will affect both purchase intentions and impulse buying intentions.

The model in this thesis uses word-of-mouth intentions as the final measurement, as there is a close link between word-of-mouth recommendations and effective advertising (Dichter, 1966). The logic behind most accepted effectiveness models is to understand what affects the consumer mindset in order to increase the value of the brand and stimulate purchases. However, the power and effectiveness of word-of-mouth communication should not be ignored, as it has significant implications on future success in terms of both consumer mindset and purchase intentions (Dichter, 1966). Therefore, the focus of this study lies on determining the associations that different characteristics of mobile marketing create and how that affects purchase intentions and word-of-mouth intentions.

2.3 Hypotheses Generation

2.3.1 Associations & Signal Effects: Innovativeness & Caring

Utilizing the new smartphone medium, especially with regards to mobile coupons, is expected to generate innovative associations to the brand. Mobile coupons are more novel than mobile banner ads, therefore it is expected that mobile coupons will carry over more innovative associations towards the brand than mobile banner ads. Hence, the brand using mobile coupons will be perceived as more modern, innovative, and new thinking.

The interactive (Gao, et al, 2010) and customer-oriented (Gröönros, 1994) aspect of the coupon format is expected to intensify associations of caring towards the brand. Mobile coupons involve and engage the consumer more than mobile banner ads, while adding value through the discount to the consumer. These factors could translate to the brand using mobile coupons being perceived as more customer-oriented (Kocken & Skoghagen, 2009; Tesch & Zeng, 2010), contributing to a higher level of the signal effect of caring.

H1a: Consumers will perceive a brand using mobile **coupons** as more **innovative** than a brand using mobile **banner** ads.

H1b: Consumers will perceive a brand using mobile **coupons** as more **caring** than a brand using mobile **banner** ads.

Location based advertising is a new technology, and therefore may enhance the innovative associations in comparison with non-location based advertising. Location based mobile advertisements, appearing when the recipient is located within a particular distance from where the advertised product can be purchased, may be perceived as more customer-oriented, interactive, and relevant than non-location based advertisements. Relevant advertising builds stronger associations than irrelevant advertising (Keller et al., 2008), further strengthening the idea that a brand using a location based advertisement will be perceived as more caring.

H2a: Consumers will perceive a brand using **location based** mobile ads as more **innovative** than a brand using **non-location based** mobile ads.

H2b: Consumers will perceive a brand using **location based** mobile ads as more **caring** than a brand using **non-location based** mobile ads.

2.3.2 Advertising Value

Xu, et al. (2009) found that location based MMS messages lead to more positive perceptions of the advertisement. On the one hand it increases the level of irritation, but on the other hand it enhances the informativeness and entertainment value even more, offsetting the irritation levels (Xu, et al., 2009). However, with the characteristics of modern mobile marketing varying greatly from MMS marketing, this study aims to take a closer look at how the perceptions of the advertising value differ based on the new qualities of mobile marketing.

While mobile marketing can take on varying forms which might affect the perceived advertising value, previous research has also found that these perceptions can vary depending on the advertising channel (Elliot & Speck, 1998). Therefore, this study aims to determine how marketing in the mobile format affects attitudes towards the advertisements, measured using the following variables:

Valuable refers to the ability of the advertisement to provide useful and important information to the respondent (Ducoffe, 1995). As Xu, et al. (2009) find in their study on location based advertising in relation to MMS and SMS marketing, 'targeted messages should also be of value in terms of relevance, personalization, and timeliness'. Since coupons provide a discount and location based advertisements provide useful information, those variables are expected to be perceived as more valuable.

Entertaining refers to the enjoyment of the message (Ducoffe, 1995) but in this context may also include the entertainment of the media and advertising format. Mobile applications in general may be perceived as entertaining due to the numerous games, music, visuals, and interactivity offered. In this thesis, the entertaining value of the advertisement is not expected to be high due to the lack of music, games, and visuals. However, the newness of mobile coupons and location based advertisements may contribute to these variables being perceived as slightly more entertaining than mobile banner ads and non-location based mobile advertisements.

Informativeness refers to the ability of the advertisement to supply relevant and up-to-date information to the consumer at the time when they need the information (Ducoffe, 1995).

Location based advertisements are perceived to more effectively supply information when needed and will therefore be valued as more informative than non-location based advertisements. It cannot be determined which ad format will be perceived as more informative since they both provide the same amount but different type of information, coupons informing about a discount and banner ads about features.

Irritating is a variable that may affect the perceived advertising value negatively, especially when advertised in a personal device such as mobile phones (Tsang, et al., 2004). It can also be argued that there is not enough space on the smartphone screen which makes the banner ad even more annoying than an internet banner. In that case, customers will ignore the message and as a result the effectiveness will be lower (Tsang, et al., 2004). However, marketing efforts that allow the consumer to choose to interact with the brand can be perceived as less obtrusive (Dahlén, 2010). A study on SMS advertising suggests that permission based advertisements are perceived as less irritating (Tsang, et al., 2004). Scharl, et al. (2005) also state that mobile marketers need to consider the optimal frequency and situation in which to expose people with mobile marketing in order to avoid irritating them. On the one hand, receiving a location based advertisement may be seen as intrusive and raise privacy concerns (Sultan & Rohm, 2005). However, advertisements that are relevant to consumers- as provided with location based advertisements- may be perceived as less irritating. Based on this reasoning, mobile coupons will be perceived as less irritating than mobile banners and location based advertisements will be perceived as less irritating than non-location based advertisements.

As the discussion above has shown, mobile coupons will be perceived as more valuable, entertaining, and less irritating and therefore generate higher evaluations of the advertisement than mobile banner ads. Location based advertisements will also generate higher overall advertisement value as they provide more informative and less irritating messages.

H3: Consumers' perceived **value of the advertisement** will be more positive for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

H4: Consumers' perceived **value of the advertisement** will be more positive for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.

2.3.3 Purchase Intentions & Impulse Buying

The ultimate long-term goal of all marketing communication is to influence consumers to purchase the product (Srinivasan et al., 2009). It has been shown that consumer mindset metrics such as brand awareness, brand associations, and brand attitudes (Keller, 2008) can explain sales variance (Srinivasan et al., 2010). Therefore, it is reasonable to assume that when measuring purchase intentions, the results will be in the same direction as the brand associations hypotheses. Communication strategies can have many different objectives- category need awareness, brand awareness, positive brand attitude shifts, and increased brand purchase intentions (Percy & Elliot, 2009). In accordance with the intended objective of the communication, advertisers select an applicable advertising or promotion strategy. Since the objective of promotions is to stimulate purchase intentions (Percy & Elliot, 2009), it is expected that the brand using mobile coupons will result in higher purchase intentions than the brand using mobile banner advertisements.

Receiving an advertisement in the right manner may also trigger impulse buying intentions. Research suggests that 36% of impulse buying is in response to receiving a message with a promotional offer (Youn & Faber, 2000), whereas traditional advertisements may affect consumers in the long run but are not recognized as stimulating impulse buying. Therefore, it is expected that mobile coupons will trigger higher impulse buying intentions in comparison to banner advertisements.

H5a: Consumer **purchase intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

H5b: Consumer **impulse buying intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

Location based advertisements have great potential to increase sales in a cost efficient way (Xu, et al., 2009) due to the fact that they are received based on proximity to retail locations. Location based targeting may therefore reach more relevant people close to the purchase decision, thereby not wasting resources on people outside their target group. As Kip Cassino, VP researcher at Borrell Associates, states, "what used to be called point-of-purchase is now

called mobile advertising" (Kunur, 2010, p. 1). This quotation is based on the assumption that location targeted mobile advertising is expected to increase purchase intentions far more than non-location based advertising. As mentioned in the first chapter, location based services through MMS (Xu, et al., 2009) are suggested to result in higher purchase intentions. Location based advertising is also expected to stimulate immediate and unplanned purchases since location is one of the main variables affecting impulse buying (Stern, 1962). Location based messages in a mobile format can also increase the intention to respond to the location based advertisement and stimulate impulse buying (Barnes, 2003).

H6a: Consumer **purchase intentions** will be higher for a brand using **location** based mobile ads versus a brand using **non-location** based mobile ads.

H6b: Consumer **impulse buying intentions** will be higher for a brand using **location** based mobile ads versus a brand using **non-location** based mobile ads.

In order to understand how effectiveness will vary based on the type of product, it is important to look at the requirements for the decision making process of different types of products. The commonly accepted general decision making process is the following: need recognition $\rightarrow$ search $\rightarrow$ alternative evaluation $\rightarrow$ purchasing $\rightarrow$ outgoings (Engel, Kollat, & Blackwell, 1968, cited in Percy & Elliot, 2009). For a low involvement product, the first stage, need recognition, is most likely more frequent and less crucial. Therefore, the more frequent the purchase, the more opportunities the brand has to persuade the consumer to try the product. The second and third stages, search and alternative evaluation, require much less time and information for low involvement products versus high involvement products, therefore impulse purchases are much more likely for low involvement products. The fourth stage, purchasing, is not an important factor for low involvement products, as while pricing may vary, the price points are much lower. There is not a huge risk financially- purchasing for a low involvement product is more likely based on impulse or convenience.

H7a: Consumer **purchase intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format.

H7b: Consumer **impulse buying intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format.

2.3.4 Word-of-Mouth Intentions

An analysis of over 800 campaigns participating in the British IPA Effectiveness Awards suggests that campaigns that people talk about increase advertising effectiveness in terms of sales and profit performance (Binet & Field, 2009). "People may filter out advertisements, but they do listen to people they know and trust" (Dahlén et al., 2010, p. 42). As a result, messages spread by word-of-mouth often have a greater impact than messages conveyed through planned marketing communication (Dahlén et al., 2010). Chevalier and Mayzlin (2006) study the sales of books at Amazon.com and find a causal relationship between word-of-mouth and sales of books online. To evaluate what type of mobile marketing is more likely to generate higher word-of-mouth intentions, it is vital to understand what motivates people to spread a message. Mobile advertising is likely to stimulate certain elements of what Dichter (1966) refers to as *involvement categories*, which describe the motivations behind word-of-mouth. *Self-involvement* describes when users of the product want to pass on a message regarding the product in order to make themselves appear or feel superior (Dichter, 1966). This could translate with consumers feeling 'in the know' about mobile marketing, particularly in regards to mobile couponing as it is necessary to have the knowledge to sign up to receive the deals. *Other involvement*, which refers to the opposite need of sharing to truly benefit the listener (Dichter, 1966), could take shape in mobile coupons in which consumers would want to tell others about the discounts so they could benefit as well, particularly for deals on products that are important to them. *Message involvement* refers to the importance of the delivery, not the product (Dichter, 1966), therefore the mobile format benefits from being a new, interactive, and relevant medium. This could lead to a higher level of excitement surrounding the more interactive and new advertising format as well as the more relevant and new location based advertising. Previous research also shows that more creative (Modig & Lethagen, 2008) and interactive media (Kocken & Skoghagen, 2009) can lead to higher word-of-mouth intentions. Therefore, it is expected that the type of mobile marketing with the strongest level of innovativeness will generate higher word-of-mouth intentions.

As hypothesized above, mobile coupons are expected to generate stronger associations in regards to innovativeness. The advertising format in itself can affect the message involvement and therefore stimulate consumers to spread the word about the advertisement and information about the brand. Therefore, mobile coupons will generate higher word-of-mouth intentions than mobile banner advertisements.

H8: Consumer **word-of-mouth intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

Since innovativeness and newness are two of the primary reasons for spreading a message, word-of-mouth intentions for location based advertisements are expected to be higher than non-location based advertisements.

H9: Consumer **word-of-mouth intentions** will be higher for a brand using **location** based mobile ads versus a brand using **non-location** based mobile ads.

In continuing with the previously discussed decision making process for varying levels of involvement, the final stage, outgoings (or post-purchase evaluation), affects word-of-mouth intentions. The post-purchase evaluation is more important for high involvement products, as people are more likely to talk about their significant purchases. As discussed earlier, this could be due to a variety of reasons- the need to justify ones' purchases, the genuine desire to tell others about something they could benefit from, or to simply express love for the product. Strong emotions are often underlying the desire to talk about a product with friends or family, and these are rarely felt for low involvement products. However, because the frequency of purchase is higher for low involvement purchases, it is important for the brand that the consumer has a positive evaluation for future purchases, although the word-of-mouth intentions for low involvement products are far less likely.

H10: Consumer **word-of-mouth intentions** will be higher for a brand with **high involvement** products in the mobile format versus a brand with **low involvement** products in the mobile format.

2.3.5 Relationship between Associations/Advertising Value and Effectiveness Measures

One of the most vital questions an advertiser or marketing manager must ask is which brand associations are those that drive sales (Landin, 2010). Previous research suggests that consumer perceptions of a company's innovativeness and customer-orientation positively influence business performance (Jin, Namwoon, & Rajendra, 1998). This thesis also sets out to determine whether the associations of caring and innovativeness can explain the difference in effectiveness in the context of mobile marketing. Positive consumer mindset metrics, represented by brand associations, are proven to explain an increase in sales (Srinivasan et al., 2010). Dahlén & Lange (2009) also suggest that attitudes, in this thesis represented by brand associations, can stimulate purchase intentions. Therefore, the mobile marketing format which generates stronger associations of innovativeness and caring are expected to generate higher purchase intentions. As previously stated, newness can also explain why people are motivated to spread a message (Dichter, 1966), therefore consumers exposed to advertising which results in innovative associations is hypothesized to explain the variance in word-of-mouth intentions.

Several studies propose a link between attitudes and intended behavior (Fishbein & Azjen, 1975; 1980; Shimp, 1981). Fishbein & Azjen (1980) outline in their model, the Theory of Reasoned Action, how behavioral intentions depend on two factors: 1., the attitude that the consumer holds to the perceived consequences of the behavior and 2., the subjected norms, i.e. the beliefs that people in their social environment hold towards the behavior. Shimp (1981) suggests that attitudes towards the advertising are a mediator of brand choice and therefore an indication of purchase intentions. In line with this argumentation, the perceived advertising value is expected to act as a determining factor in purchase intentions and word-of-mouth intentions. Alex Wang (2011) provides further support for these hypotheses in his research about interactive ads in the iPad, stating that the attitude towards interactive advertisements is a mediator for effectiveness, specifically purchase intentions.

H11a: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **purchase intentions**.

H11b: Brands that consumers perceive as more **caring** in the mobile format will generate higher **purchase intentions**.

H11c: Higher perceived **value of the advertisement** in the mobile format will lead to higher **purchase intentions**.

H11d: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **word-of-mouth intentions**.

H11e: Higher perceived **value of the advertisement** in the mobile format will lead to higher **word-of-mouth intentions**.

2.8 Summary of Hypotheses

The hypotheses are constructed to be able to answer the research questions. The table below summarizes the hypotheses in relation to the research questions.

Research Questions	Hypotheses
What type of mobile marketing creates stronger associations of innovativeness and caring to a brand?	H1a: Consumers will perceive a brand using mobile **coupons** as more **innovative** than a brand using mobile **banner** ads. H1b: Consumers will perceive a brand using mobile **coupons** as more **caring** than a brand using mobile **banner** ads. H2a: Consumers will perceive a brand using **location based** mobile ads as more **innovative** than a brand using **non-location based** mobile ads. H2b: Consumers will perceive a brand using **location based** mobile ads as more **caring** than a brand using **non-location based** mobile ads.
What mobile advertising format is most effective?	H5a: Consumer **purchase intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads. H5b: Consumer **impulse buying intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads. H8: Consumer **word-of-mouth intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.
Can location based advertising in the mobile marketing format increase effectiveness?	H6a: Consumer **purchase intentions** will be higher for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads. H6b: Consumer **impulse buying intentions** will be higher for a brand using **location based** ads mobile versus a brand using **non-location based** mobile ads. H9: Consumer **word-of-mouth intentions** will be higher for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.
What level of product involvement is most effective in the mobile marketing medium?	H7a: Consumer **purchase intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format. H7b: Consumer **impulse buying intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format. H10: Consumer **word-of-mouth intentions** will be higher for a brand with **high involvement** products in the mobile format versus a brand with **low involvement** products in the mobile format.
Will there be differences in the perceived advertising value based on advertising format or level of geographic targeting?	H3: Consumers' **perceived value of the advertisement** will be more positive for a brand using mobile **coupons** versus a brand using mobile **banner** ads. H4: Consumers' **perceived value of the advertisement** will be more positive for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.
Can the associations and the perceived advertising value from mobile marketing explain the higher effectiveness?	H11a: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **purchase intentions.** H11b: Brands that consumers perceive as more **caring** in the mobile format will generate higher **purchase intentions.** H11c: Higher perceived **value of the advertisement** in the mobile format will lead to higher **purchase intentions**. H11d: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **word-of-mouth intentions**. H11e: Higher perceived **value of the advertisement** in the mobile format will lead to higher **word-of-mouth intentions**.

3. Methodology

This chapter gives a description of the procedure of collecting and analyzing the data in this study. An explanation of how the empirical findings were derived from PASW is also included in this section. In the end of the chapter, a discussion about the reliability and validity of the study can be found.

3.1 Research Approach

This study tests whether the existing theory of marketing effectiveness is applicable in the newest smartphone advertising context. Since the hypotheses are formed using existing theory, this study takes on a deductive approach (Bryman & Bell, 2007). The study assumes an explanatory form, seeking to explain a situation and analyze a causal relationship between the variables. This study aims to gain an understanding of how the consumer mindset and intended behavior of the consumer will change when a certain type of product (high or low involvement) is advertised in a coupon or banner ad format using location or non-location based advertising. In order to test the hypotheses and obtain results on the cause and effect relationship, it is necessary to gather a large sample using quantitative methods. Hypotheses will be rejected or accepted depending on the findings and theory will be updated to suit the mobile marketing context (Bryman & Bell, 2007).

3.2 Preparatory work

The experiment consists of both a pre-test and a pilot study. The purpose of the pre-study was to select the products for the main study in order to confirm that the high and low involvement products were perceived by consumers accordingly. The aim of the pilot study was to ensure the quality of the questionnaire.

3.2.1 Pre-test: Selection of High and Low Involvement Products

The pre-test was conducted in order to select suitable products representing both a high and low involvement product. Six products were tested: a computer, a car, a winter jacket, toilet paper, eggs, and socks. A questionnaire was created with Qualtrics Survey Software, using three questions derived from standard product involvement measurements (Ratchford, 1987)

in order to measure a person's involvement or interest in various products (Appendix 1). The questions concerned the following: 1. how important the brand is in the decision making process, 2. the level of thought that goes into the decision, and 3. the level of risk involved in choosing the wrong brand. This was measured on a Likert scale from 1-7, where 1 was an indication of a low involvement product and 7 was perceived as being a high involvement product. 40 respondents participated through a convenience sample, which was representative of the target group of the main study consisting mostly of students from the Stockholm School of Economics. However, these respondents were not asked to participate in the main study, as that may have biased the results. The three questions were indexed together since they measured the same variable as determined by the Cronbach alpha which was above 0.7. Based on the outcome of the survey (Figure 2), a car would be used as the high involvement product and toilet paper as the low involvement product, as these two products showed the highest and lowest means in comparison with the other four products in the survey.

Figure 2. Results from the Pre-test - Level of Product Involvement

	N	Min	Max	Mean	St. Deviation
Car	40	3	7	5.970	0.770
Computer	40	2	7	5.760	0.890
Winter Jacket	40	2.67	6.67	5.170	0.800
Toilet Paper	40	1	4.33	2.040	1.020
Eggs	40	1	5	2.680	1.290
Socks	40	1	5	2.310	1.050

3.2.2 Pilot Study: Testing the Questionnaire

Prior to mass distribution of the survey, a pilot survey was distributed to 20 people consisting of members of the target group as well as experienced members of the advertising industry. Valuable feedback was given, while problems regarding the functional aspects of Qualtrics, e.g., the ability to view the manipulation later in the survey, were detected and adjusted. The respondents helped to identify some minor errors in the questions and gave feedback regarding the length of the questionnaire, to which adjustments were made to shorten the survey in order to increase the response rate (Sheehan, 2001). Those who received the mobile banner advertisements responded negatively when asked whether or not the features had a significant impact on their answers. Most replied that the features displayed were expected characteristics of the two products in their respective categories, therefore the features did not have an influence on responses. A question regarding respondents' ability to speculate as to

the purpose of the study was included in the pilot survey to ensure that participants would not skew the experiment if they had knowledge of the goal of the experiment (Söderlund, 2010). This did not prove to be an issue as most participants answered that they did not know the purpose of the study. Those who answered the question only had a general idea about the purpose of the study, such as "to evaluate what people think about advertising in mobile phones" or "to see if people think that mobile marketing is annoying". After a discussion with thesis advisor Micael Dahlén, some feedback was determined to be invalid, for instance one respondent's feedback regarding the irrelevancy of asking about impulse buying with the high involvement product manipulation. This decision was based on the fact that the question is necessary when testing between the different involvement product manipulations and the same type of data is needed when comparing between groups.

3.3 Experiment

The experiment tests how the dependent variables are affected when manipulating the independent variables. In this thesis, the independent variables, are as follows: location based or non-location based advertising, type of product (high or low involvement), and type of advertising format (banner ad or coupon). The dependent variables measure the effectiveness of smartphone marketing, which includes psychological responses such as the perceived advertising value and signal effects as well as behavioral intentions such as purchase intentions and word-of-mouth intentions. A 2×2×2 between-group design was chosen to avoid the risk of recipients carrying over the knowledge from the first manipulation when exposed to the second manipulation, which could have biased the results (Levin, 1999).

3.4 Manipulation

The experiment consists of eight groups, with four groups exposed to a coupon advertisement and four groups exposed to a banner advertisement in a smartphone. Each type of advertisement was also manipulated with a high or low involvement product and with or without location based targeting. Two examples of manipulations are presented below in Figures 2 and 3 (for all versions, see Appendix 2). Adobe Photoshop was used to create the images on an iPhone. The image displays a radio application on an iPhone, with either a banner advertisement in the application or a coupon message on the screen with the application in the background. A description of the setting (Appendix 3) was also added to

portray a realistic scenario in which the respondents could imagine themselves receiving the advertisement. The features of the product displayed in the banner ad are considered to be general and therefore not affect the responses of the participants, as supported in the pilot study. Besides the independent variables, all characteristics, such as the background application and the initial description were kept similar for each manipulation. One main difference for the coupon manipulations is that the respondents were told that they had previously signed up to receive notifications of deals and offers. The identity of the brand remained anonymous in order to avoid respondents' bias of existing attitudes and associations towards the brand.

Figure 2. Manipulation for High Involvement, Location Based Banner Ad.

Figure 3. Manipulation for Low Involvement, Non-Location Based Coupon.

3.5 Sampling

The goal of the experiment is to achieve strong internal validity in order to compare the results between groups. A homogenous group such as students is preferred, since using a heterogeneous group would have increased the risk of making type II errors, i.e. - increasing the likelihood of accepting a false hypothesis (Lynch, 1999). Since the data is analyzed using statistics, the sample size must be large enough to correlate with the central limit theorem, allowing for a normal distribution curve (Aczel & Sounderpandian, 2006). The statistical rule of thumb states that it is necessary to use a sample size of 30 for each manipulation (Aczel & Sounderpandian, 2006). The total sample of the experiment is 365 respondents of at least 30 respondents in each of the 8 groups. However, the exact number within groups ranged from 36 respondents in one group to 51 respondents in another (Appendix 4), most likely due to inadequate survey completion. In order to achieve maximum response rates via e-mail, tactics included using a personalized cover letter, incentive to respond (the offer to win a portable speaker), and a reminder to those who failed to respond to the initial request (Bryman & Bell, 2007). Only respondents who completed the survey in its entirety were included in the results, ending in a final response rate of 18%.

The respondents consist of students from Stockholm, chosen due to their demographic and psychographic similarities, as well as the strong likelihood that this population has previous experience with mobile marketing. In terms of age, the distribution was normal with a mean of 23.68 years and 97% in the range of 19-28, with the total range from 19-38 years. The gender distribution of the sample was 58.9% male and 41.1% female with 94.2% listed as students. A staggering 69.6 % of the sample had smartphones, while 76.4% had received advertising on their phone. The sample was therefore homogenously young students with smartphones and previous experience with mobile advertising. Qualtrics Survey Software randomly distributed the various manipulations to respondents in order to collect an equal number of surveys per manipulation. As a result, the means were very similar between the groups in terms of age, sex, smartphone ownership, and experience with mobile advertising.

3.6 Questionnaire

To investigate the effects of mobile marketing activities on consumers, the questionnaire was designed to measure associations as well as the perceived advertising value and intended

behaviors. Due to the between-group nature of the experiment, while the manipulations varied, the questions in the survey were the same for all groups. This was a standardized self-completion questionnaire with close-ended questions in order to give the respondents control and avoid interviewer evaluation apprehension (Bryman & Bell, 2007). The following variables were included in the questionnaire: advertising value, signal effects, purchase intentions, and word-of-mouth intentions. The survey evaluated the responses on a Likert scale from 1-7 for every question in order to provide consistent and clear direction. Explanations and examples of questions are presented below (for the entire survey, see Appendix 3).

Novelty of media can result in spill-over associations towards the brand (Kocken & Skoghagen, 2009). Therefore, established measures testing **innovative** signal effects are used to evaluate whether the brand is perceived as *modern, new thinking* (Granlund & Grenros 2007) and *innovative* (Kocken & Skoghagen, 2009). This index has a Cronbach alpha of 0.91.

Sending different messages in various formats with a range of characteristics may also signal to a consumer whether or not the brand **cares** about their customers (Kocken & Skoghagen, 2009). Two statements were asked to be rated in order to measure this signal effect: 1. *the brand cares about their customers* and 2. *the brand is available for their customers*. As the results of these statements had a Pearson coefficient of 0.638, they were indexed together.

To evaluate the perceived **advertising value** and its potential effect on the brand, the standard measurements by Ducoffe (1996) were used. Respondents were asked to rate whether they perceived the advertisements as *valuable, entertaining, informative* and *irritating*. With the irritating variable measured on a reverse scale, these questions were indexed with a Cronbach alpha of 0.78.

In order to test whether the advertising format and level of geographic targeting could influence **impulse buying**, the survey includes questions regarding respondents *urge to purchase this brand spontaneously* and the *desire to buy items that did not pertain to their specific shopping goal* (Verhagen & Dolen, 2009). The two questions regarding impulse buying have Pearson coefficient of 0.793, and were therefore indexed together.

Purchase intentions is a well established variable for measuring effectiveness (Srinivasan et al., 2010). Standard questions with both intentions-as-wants (*I want to buy this product*) and intentions-as-expectations (*I would most likely want to buy this brand*) were asked to increase the reliability (Söderlund & Öhman, 2003). The statement "If I needed this product" was included in order to place respondents in the mindset of being in the market for the respective products in the manipulations (Yoo & Donthun, 2001; Everard & Galletta, 2006), which was more important when asking about the high involvement product. The following statements were asked to be rated: 1. *If I needed this product I would try this brand,* 2. *If I needed this product I would want to buy this brand* and 3. *If I needed this product I would most likely buy this brand.* These three questions were indexed together with a Cronbach alpha of 0.91.

Word-of-mouth intentions affect purchase intentions (Dichter, 1966), and is therefore an important effectiveness measurement. The survey asked respondents to rate the following statements: 1. *I want to talk to others about this brand* (Modig & Lethagen, 2008) and 2. *I will most likely recommend this brand to others* (Reicheld, 2003). The word-of-mouth index has a Pearson coefficient of 0.672.

3.7 Analytical Tools

In analyzing the results, Qualtrics allows for a direct transfer to PASW. Before analyzing the 365 total surveys, it was necessary to understand whether or not the multiple questions measured the same variable. As shown above, the Cronbach alpha was used for measurements with three or more questions and the Pearson coefficient for measurements with two questions, which allowed the grouping of questions through an index function. This way, each question would not have to be individually analyzed when measuring the same variable and would therefore provide stronger support for the results. As previously mentioned, for the 'irritating' question in the advertising value measurement, the coding needed to be reversed in order to be measured on the same scale as the three other questions regarding the perceived advertising value. Therefore, first the responses of the 'irritating' question were transformed, then the Cronbach alpha was tested among all four questions, and finally the questions were indexed together.

After indexing the variables with multiple questions, the goal was to understand the results on a broader level. Therefore, the three independent variables were grouped separately by

recoding them into different variables: location and non-location, banner and coupon, and high and low involvement. An independent samples t-test was then run for each of the three groups against all of the indices, determining any significance among the dependent variables within the independent variables.

Interaction effects between the independent variables were then tested using a two-way MANOVA (multiple analysis of variance) in order to compare all the indices between two independent variables. As there were not more than two groups within the independent variables, it was not necessary to perform a Post Hoc test. The results showed some interaction effects among certain dependent variables, therefore it was imperative to delve deeper into understanding exactly how these variables interacted with each other.

In order to do so, PASW requires split cases for the independent variables, one at a time for each test. An independent samples t-test was then performed to determine in which ways the independent variables interacted with each other for the particular dependent variable. Again, it was not necessary to run a Post Hoc test, as there were not more than two groups within the independent variables. Individual independent samples t-tests were then performed for each combination, splitting the cases for one independent variable per test.

To test the hypotheses 11a-11e regarding the effects of one variable on another, a linear regression analysis was used. The unadjusted R square value, t-values and p-values determines the strength of the relationship and level of significance.

3.8 Data quality

3.8.1 Reliability

Reliability discusses to what extent the results are consistent should the experiment be repeated numerous times (Bryman & Bell, 2007). This study is evaluated with regards to internal reliability and stability (Bryman & Bell, 2007). Internal reliability refers to whether or not respondents' answers correlate appropriately across various questions, while stability refers to whether or not the measure is constant over time (Bryman & Bell, 2007). Reliability can also be discussed in terms of both primary and secondary sources. The secondary sources in this thesis are mostly from well-cited journal articles; however, due to the newness of the

topic, recent articles from lesser known authors as well as information from mobile marketing authorities are also utilized.

In discussing reliability in the primary sources, while using established multi-item measurements increases the construct validity as previously discussed, they also serve to strengthen the internal reliability. This was further controlled for by testing the internal consistency of the measurements in which all questions referencing the same variable had a Cronbach alpha above 0.7 and a Pearson correlation coefficient above 0.5 (Bryman & Bell, 2007). For the intended behavior questions, purchase intentions and word-of-mouth intentions, both intentions-as-wants and intentions-as-expectations were tested in order to increase the reliability (Söderlund & Öhman 2003). The questionnaire was also tested in a pilot study, and questions causing confusion or frustration were erased, which further increases the likelihood of yielding the same results if conducting the test again. Still, to strengthen the reliability in terms of stability, another test needs to be conducted at some point in the future to make sure the results are constant over time. However, it may be difficult to yield the same results due to the fast development and changing landscape of mobile marketing.

3.8.2 Validity

Validity discusses to what extent the study has actually measured what the study intended to measure (Bryman & Bell, 2007). This thesis aims to reach a high internal validity, therefore making sure the following has been assessed: 1. to what extent the difference in the dependent variables is due to the independent variables and 2. if there is a causal relationship between the dependent variables (Bryman & Bell, 2007). To ensure the validity, the effect of external variables has to be eliminated (Malhotra, 2007). To reduce the effect of external variables, anonymous brands were used in the experiment to avoid previously held opinions about the brands. Respondents were also given the same information about the experiment- only what was written in the questionnaire- while the surveys were allocated randomly. The fact that the groups were homogeneous increases the validity of the experiment (Söderlund, 2005). The internal validity of the thesis is supported by the results of the pre-test, indicating that the level of involvement of the products were correctly determined. The use of established multi-item measurements, which means using more than two previously tested questions for measuring the same variable, also increases internal validity (Bryman & Bell, 2007).

The external validity, or generalizability, discusses to what extent the findings can be applicable to other settings (Saunders, Lewis & Thornhill, 2003). There is no previous research on whether the effectiveness measures vary based on the independent variables in this experiment. Therefore, it is essential to determine these initial results before investigating whether or not the same results would occur under varied conditions such as different experiment types or target groups. While the specific and homogenous characteristics of the respondents increase internal validity, it could be seen as a risk for external validity (Creswell, 2009). Following this logic, the results can only be generalized to students in Stockholm in the range of 19-28 years old.

4. Results & Analysis

This chapter analyzes the results of the PASW testing of the hypotheses. First, the results on the signal effects and the perceived advertising value will be discussed, followed by the effectiveness measurements of purchase intentions and word-of-mouth intentions. Finally, the brand associations of innovativeness and caring as well as perceptions of advertising value will be examined in relation to the effectiveness measures.

4.1 Signal Effects

Hypotheses 1 and 2 test the differences of two of the brand associations measured in this survey- innovativeness and caring- among the different types of mobile marketing.

The results indicate that a brand using a mobile coupon is perceived as more innovative than a brand using a mobile banner advertisement. The analysis shows a significant difference between coupons (mean = 4.68) and banner ads (mean = 4.17) with a mean difference of 0.51 (Appendix 5). Therefore, hypothesis 1a is supported on a 0.01 significance level.

H1a: Consumers will perceive a brand using mobile **coupons** as more **innovative** than a brand using mobile **banner** ads.

ACCEPTED

Hypothesis 1b suggests that a brand using mobile coupons will be perceived as more caring than a brand using mobile banner ads. Although the results show that mobile coupons (mean = 4.00) allow the brand a slight advantage in being perceived as caring versus a brand using banner ads (mean = 3.96) with a mean difference of 0.04, it is not significant (Appendix 5). Therefore, the analysis suggests that ad format does not affect the brand associations of caring.

H1b: Consumers will perceive a brand using mobile **coupons** as more **caring** than a brand using mobile **banner** ads.

REJECTED

Hypothesis 2a suggests that a brand using location based advertisements will be perceived as more innovative than a brand using non-location based advertisements. This hypothesis is supported on a 0.01 significance level, with location based ads (mean = 4.64) generating a mean value of 0.43 higher than the mean value of non-location based advertisements (mean = 4.21) (Appendix 6).

H2a: Consumers will perceive a brand using **location based** mobile ads as more **innovative** than a brand using **non-location based** mobile ads.

<div align="right">**ACCEPTED**</div>

The results show that brand associations of caring is significantly higher for a brand using a location based advertisement (mean = 4.16) versus a brand using a non-location based advertisement (mean = 3.81) in a smartphone format, with a mean difference of 0.34 (discrepancies due to rounding). Hypothesis 2b is therefore accepted on a 0.01 significance level (Appendix 6).

H2b: Consumers will perceive a brand using **location based** mobile ads as more **caring** than a brand using **non-location based** mobile ads.

<div align="right">**ACCEPTED**</div>

4.2 Advertising Value

Hypotheses 3 and 4 test the difference in perceived advertising value based on ad format and level of geographic targeting.

The analysis shows that perceived advertising value is significantly higher ($p < .01$) for mobile coupons (mean = 3.52) than for mobile banner ads (mean = 3.15), with a difference in mean values of 0.37 (Appendix 5). All four variables- valuable, entertaining, informative, and irritating- were significantly different between the two formats, therefore it is interesting to analyze the variables separately (Appendix 8). The irritating variable where mobile banner ads (mean = 4.93) were perceived as much more irritating than mobile coupons (mean =

3.70), with a mean difference of 1.23. As expected, mobile coupons (mean = 3.76) were perceived to provide more useful and valuable information versus mobile banners (mean = 3.32) with a mean difference of 0.44, as well as more entertaining with a mean difference of 0.27 (mobile coupons mean = 3.06, mobile banners mean = 2.79). A possible explanation for this is the higher degree of interactivity and newness of the format, as previously discussed in the theory section. Mobile coupons (mean = 3.95) were also perceived as more informative than mobile banners (mean = 3.43) with a mean difference of 0.52.

H3: Consumers' perceived **value of the advertisement** will be more positive for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

<div align="right">

ACCEPTED

</div>

Consumers show significantly (p < .01) higher perceived value of the advertisement of a brand using location based advertisements (mean = 3.52) versus a brand using non-location based advertisements (mean = 3.15), with a mean difference of 0.37 (Appendix 6). This is in line with the previous theory that more targeted and relevant advertisements result in more positive evaluations of the advertisements. Respondents especially found the location based advertisement of greater value (mean LBA = 3.71, mean non-LBA = 3.36; mean difference = 0.35), more informative (mean LBA = 4.02, mean non-LBA = 3.37; mean difference = 0.65), and more entertaining (mean LBA = 3.11, mean non-LBA = 2.73; mean difference = 0.38). The irritating variable, which shows a vast dissimilarity between the means of ad formats, has a difference in means of only 0.09 (mean LBA = 4.77, mean non-LBA = 4.86) among the levels of geographic targeting (Appendix 8).

H4: Consumers' perceived **value of the advertisement** will be more positive for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.

<div align="right">

ACCEPTED

</div>

4.3 Purchase Intentions & Impulse Buying Intentions

Hypotheses 5a and 5b test which type of mobile advertising format is most effective in regards to purchase intentions and impulse buying intentions. Hypotheses 6a and 6b further test whether location based advertising can increase purchase intentions and impulse buying. Finally, hypotheses 7a and 7b test whether or not the type of product based on level of involvement affects purchase intentions and impulse buying intentions in the mobile marketing format.

The analysis for purchase intentions shows that a brand using mobile coupons (mean = 3.78) will generate significantly higher purchase intentions ($p < .01$) than a brand using mobile banner ads (mean = 3.30), with a mean difference of 0.48 (Appendix 5). Hence, the results from this research support the hypothesis that mobile coupons meet the objective of increasing purchase intentions more effectively than mobile banner advertisements.

H5a: Consumer **purchase intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

ACCEPTED

Impulse buying intentions show even more significant results ($p < .01$), with a mean difference of 0.50 (discrepancies due to rounding) between brands using mobile coupons (mean = 2.78) and brands using mobile banner advertisements (mean = 2.27) (Appendix 5).

H5b: Consumer **impulse buying intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

ACCEPTED

Purchase intentions are significantly higher ($p < .01$) for a brand using location based advertisements (mean = 3.71) versus a brand using non-location based advertisements (mean = 3.36), with a mean difference of 0.36 (discrepancies due to rounding) (Appendix 6).

H6a: Consumer **purchase intentions** will be higher for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.

ACCEPTED

Hypothesis 6b suggests that consumers will have higher impulse buying intentions for a brand using location based advertisements versus a brand using non-location based advertisements. Although the results followed the hypothesized direction, the analysis did not show significant results ($p > .01$) in impulse buying intentions between the groups exposed to location based advertisements (mean = 2.60) and the groups exposed to non-location based advertisements (mean = 2.43), with a mean difference of 0.17 (Appendix 6).

H6b: Consumer **impulse buying intentions** will be higher for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.

REJECTED

Consumer purchase intentions are significantly higher ($p < .01$) for low involvement products (mean = 3.84) than for high involvement products (mean = 3.24) with a difference in mean values of 0.61 (discrepancies due to rounding) (Appendix 7).

H7a: Consumer **purchase intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format.

ACCEPTED

The analysis shows that impulse buying intentions are significantly higher ($p < .01$) for low involvement products (mean = 2.88) than for high involvement products (mean = 2.16) with a mean difference of 0.72 (Appendix 7).

H7b: Consumer **impulse buying intentions** will be higher for a brand with **low involvement** products in the mobile format versus a brand with **high involvement** products in the mobile format.

<div align="right">**ACCEPTED**</div>

4.4 Word-of-Mouth Intentions

Hypothesis 8 tests which mobile advertising format is most effective in terms of word-of-mouth intentions, while hypothesis 9 tests if there is a difference between word-of-mouth intentions for location based and non-location based advertisements in the mobile format. Finally, hypothesis 10 tests which type of product- high or low involvement- creates more word-of-mouth intentions.

The results indicate that consumer word-of-mouth intentions are significantly higher ($p < .01$) for a brand using mobile coupons (mean = 3.00) than a brand using mobile banner advertisements (mean = 2.63), with a difference in means of 0.37 (Appendix 5).

H8: Consumer **word-of-mouth intentions** will be higher for a brand using mobile **coupons** versus a brand using mobile **banner** ads.

<div align="right">**ACCEPTED**</div>

Hypothesis 9 suggests that a brand using location based advertisements will result in higher word-of-mouth intentions than a brand using non-location based advertisements. The mean value of word-of-mouth intentions for location based advertisements (mean = 2.91) is 0.20 higher than the mean value for non-location based advertisements (mean = 2.71). This hypothesis can be supported on a 0.1 significance level, however it failed to satisfy the accepted significance level of 0.01 (Appendix 6). Therefore, conclusions cannot be made regarding the effectiveness of word-of-mouth intentions based on the level of geographic targeting in the mobile format.

H9: Consumer **word-of-mouth intentions** will be higher for a brand using **location based** mobile ads versus a brand using **non-location based** mobile ads.

<div align="right">**REJECTED**</div>

The analysis of the data shows that respondents are significantly more willing to talk about and recommend ($p < .01$) high involvement products (mean = 3.03) versus low involvement products (mean = 2.58) after being exposed to the various manipulations. The results show a difference in mean values of 0.45 (Appendix 7).

H10: Consumer **word-of-mouth intentions** will be higher for a brand with **high involvement** products versus a brand with **low involvement** products.

<div align="right">**ACCEPTED**</div>

4.5 Relationship between Associations & Advertising Value and Effectiveness Measures

The last set of hypotheses intend to test whether purchase intentions and word-of-mouth intentions can be explained by the brand associations of innovativeness and caring as well as the perceived advertising value.

The regression analysis of the 365 respondents indicates that innovative brand associations can explain higher purchase intentions. Hypothesis 11a, which suggests that brands perceived as more innovative will generate higher purchase intentions, is accepted due to the high t-value of 11.63. High t-values indicate that there is a strong correlation between the brand association of innovativeness and purchase intentions. The R-square value implies that up to 27% of the variance in purchase intentions can be explained by the innovative brand association. The explanation variable β determines the degree to which the measurement tested, in this case innovativeness, explains purchase intentions in comparison to the measurements of caring and perceived advertising value. The beta coefficient of 0.54 for innovativeness is satisfactory compared to the other variables of explaining purchase intentions, and hypothesis 11a is supported on a 0.01 significance level (Appendix 9).

Therefore, it can be concluded that when consumers perceive a brand as more innovative due to smartphone advertisements, they will have higher intentions to purchase the brand.

H11a: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **purchase intentions.**

ACCEPTED

The brand association of caring can explain purchase intentions of up to 35% (t = 14.13). The explanation variable $\beta = 0.68$ is considered to be high relative to the other explanation variables and hypothesis 11b is supported on a significance level of 0.01 (Appendix 9). Hence, a brand with associations of caring due to smartphone advertisements will generate higher purchase intentions.

H11b: Brands that consumers perceive as more **caring** in the mobile format will generate higher **purchase intentions.**

ACCEPTED

In analyzing respondents' evaluations of the mobile advertising value as a predictor of purchase intentions, the results confirm the hypothesis (t = 16.83). The explanation variable is relatively high ($\beta = 0.78$), and perceived advertising value, which utilize the variables of valuable, entertaining, informative, and irritating, can explain the variance in purchase intentions of up to 43.8%. The results give significant support ($p > 0.01$) to hypothesis 11c (Appendix 9), and it can be concluded that there is a strong causal relationship between perceived advertising value and purchase intentions in the mobile format.

H11c: Higher perceived **value of the advertisement** in the mobile format will lead to higher **purchase intentions**.

ACCEPTED

The brand association of innovativeness in the mobile marketing format is one variable which explains why people talk about a brand or recommend a brand to a friend (t = 8.85). Although the explanation variable is low ($\beta = 0.427$) relative to the advertising value explanation variable, and the innovative associations can only explain the variance in word-of-mouth intentions of up to 18%, hypothesis 11d can be supported with a significance level of 0.01 (Appendix 9).

H11d: Brands that consumers perceive as more **innovative** in the mobile format will generate higher **word-of-mouth intentions.**

ACCEPTED

Evaluations of the advertising value can also explain the variance in word-of-mouth intentions (t = 12.10). The explanation variable $\beta = 0.618$ shows stronger results in comparison to the innovative measurement when measuring word-of-mouth intentions, and hypothesis 11e can be supported with a significance level of 0.01 (Appendix 9).

H11e: Higher perceived **value of the advertisement** in the mobile format will lead to higher **word-of-mouth intentions**.

ACCEPTED

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5. Discussion

This chapter will first discuss the results presented in the previous chapter. This is followed by conclusions, answering the research questions presented in the problem area section from chapter 1. Then, managerial implications and potential criticism towards the study is discussed. Finally, suggestions for further research will be outlined.

5.1 Discussion of the Results

This study contributes to the literature on mobile marketing effectiveness in several respects. First, by complementing previous studies of mobile advertising with measurements of the signal effects of caring and innovative associations. Second, by extending the research on evaluations of mobile advertising beyond SMS and MMS marketing. Third, by adding to research on behavioral intentions for various mobile advertising formats and location based advertising in today's mobile advertising landscape. Finally, by providing information on what type of product is most effective in a mobile format depending on the level of involvement.

5.1.1 The Type of Mobile Marketing that Signals Innovativeness & Caring

The results indicate that the choice of mobile advertising format as well as the location based feature can affect the perceived innovative associations that consumers hold towards a brand. Consumers perceive a brand using mobile coupons as more innovative than a brand using mobile banner ads. They also perceive a brand using location based ads as more innovative than a brand using non-location based ads.

The results show that location based advertising transfers more associations of caring than non-location based advertising, while neither of the advertising formats are significantly better in creating brand associations of caring. The significant results on the location based advertisements were in line with our expectations since a location based advertisement is more well-targeted and therefore more relevant, which can strengthen brand associations (Keller et al., 2008). The insignificant results between ad formats may be explained by the fact that the mobile coupons alone (without the location based features) are not perceived as customer-oriented and available, even though the coupon provides added value. Mobile

coupons may not be perceived as customer-oriented unless they are well-targeted towards the customer, which could explain why location based ads are perceived as more caring but not mobile coupons. Worth noting is that the caring associations for both advertising formats are below the average of 4 on a 1-7 Likert scale, indicating that neither of the advertising formats transfer associations of caring (Appendix 5). Based on the lack of difference in caring associations between advertising formats, it can be concluded that when the goal is to build brand associations of caring, the decision to use location based mobile marketing is more important than the choice of advertising format.

5.1.2 The Type of Mobile Marketing that Makes People Like Advertising

The analysis shows that perceived advertising value are significantly higher for mobile coupons than for mobile banner ads. An analysis of the variables separately shows that the highest difference is between the irritating variable, where mobile banners were perceived as much more irritating than mobile coupons. This can be explained by Tsang, et al.'s (2004) findings on evaluations of SMS marketing, stating that attitudes towards the advertisement may be negatively affected when advertised in personal devices such as mobile phones. However, the irritating perceptions can be reduced if consumers give their permission to receive SMS messages from the company (Tsang, et al., 2004). This thesis validates that finding, but extends beyond SMS advertising as permission based mobile coupons are perceived as less irritating and generate higher perceived advertising value than mobile banner ads. The irritating variable did not differ between location based advertisements and non-location based advertisements, which was a surprising result. Some studies claim that consumers have more positive attitudes towards well-targeted advertisements (Keller, et al., 2008), while others claim that the location based function may be perceived as intrusive and therefore seen as more irritating (Tsang, et al., 2004). The results show an equal degree of irritation across the two levels of geographic targeting, thereby supporting the conclusion that the relevancy factor neutralizes the potential privacy issues of location based advertising.

The other variables- relevant, informative, and entertaining- show significantly higher perceived advertising value for mobile coupons versus mobile banner ads. The variables are also higher for location based advertisements versus non-location based advertisements, which was in line with the expected outcome. The location based advertisements are perceived as particularly informative, which indicates that respondents valued the information

"available at your local store, only 200 meters away." Another finding worth mentioning is the high entertainment value of coupons which contributes to higher perceived advertising value. In conclusion, marketing practitioners can benefit from using location based mobile coupons in order to increase positive advertising value, as they are perceived as more informative, relevant, entertaining, and less irritating.

5.1.3 The Type of Mobile Marketing that Makes People Purchase

Mobile coupons meet the objective of increasing purchase intentions more effectively than mobile banner advertisements. One possible explanation is the interactive feature of the mobile coupon, increasing attention from the consumer, and as a result becoming more effective (Keller, et al., 2008). The tangible value added benefit of mobile coupons in comparison to mobile banners may also trigger purchase intentions and is an explanation of the even more significant results on impulse buying intentions (Youn & Faber, 2000). The coupon message could be perceived as more rational with informative content due to the price discount being offered, which could also explain the higher purchase intentions (Drossos et al., 2007). In this study, the brand association of innovativeness has been tested and proven to be significantly higher for mobile coupons versus mobile banners ads. Following these results, innovativeness was also proven to explain purchase intentions, meaning that mobile coupons are established as more effective in terms of purchase intentions than mobile banner advertisements both directly and indirectly through the signal effect of innovativeness.

In discussing purchase intentions in regards to level of geographic targeting, Drossos et al. (2007) suggest that location is not a variable affecting purchase intentions. However, this study shows that consumer purchase intentions will be higher for a brand using location based advertisements versus a brand using non-location based advertisements. The results validate other previous research proposing that location based advertising in MMS (Xu, et al., 2009) increase purchase intentions. In regards to impulse buying intentions, the results failed to support the hypothesis that location based advertisements would be more effective than non-location based advertisements. Therefore, the previously held assumption by Stern (1962) that location is a variable affecting impulse buying cannot be supported by this thesis. However, when looking at interaction affects between the level of geographic targeting and product involvement for impulse buying intentions, low involvement products with location based services show the highest relative results. While there is not a significant difference between

the interaction effects of these two variables for impulse buying intentions, it is still valid to look at the raw data and see how the independent variables relate to each other. When measuring impulse buying, there is a significant difference in the interaction effects of advertising format and product involvement level, which will be discussed in further detail later on. Hence, a mobile coupon can influence impulse buying intentions more than a mobile banner advertisement, while a location based advertisement does not necessarily influence impulse buying intentions – only having a slight affect based on the level of involvement. Following the discussion above, it can be concluded that a location based mobile coupon is the most effective alternative in stimulating purchase intentions, while a mobile coupon with either level of geographic targeting is the most effective alternative in stimulating impulse buying intentions.

5.1.4 The Type of Mobile Marketing that Makes People Talk

The results indicate that word-of-mouth intentions are significantly higher for a brand using mobile coupons versus a brand using banner advertisements. This was in line with the expected direction and may be explained by the fact that people are willing to spread a message because of the benefits to the person spreading the news or 'spreader' (Dichter, 1966). The 'spreader' talking about mobile coupons may feel more in touch with the newest trends and technologies, as mobile couponing is a relatively new way of reaching consumers. This makes the 'spreader' feel superior and gives them gratification to know something that others do not. On a more positive level, the 'spreader' is also able to help others to find the same deals and benefits that they have previously taken advantage of, acting as a helpful guardian angel of sorts. Finally, the 'spreader' is showing others an exciting and interactive format, making the format itself (not the message), the real reason to talk about the mobile couponing format. Therefore, the characteristics which differentiate mobile coupons and mobile banner ads- the interactivity, the value-added service, and the type of information included- prove to result in higher word-of-mouth intentions for mobile coupons. Based on these results and previous theories from Dichter (1966), advertisers can assume the following best practices for advertising format and content: make the message easy to spread, encourage interactivity, and capitalize on 'newness', whether it be in the medium or message.

The hypothesis suggesting that consumer word-of-mouth intentions will be higher for a brand using location based ads versus a brand using non-location based ads was unable to be

supported by the data. Research stating that creative and smarter media can lead to higher word-of-mouth intentions (Modig & Lethagen, 2008; Kocken & Skoghagen, 2009) does not apply to the location based advertisements in this study. This could be due to respondents' opinion that the location based component of an advertisement is not a strong enough reason to talk to their friends about the advertisement, but rather that the offer of a deal or mention of a high involvement product are more worthy of spreading the message.

5.1.5 The Type of Associations & Advertising Value that Drive Effectiveness Measures

The analysis shows that brands that consumers perceive as more innovative will generate higher purchase intentions. The Expectations Society concept from Micael Dahlén (2009) explains that people are living for the future, always expecting the next thing to be the best thing, which could be a reason for innovativeness increasing purchase intentions. This is in line with previous research that innovation can positively impact business performance (Jin, et al., 1998). Jin, et al.'s (1998) research concerns an *organization* which is defined as innovative, and this theory is therefore extended to also include an innovative *brand*. This leads to the conclusion that businesses should focus on being perceived as innovative in a multitude of ways- through organizational, product, and marketing communications innovation. By using an advertising format and method which is perceived as innovative, companies can increase consumer purchase intentions, leading to an overall increase in business.

Also proven from the analysis is the hypothesis that brands that consumers perceive as more caring will generate higher purchase intentions. This is in line with Jin, et al. (1998), proposing that a customer-oriented brand will increase business performance. It also validates previous research that customer mindset metrics can explain an increase in sales (Srinivasan et al., 2010). A brand which consumers perceive as caring increases positive attitudes towards the brand and adds another point of differentiation to the brand versus its competition. In a world of oversaturated markets and limitless product options, a small differentiator could be the key to increased purchase intentions- in this case, showing the consumer that the brand cares about them.

This study shows that brands that consumers perceive as more innovative will generate higher word-of-mouth intentions**.** This is in line with the theory of (Dichter, 1966) that 'newness' can

explain word-of-mouth intentions. Whether it is the internal need to feel 'in the know' about the newest trends and brand activity, or the external need to show and share to friends or family in order to spread the benefits of the message, consumers like talking about brands that are innovative. Take, for example, 2010's most innovative brands- Apple and Google (Businessweek, 2011) - and think of the last time you or someone you know spoke about them. Even if not directly involved in Apple or Google's industry or a user of their products, it's no surprise if you've heard someone mention their name or one of their products in the past week. These innovative powerhouses make their brands exciting to talk about, easy to spread, and impossible to ignore.

The perceived advertising value also show a causal relationship to both purchase intentions and word-of-mouth intentions, which supports the proposed model in section 2.8 of the theory chapter. This validates previous research on attitudes towards interactive advertisements in the iPad (Wang, 2011) and attitudes towards location based advertisements in MMS (Xu, et al., 2009) as a determining factor of purchase intentions. The perceived advertising value have an impact on both effectiveness measurements, but show a smaller influence on word-of-mouth intentions relative to purchase intentions. As advertising value were significantly higher for location based coupons, and advertising value affect purchase intentions and word-of-mouth intentions, it can therefore be concluded that location based coupons can increase purchase intentions and word-of-mouth intentions.

5.1.6 The Type of Product that Makes People Purchase or Talk

Purchase intentions are significantly higher for low involvement products than for high involvement products. This is in line with Drossos et al. (2007), suggesting that purchase intentions are less favorable for SMS advertisements involving a high involvement product. This thesis adds to previous research by showing that Drossos' theory is not only applicable to SMS marketing, but also holds true for more advanced mobile marketing such as mobile coupons and mobile banner advertisements. This reasoning can be closely compared to the theories behind the higher impulse buying intentions for low involvement products, as the search process is significantly less involved. Therefore, purchase intentions of high involvement products are far less likely to be swayed by a single impression of mobile advertising. However, mobile marketing could still contribute to lowering the perceived risk in high involvement products and therefore increasing purchase intentions, as it

communicates and strengthens the brand name which consumers value more in high involvement products (Percy & Elliot, 2009; Keller, et al., 2008). A high involvement product which integrates mobile marketing into their communication strategy also gives the consumer confidence that the company is secure and healthy, as high advertising expenses often signals (Ambler & Hollier, 2004). However, lowering the risk through strengthening the brand name of high involvement products can be achieved through a number of marketing communications methods, and is not proven to be specifically more effective in the mobile marketing format.

The analysis shows that impulse buying intentions is significantly higher for low involvement products than for high involvement products. This is in line with the expected outcome and may be explained by the fact that a person will spend less time and energy on information search for a low involvement product versus a high involvement product (Percy & Elliot, 2009). High involvement products require a significant amount of analysis prior to purchase. Not only will consumers search among their peers for feedback, but will also gather information from experts in the field, current users of the product, and credible sources. They will search for product features, pricing information, retail locations, and potentially background on the company or market as a whole. This extensive information gathering is not a quick and easy task, and does not lead to impulse or unexpected purchases, but rather the opposite. Therefore, it becomes fairly apparent that high involvement products are not geared towards impulse purchasing, allowing for significantly higher impulse buying intentions for low involvement products versus high involvement products.

In examining how word-of-mouth intentions differ between the type of product, the analysis shows that respondents are significantly more willing to talk about and recommend high involvement products than low involvement products in the mobile marketing format. As mentioned in the theory section, people are more likely to talk about their significant purchases (Percy & Elliot, 2009). This is due to the risk associated with high involvement purchases, whether fiscal, psychological, or social, and the decision often requires heavy information gathering (Percy & Elliot, 2009). Therefore, these risks lead to the main motivation behind an open discussion of these products: guidance from others. Consumers will seek confirmation both prior to and post their decision to buy, in order to justify the money spent, the time put forth in making the decision, and the social approval which allows the consumer to feel at ease with their purchase decision. The importance of the product to the

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consumer also makes a high involvement product worth talking about- it is far more likely that a consumer will want outside opinions on a product they feel defines them or is frequently used rather than a less important and trivial product.

While this study did not find significant differences in regards to varying levels of product involvement and signal effects, this could lead to the conclusion that both high and low involvement products could benefit from certain signal effects. The average mean values for all manipulations show that the perception of being an innovative brand is high in the mobile format overall, while the perception of being a caring brand is average in the mobile format (Appendix 4). Therefore, it can be concluded that both involvement types should advertise in the mobile format in order to be perceived as innovative.

5.1.6.1 The Type of Product & Type of Ad Format/Level of Geographic Targeting

After receiving significant results among most of the tests, the question arose as to how the level of product involvement might interact with the ad formats or level of geographic targeting. Therefore, interaction effects were measured, however the only significant results to discuss were found between level of involvement and advertising format for purchase intentions and impulse buying intentions. To delve deeper and find out the exact ways in which they interacted, independent samples t-tests were done which showed the following results (Appendix 10):

- *Banners with low involvement products are slightly significantly more effective for purchase intentions ($p < .1$) and significantly more effective for impulse buying ($p < .01$) than banners with high involvement products.*

- *Coupons with low involvement products are significantly more effective for purchase intentions ($p < .01$) and impulse buying ($p < .01$) than coupons with high involvement products.*

- *Low involvement products with coupons are significantly more effective for purchase intentions ($p < .01$) and impulse buying ($p < .01$) than low involvement products with banners.*

- *High involvement products with coupons are not significantly more effective for purchase intentions ($p > .01$) nor impulse buying ($p > .01$) than high involvement products with banners.*

The analysis of interaction effects shows that neither coupons nor banners are more effective in terms of purchase intentions or impulse buying intentions for high involvement products. It

can therefore be concluded that companies with high involvement products can advertise using either mobile coupons or mobile banner ads to affect purchase intentions. Mobile advertisers can also rely on the fact that low involvement products, whether in the banner or coupon format, are more effective for purchase intentions and impulse buying than high involvement products. This is supported by the theory that the decision making process for low involvement products takes less time and effort, making a purchase decision for these products easier than for high involvement products. With this information, advertisers can narrow it down even further to say specifically that low involvement coupons are the most effective both in comparison to high involvement coupons and low involvement banners. This supports the idea that couponing allows the consumer to more easily make the decision to purchase, potentially due to the lowering of the financial risk as well as simply allowing the brand to become top of mind through increased visibility (Keller, et al., 2008).

5.2 Conclusions

5.2.1 What type of mobile marketing creates stronger associations of innovativeness and caring to a brand?

The two main associations that showed significant variations based on ad format and level of geographic targeting were innovativeness and caring. Mobile coupons show stronger brand associations of innovativeness in comparison with mobile banners. Location based mobile advertising also show significantly stronger brand associations of innovativeness versus non-location based advertising. Therefore, to create the strongest associations of innovativeness, a brand should use mobile coupons with location based targeting. Location based advertising also creates stronger associations of caring versus non-location based advertising, however no significant conclusions can be discussed in regards to ad format and caring associations. Therefore, to create the strongest associations towards caring, a brand should use location based advertising with either mobile coupons or mobile banner ads.

5.2.2 What mobile advertising format is most effective?

When comparing advertising formats, mobile coupons are significantly more effective in all categories except the caring signal effect, which shows very similar means between the ad formats. For the innovativeness signal effect, perceived advertising value, purchase intentions, impulse buying intentions, and word-of-mouth intentions, mobile coupons are

significantly more effective than banner advertisements. Therefore, we can conclude that mobile coupons are more effective in the mobile advertising format.

Although the results indicate that coupons are more effective, it is worth discussing the potential drawbacks to using coupons. Coupons and discounts require a certain financial commitment beyond the advertising costs, e.g. lower margins or increased retail costs. Therefore, part of the potential higher profits from increased sales may be lost in the realization of the discount or offer. Another factor to consider in using coupons is the possibility of negatively affecting the brand, as promotional activities can be seen as an act of desperation on the part of the brand or as the brand's need to get rid of undesirable products. Therefore, using discounts may negatively affect the perceived value and position of the brand in the long run, and can dilute the brand value over time (Keller, et al., 2008). Due to the risks involved in discounting and promotions, it is recommended that a brand integrates both long term advertising and short term promotional strategies to build a strong brand and generate profits in the long run (Dahlén, et al., 2010).

5.2.3 Can location based advertising in the mobile marketing format increase effectiveness?

When location based advertising is tested against non-location based advertising, it shows to be significantly more effective in four out of the six measurements used in this experiment. In the innovativeness and caring signal effects, perceived advertising value, and purchase intentions, the study shows that location based advertising is significantly more effective than non-location based advertising. The two other measurements- impulse buying intentions and word-of-mouth intentions- show only a slight weighting towards location based advertising, however are not significant enough to discuss. Therefore, in determining the most effective strategies for mobile advertising, it is best to use location based advertisements.

5.2.4. What level of product involvement is most effective in the mobile marketing medium?

In measuring the effectiveness based on the level of product involvement, the results show that low involvement products are significantly more effective than high involvement products in impulse buying intentions and purchase intentions. However, in measuring word-of-mouth intentions, the study shows that high involvement products are more effective than

low involvement products in the mobile format. Neither type of product showed a significant advantage in the signal effect measures of innovativeness and caring. In determining the most effective level of product involvement, it is also important to look at interaction effects between high or low involvement products and either ad format or level of geographic targeting. However, the only significance shown was between involvement levels and ad format for purchase intentions and impulse buying intentions. In looking at these results, neither mobile coupons nor mobile banners were more effective in terms of purchase intentions or impulse buying intentions for high involvement products. Overall, low involvement coupons showed to be more effective for all manipulations for both purchase intentions and impulse buying intentions.

5.2.5 Will there be differences in perceived advertising value based on advertising format or level of geographic targeting?

Perceived advertising value is shown to be significantly higher for mobile coupons versus mobile banners. Location based advertising also leads to significantly more positive evaluations of the advertisement in comparison with non-location based advertising.

5.2.6 Can the associations from mobile marketing and advertising value explain the higher effectiveness?

When measuring across all manipulations, the experiment shows that the signal effects of both innovativeness and caring can explain the higher level of purchase intentions. Innovativeness is also able to explain increased word-of-mouth intentions. Perceived advertising value can explain the variance in both purchase intentions and word-of-mouth intentions. Therefore, it is important to aim for increased associations in order to affect additional measurements such as purchase intentions and word-of-mouth intentions.

5.3 Managerial Implications

The findings of this thesis have practical implications for players in consumer products industries as well as media and advertising agencies. It will guide managers in determining the type of marketing to engage in depending on varying goals – increasing certain associations, purchase intentions or word-of-mouth intentions.

A brand with the goal of being perceived as innovative should engage in a particular type of mobile marketing- mobile coupons and/or location based advertising. Many car brands are spending a lot of money on advertising to create the association of being an innovative brand in the minds of consumers. Mobile advertising does not replace the spending on R&D; however, the modern type of mobile marketing- coupons and location based services- can add associations of innovativeness. These innovative associations will in turn influence both purchase intentions and word-of-mouth intentions. For low involvement products, purchase intentions and impulse buying intentions can be strongly affected by choices in characteristics of mobile marketing, while purchase intentions for high involvement products are not as influenced by the various qualities of mobile marketing. Therefore, if a company with a range of products aims to increase purchase intentions, they would benefit from choosing one of their low involvement offerings to be advertised through a location based mobile coupon. On the other hand, if the objective is to build a buzz around the brand, it is better to roll out a high involvement product in the campaign.

As products become increasingly similar, the association of being customer-oriented has become an important differentiator for a brand (Gröönros, 1994). Therefore, it is of interest for companies to be perceived as caring- being available and concerned for their customers. The findings suggest that mobile advertising can contribute with associations of caring when using location based mobile advertisements – regardless of ad format. The analysis also indicates that this will in turn increase purchase intentions.

Coupons and location based advertising can also increase the positive evaluations of the advertisement. Although both mobile advertising formats were perceived as somewhat irritating, this is indicative of most forms of advertising. Location based coupons showed high results in the categories of valuable and entertaining, which has a positive impact on purchase intentions and word-of-mouth intentions. In order to counteract the possibilities of being perceived as irritating, companies should provide relevant and well-targeted promotions for maximum effectiveness.

Marketing managers of tomorrow can be confident that location based mobile coupons will increase purchase intentions and word-of-mouth intentions through capitalizing on the associations of innovativeness.

5.4 Potential Criticism

Critique towards the study can be raised in some aspects regarding the sample, manipulations, and research approach.

The sample consisting mainly of students can be challenged, as their responses may not reflect the habits of the average consumer (Cunningham, Anderson & Murphy, 1974). However, in this case, students are perceived to be an appropriate sample since they are experienced smartphone users. Furthermore, this group was highly homogeneous, which is necessary for between-group experiments. Critique can also be put forward regarding the low response rate of the main survey, as a response rate for postal questionnaires below 50% is unacceptable according to Mangione (1995, cited in Bryman & Bell, 2007). Low response rates are a concern as respondents' answers may differ from the potential answers of non-respondents, and can therefore lead to biased results (Bean & Roszkowski, 1995, cited in Sheehan, 2001). However, Bryman & Bell (2007) state that many published research articles achieve response rates of approximately 18-25%, and based on the declining response rate for e-mail surveys, the 18% response rate in this thesis can be regarded as sufficient.

This experiment did not take into consideration the aesthetics of the advertisements and mobile coupons and how they might affect consumer attitudes towards the advertisement and behavioral data. For example, if a respondent thought the advertisement was 'ugly', she might answer negatively for many questions, and questions regarding how respondents felt about the look or feel of the advertising were not included. However, the purpose of this thesis is to measure the differences between the groups, and the aesthetics have been kept consistent throughout the manipulations to offset any potential effects from a reaction to the design of the advertisements. The decision was also made to use the same type of offer- percentage discounts- for both the high and low involvement products. However, research has shown that a percentage discount is more effective for products with low price points, while cents-off coupons are more effective for products with higher price points (Yin & Dubinsky, 2004). Percentage discounts were used in order to measure the independent variables without the discount type becoming a variable. The high involvement product may therefore have generated higher perceived advertising value and purchase intentions if using cents-off coupons.

The study uses a hypothetical situation asking respondents to 'imagine' they have received certain advertising on their mobile phones, as opposed to a real world situation testing actual behavior. Evidence suggests that observational studies might be a more accurate measurement of how the consumer would actually behave (Bryman & Bell, 2007). Using a real world situation would have involved technical expertise and participation from companies such as Google (AdMob) or Apple (iAds) and Rabble or Facebook. It also would have required knowledge of respondents' mobile phone contact information prior to the study and agreement from them to participate in advance. However, observational studies would not give insight into the mindset metrics and intended behavior that consumers cannot display but must rather reflect upon.

5.5 Suggestions for Further Research

This thesis discusses a number of areas regarding mobile marketing and smartphones, however there are many opportunities to branch off into new areas or delve deeper into specific parts of this study. A main area to expand on would be comparing mobile advertisements using predetermined qualities with similar advertisements in varying formats, such as television, print, or the internet. This would allow advertisers to say with confidence that the mobile marketing format is more or less effective in regards to particular measurements based on the characteristics of the advertisements used in that study.

While this study focuses on mobile marketing effectiveness based on a number of characteristics, there still exist a number of areas to be examined further. Although the parameters chosen- level of geographic targeting, ad format, and product involvement- were determined to be the most important in the mobile marketing format, there are perhaps other characteristics which might be beneficial to test. For example, these parameters could include whether the brand advertised is familiar or not or expand on the product type based on qualities other than involvement level. Different industries could be explored- services or retail, for example, or the importance of product fit with the medium. The experiment here focuses on consumer products- toilet paper and a car- and could find varying results for restaurants, health services, or grocery stores. Another potential area to focus on is location and how an ad shown in specific areas of the city- for example, a very affluent area versus a less affluent area- affects multiple measurements.

In regards to location based advertising, it might also be interesting to compare applications which utilize this service, such as Gowalla, Foursquare, and Facebook places. Services like Foursquare differ from mobile couponing, as they require a consumer to 'check in' to track their movements in order to rack up points for their most frequented locations.

It could also be interesting to see if this study shows the same results when conducted in a real world experiment. Observational data carries a certain degree of weight in that it is actual behavior versus potential behavior (Bryman & Bell, 2007), and it can make the results more realistic and indicative of real world situations. Hence, in observing how consumers who normally use smartphones interact with multiple variations of advertisements, future researchers could more solidly conclude best practices based on actual behavior. A future experiment testing a different sample could also be interesting, as results may vary depending on demographics such as age and income level and psychographics such as level of smartphone experience and hobbies.

As this study has shown that mobile coupons offer superior characteristics in most areas versus mobile banner advertisements, it is important to delve deeper into best practices for mobile coupons specifically. For example, perhaps the percentage discount is not the most effective offer for a particular group of products, but rather a rebate or dollar amount off is more appropriate. Other factors discussed previously such as industry type or prior brand knowledge may yield exciting results when examined solely in the coupon format.

As technology is constantly changing and becoming increasingly a part of our daily lives, marketers are finding new ways to better satisfy the needs of consumers. The importance of mobile phones has reached new heights with the smartphones of today, providing functions no one could have imagined 20 years ago. Companies can no longer ignore the need to market in the mobile arena; however they should be aware that with the rapidly changing technologies, five years from now the landscape will look completely different. Hence, this study should assist marketing managers in determining the best way to enter the mobile playground in its current state in mid 2011.

"*The future will be fantastic because we expect it to be.*"

– Micael Dahlén (2009, p. 150)

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7. Appendices

Appendix 1: Pre-Test Survey

Hello Friends,

We need your help to measure the level of involvement or interest in various products. Please answer as honestly as possible.

Thanks so much!

- Julie & Carolina

>>

How important is the brand in the decision to buy one of the following products:

	Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
Car	○	○	○	○	○	○	○
Socks	○	○	○	○	○	○	○
Computer	○	○	○	○	○	○	○
Toilet Paper	○	○	○	○	○	○	○
Winter Jacket	○	○	○	○	○	○	○
Eggs	○	○	○	○	○	○	○

Determine the amount of thought that goes into deciding what brand to purchase for the following products:

	No Thought at all	Very Little Thought	Somewhat Little Thought	Indifferent	Somewhat More Thought	Very Much Thought	An Extreme Amount of Thought
Car	○	○	○	○	○	○	○
Socks	○	○	○	○	○	○	○
Computer	○	○	○	○	○	○	○
Toilet Paper	○	○	○	○	○	○	○
Winter Jacket	○	○	○	○	○	○	○
Eggs	○	○	○	○	○	○	○

How much risk do you feel is involved with choosing the wrong brand for the following products:

	Nothing to Lose	Very Little to Lose	Somewhat Little to Lose	Indifferent	Somewhat More to Lose	Much More to Lose	Everything to Lose
Car	○	○	○	○	○	○	○
Socks	○	○	○	○	○	○	○
Computer	○	○	○	○	○	○	○
Toilet Paper	○	○	○	○	○	○	○
Winter Jacket	○	○	○	○	○	○	○
Eggs	○	○	○	○	○	○	○

>>

Sex:

○ Male

○ Female

Age:

[   ]

Place of residency:

[▼]

>>

We thank you for your time spent taking this survey.
Your response has been recorded.

Appendix 2: Illustrations of all Manipulations

Appendix 2.1: Low Involvement Banner Non-Location Based

Appendix 2.2: Low Involvement Banner Location Based

Appendix 2.3: Low Involvement Coupon Non-Location Based

Appendix 2.4: Low Involvement Coupon Location Based

Appendix 2.5: High Involvement Banner Non-Location Based

Appendix 2.6: High Involvement Banner Location Based

Appendix 2.7: High Involvement Coupon Non-Location Based

Appendix 2.8: High Involvement Coupon Location Based

Appendix 3: Questionnaire – High Involvement, Coupon, Non-Location Based

Hello,
The following survey is part of a study being conducted at the Stockholm School of Economics. Your response is very important to us! As a token of gratitude for your participation, we are offering the opportunity to win an amazing portable speaker.
Thank you for participating!

/Julie and Carolina

Close

Please read the short senario below.
You will be asked to answer a series of questions regarding this senario throughout the survey.

Imagine you are sitting in a coffee shop by yourself, listening to the radio on your smart phone. You have signed up to receive coupons from an application on your smart phone. A coupon pops up on the screen which does not affect the application you are running. Please take a look at the coupon below which shows car brand X (the identity of the brand is kept anonymous for the purpose of this test). It displays the discounted offer and tells you that you can purchase this item for a limited time only.

Close

To what extent do you agree with the following statements about the brand being advertised:

	Strongly Disagree						Strongly Agree
The brand is innovative.	◎	◎	◎	◎	◎	◎	◎
The brand is modern.	◎	◎	◎	◎	◎	◎	◎
The brand is new thinking.	◎	◎	◎	◎	◎	◎	◎
The brand is capable of delivering new products in the future.	◎	◎	◎	◎	◎	◎	◎
The brand offers high quality products.	◎	◎	◎	◎	◎	◎	◎
The brand is successful.	◎	◎	◎	◎	◎	◎	◎
The brand is smart.	◎	◎	◎	◎	◎	◎	◎
The brand cares about their customers.	◎	◎	◎	◎	◎	◎	◎
The brand is available for their customers.	◎	◎	◎	◎	◎	◎	◎
The brand is creative.	◎	◎	◎	◎	◎	◎	◎

[Close]

To what extent do you agree with the following statements:

	Strongly Disagree						Strongly Agree
After seeing this advertisement, I had a desire to buy items that did not pertain to my specific shopping goal.	◎	◎	◎	◎	◎	◎	◎
After seeing this advertisement, I had the urge to purchase this brand spontaneously.	◎	◎	◎	◎	◎	◎	◎
If I needed this product I would try this brand.	◎	◎	◎	◎	◎	◎	◎
If I needed this product I would want to buy this brand.	◎	◎	◎	◎	◎	◎	◎
If I needed this product I would most likely buy this brand.	◎	◎	◎	◎	◎	◎	◎
I want to talk to others about this brand.	◎	◎	◎	◎	◎	◎	◎
I will most likely recommend this brand to others.	◎	◎	◎	◎	◎	◎	◎

[Close]

What is your perception of the advertisement itself:

	Strongly Disagree						Strongly Agree
This advertisement is of value.	○	○	○	○	○	○	○
This advertisement is entertaining.	○	○	○	○	○	○	○
This advertisement is informative.	○	○	○	○	○	○	○
This advertisement is irritating.	○	○	○	○	○	○	○

Close

Finally we need some information about you:

What type of phone do you have?

○ Smartphone (iPhone, HTC or other phone with internet capabilities)

○ Other

○ I don´t have a phone

Close

Have you received any type of advertising on your phone (including SMS)?

Yes ▾

Close

What is your main occupation?

◯ Student

◯ Employed

◯ Unemployed

[Close]

What is your gender?

[Male ▾]

[Close]

What is your age?

[_____]

[Close]

Thank you for your help!
If you would like the opportunity to win the portable speaker, please include your e-mail address and phone number below:

E-mail: [_____]

Phone number: [_____]

[Close]

Appendix 4: Overview of Mean Values between the Different Manipulations

	N	Caring	Innovative	Ad Value	PI	Impulse PI	WOMI
High Banner LBA	44	3.9773	4.3333	3.4091	3.3788	2.0795	2.7273
High Banner Non-LBA	51	3.7451	4.0000	2.7451	2.9412	2.0098	2.9314
High Coupon LBA	45	4.1889	5.1037	3.7722	3.6519	2.3778	3.3222
High Coupon Non-LBA	47	3.7447	4.305	3.1117	3.0213	2.2021	3.1277
Low Banner LBA	50	4.2700	4.4267	3.2300	3.5400	2.5800	2.5200
Low Banner Non-LBA	46	3.8478	3.9275	3.2772	3.3623	2.4130	2.3261
Low Coupon LBA	36	4.1806	4.7130	3.7361	4.4537	3.5556	3.1806
Low Coupon Non-LBA	46	3.9239	4.6087	3.5163	4.1667	3.1413	2.4239
Average Mean Value		3.9239	4.4119	3.3274	3.5306	2.5123	2.8082

Appendix 5: Comparing Means – Advertising Format

	Coupon	Banner	Difference between Means	Significance Level
Brand Association: Innovativeness	4.6762	4.171	0.5052	0.0005
Brand Association: Caring	3.9971	3.9607	0.0364	0.398
Advertising Value	3.5187	3.1531	0.3656	0.0035
Purchase Intentions	3.7835	3.3002	0.4833	0.0015
Impulse Buying Intentions	2.7759	2.2723	0.5036	0.005
Word-of-Mouth Intentions	3.0029	2.6309	0.3720	0.009

Appendix 6: Comparing Means – Level of Geographic Targeting

	LBA	N-LBA	Difference between Means	Significance Level
Brand Association: Innovativeness	4.6362	4.2053	0.4309	0.0025
Brand Association: Caring	4.1571	3.8132	0.3439	0.007
Advertising Value	3.5186	3.1513	0.3673	0.0035
Purchase Intentions	3.7162	3.3596	0.3566	0.0135
Impulse Buying Intentions	2.6029	2.4289	0.1740	0.1360
Word-of-Mouth Intentions	2.9143	2.7105	0.2038	0.0975

Appendix 7: Comparing Means – Low & High Involvement

	Low	High	Difference between Means	Significance Level
Brand Association: Innovativeness	4.4026	4.4207	0.0181	0.373
Brand Association: Caring	4.0534	3.9064	0.1470	0.689
Advertising Value	3.4185	3.2406	0.1779	0.0965
Purchase Intentions	3.8408	3.2353	0.6055	0.000
Impulse Buying Intentions	2.8792	2.1631	0.7161	0.000
Word-of-Mouth Intentions	2.5787	3.0267	0.4480	0.002

Appendix 8: Components of the Advertising Value Measurement

	LBA	Non-LBA	Banner	Coupon
Valuable	3.71	3.36	3.32	3.76
Entertaining	3.11	2.73	2.79	3.06
Informative	4.02	3.37	3.43	3.95
Irritating	4.77	4.86	4.93	3.70

Appendix 9: Results from the Regression Analysis

	Unstand. Coefficient Beta	R-square	t-value	p-value
Innovativeness & Purchase Intentions	0.541	0.271	11.63	0.000
Caring & Purchase Intentions	0.683	0.355	14.13	0.000
Innovativeness & Word-of-Mouth Intentions	0.427	0.180	8.85	0.000
Advertising Value & Purchase Intentions	0.780	0.438	16.83	0.000
Advertising Value & Word-of-Mouth Intentions	0.618	0.287	12.10	0.000

Appendix 10: Interaction Effects – Involvement Level & Ad Format for Purchase Intentions & Word-of-Mouth Intentions

Purchase Intentions	High	Low	Significance Level
Banner	3.1439	3.4549	0.061
Coupon	3.3297	4.2927	0.000
Significance Level	0.1935	0.000	

Impulse Buying Intentions	High	Low	Significance Level
Banner	2.0421	2.500	0.009
Coupon	2.2880	3.3232	0.000
Significance Level	0.0995	0.001	