Consumer acceptance of mobile advertising

The key determinants for driving consumer acceptance

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Abstract – Technological advancements in the mobile phone business and rapid improvements in the wireless technology of mobile phones create an emerging market for the advertising industry. This study explores the key determinants for mobile advertising acceptance by the consumer and the requirements for an effective mobile advertising message. It provides an implementation of the framework of Frambach and Schillewaert (2002) on innovation adoption and technology acceptance, translated to the mobile advertising research domain. The mobile advertising message content is considered, including perceived entertainment, informativeness, advertisement credibility and personalization. Additionally, this study looks at the implications of perceived risk of privacy and control on mobile advertising acceptance and examines the influence permission and incentives have on the adoption decision.

Keywords - mobile marketing, mobile advertising, permission-based advertising, incentive-based advertising, innovation adoption, technology acceptance, extended-self.

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# Table of Content

## CHAPTER 1: INTRODUCTION ................................................................. 3

- BACKGROUND .................................................................................. 3
- PURPOSE ......................................................................................... 5
- RESEARCH QUESTIONS ..................................................................... 5
- DEFINITIONS ................................................................................... 6
- DEMARCATION .................................................................................. 7
- MANAGERIAL RELEVANCE ............................................................. 7
- ACADEMIC RELEVANCE .................................................................. 8
- STRUCTURE ....................................................................................... 8

## CHAPTER 2: THEORY OF FRAMBACH AND SCHILLEWAERT .................. 9

- INTRODUCTION .................................................................................. 9
- THE FRAMEWORK EXPLAINED ......................................................... 10
  - Perceived innovation characteristics ........................................... 10
  - Adopter characteristics ............................................................... 10
  - Supplier marketing efforts ......................................................... 10
  - Social network ............................................................................. 10
  - Environmental influences ........................................................ 11
- TRANSLATION OF THE FRAMEWORK TO THE MOBILE ADVERTISING RESEARCH DOMAIN .......................................................... 11
  - Perceived innovation characteristics ........................................... 11
  - Adopter characteristics ............................................................... 12
  - Supplier marketing efforts ......................................................... 12
  - Social network ............................................................................. 12
- THEORETICAL FRAMEWORK .......................................................... 13
- RELATED RESEARCH AND REPORTED RELATIONSHIPS .............. 13

## CHAPTER 3: DETERMINANTS OF CONSUMER ATTITUDES ................ 14

- INTRODUCTION .................................................................................. 14
- 3.1 MESSAGE .................................................................................... 14
  - Introduction .................................................................................. 14
  - Entertainment and informativeness ............................................. 15
  - Credibility ..................................................................................... 17
  - Personalization ............................................................................. 18
- 3.2 PERCEIVED RISK OF PRIVACY AND CONTROL ........................................... 20
- 3.3 EXTENDED SELF ......................................................................... 22
- CONCLUSION .................................................................................... 24

## CHAPTER 4: PERMISSION AND INCENTIVES ................................... 26

- 4.1 PERMISSION-BASED MOBILE ADVERTISING .................................. 26
- 4.2 INCENTIVE-BASED MOBILE ADVERTISING .................................. 29
- CONCLUSION .................................................................................... 29

## SYNTHESIS ...................................................................................... 30

- CONCLUSION .................................................................................... 30
- LIMITATIONS ................................................................................... 31
- RECOMMENDATIONS FOR FUTURE RESEARCH ................................. 32

## BIBLIOGRAPHY ............................................................................... 33

## APPENDIX ...................................................................................... 35

- APPENDIX A ..................................................................................... 35
Chapter 1: Introduction

Chapter one acts as a general introduction of the topic on the consumer acceptance of mobile advertising. It provides an overview of the opportunities and implications of the mobile advertising market, resulting in a central problem statement. This chapter further explains the key definitions covered in this thesis, the demarcation of this research topic, the structure and the academic and managerial relevance.

Background

Technological advancements in the mobile phone business and rapid improvements in the wireless technology of mobile phones create an emerging market for the advertising industry.

The Mobile Infolink of the GSM Association reports a total of 3,450,410,548 mobile phone subscriber connections worldwide by the end of the second quarter of 2009, more than half of the world population in absolute numbers, which is estimated at 6,813,200,000 as of April 7 2010 (United States Census Bureau, 2010). This in turn is a 43-44% increase compared to the 2,4 billion mobile phone connections in the second quarter of 2006.

In the United States, where mobile phone adoption was slower than in Europe (Economist, 2005), mobile penetration of 91% (285.6 million) was reported by the CTIA in December 2009, compared to 69% (207.9 million) back in December 2005. A total of 1.56 trillion (1560 billion) text messages were sent or received.

This booming sector gives rise to a big potential market, and, more importantly, a new channel of advertising, from here on referred to as ‘mobile advertising’, and a new area for research (Tsang, Ho & Liang, 2004). The mobile phone’s characteristics offer new and unique opportunities in marketing and, unlike other media, allow for personalization, ubiquity, localization and interactivity (Bauer, Reichardt, Barnes & Neumann, 2005).

The way companies deliver their promotional communications does however raise important concerns, both from a privacy and legal perspective. The law of the European Union states that mobile advertising requires prior permission from the customer and the advertiser needs “an effective disclosure” (Cleff, 2007). In addition, personal information, such one’s current location, may be required for localization and increased personalization (Jayawardhena, Kuckertz, Karjaluoto & Kautonen, 2009).
In many countries unsolicited mobile advertising messages are considered to be a violation of the law, leaving permission- and incentive-based mobile advertising as the only alternatives for a global marketing campaign.

Permission-based mobile advertising, PBMA in short, is also referred to as ‘opt-in’ mobile marketing (Jayawardhena, Kuckertz, Karjaluoto & Kautonen, 2009) and requires prior consent before the advertiser can send advertising messages. It significantly improves the response to the advertisement message, according to the findings of Barwise and Strong (2002).

Incentive-based mobile advertising could be seen as a form of permission, in which customers give their consent and are rewarded for being exposed to advertisements, which could be anything from financial compensation to free Wi-Fi time.

Consumer attitudes play an important role in driving the consumer acceptance of mobile advertising and are influenced by, amongst others, the perceived utility of the content and the perceived risk associated with data security and consumer privacy (Bauer, Reichardt, Barnes & Neumann, 2005).

The mobile phone is a very personal device (Barwise & Strong, 2002; Tsang, Ho & Liang, 2004) and as such, advertising messages need to fit the individual and possibly take different forms by offering incentives, asking for permission or using a person’s location (e.g.: you receive an advertising message with a discount when you walk past a store) to cater the advertising messages to their needs (Tsang, Ho & Liang, 2004). A mobile device is a possession many people carry with them and text messaging is generally used for personal one-to-one contact, which is why a more personal approach seems to be required (Barwise & Strong, 2002).

Research on the influence of possessions that contribute to our identity or are a reflection of our identity was conducted by Belk (1988). Belk refers to these personal possessions as a part of the ‘extended self’, which include external objects (such as a watch) that are seen as a part of our selves and therefore treated differently compared to regular objects. Intrusions into this personal device could lead to irritation, which can be amplified if the mobile phone is seen as an extension of the self. This, in turn, can harm the perception of the brand in question (Barwise & Strong, 2002).
Purpose
The purpose of this study is to review the key determinants for driving consumer acceptance of mobile advertising, the influence of advertisement content and the extended self on consumer attitudes and the role permission- and incentive-based advertising play in influencing these attitudes.

The central problem
What are the key determinants for driving consumer acceptance of mobile advertising and what role does permission from the consumer play?

Research questions
The basis of the research topic is formed by answering the following four main research questions:

- Which variables influence the adoption decision of mobile advertising? (Chapter 2)

- What is the relationship between advertisement message and consumer attitudes towards mobile advertising, and what role does the extended self play? (Chapter 3)

- What is the influence of the perceived risk of privacy and control in driving consumer attitudes towards mobile advertising? (Chapter 3)

- What is the influence of permission- and incentive-based advertising in driving consumer attitudes towards mobile advertising? (Chapter 4)
Definitions

Consumer attitudes (towards mobile advertising): Solomon, Bamossy, Askegaard & Hogg, 2006 describe an attitude as a “lasting, general evaluation of people, objects, advertisements or issues”. In this study, consumer attitudes involve the evaluation of mobile advertising messages by consumers.

Mobile advertising: A form of advertising via mobile phones, predominantly via text messaging (short message service or sms) and multimedia messaging service (mms).

Extended self: Certain possessions, in this case a mobile device, that are seen as a part of a person’s self and his or her identity. Individuals treat these external objects as if they were a part of their selves, with great care and / or affection.

Permission-based advertising (or PBMA): Also referred to as ‘opt-in’ mobile marketing. The advertising requires prior consent from a consumer. In Europe, permission is required by law (European Union).

Incentive-based advertising: A form of advertising in which consumers are rewarded for being exposed to advertisements. This could be anything from financial compensation to free Wi-Fi time.

Mobile penetration: The percentage of mobile phone connections of the total population. Mobile phone connections / Total population = Mobile penetration. This number can exceed 100%, given that there are individuals with multiple mobile phones.
Technical limitations, technological advancement (see Wu, Luh & Shieh, 2007), social influences, the theory of critical mass, existing knowledge of mobile advertising and demographics have been left out due to the scope of this research and/or the lack of solid empirical evidence regarding the influence on mobile advertising acceptance. The effects on behavioral intentions and the influence of recall are not researched. For more information on this topic, see Nasco & Bruner (2007) and Nasco & Bruner (2008). Additionally, general attitudes towards advertisements and promotional activities will not be considered, as this topic has been thoroughly researched. Broadening the research would therefore not be appropriate, given the scope of this thesis.

Managerial relevance
What makes this topic relevant is that the mobile advertising market is a huge potential market, which is still in its infancy. The mobile phone market has experienced rapid growth and with the development of new technologies, the ability to access information on the internet via data plans and a rapid increase of mobile phone usage in general, the
mobile advertising market could become an important sector in the global advertising market.

**Academic relevance**
The scientific aim of this research is to provide a broader perspective on the determinants of mobile advertising acceptance, using the framework of Frambach and Schillewaert (2002), which incorporates several theories, including the Technology Acceptance Model (TAM) by Davis (1989) and the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975), which are both frequently used in this research domain.

This thesis looks at the theory of the extend self, which has not yet been applied to the mobile advertising domain, and the possible implications for mobile advertising acceptance. Additionally, it looks at the emotional attachment to a mobile device and the influence it has on consumer attitudes towards mobile advertising. Almost all recent research on the consumer acceptance of mobile advertising focuses primarily on the advertisement message, whilst ignoring the emotional attachment to a mobile device as a significant influence.

**Structure**
The first chapter of the thesis will provide an introduction to mobile advertising, the market and influencing factors surrounding the topic. In addition, it includes the central research problem, the research questions, definitions, demarcation and the academic and managerial relevance.

Chapter two looks at the theory of Frambach and Schillewaert on innovation adoption and technology acceptance, translated to the research domain of this thesis.

The third chapter deals with the consumer attitudes towards mobile advertising, the relationship between the advertisement content and the consumer attitudes, the influence of perceived risk of privacy and control and the effect of the extended self.

In the fourth chapter, the effect of permission-based advertising on the consumer acceptance of mobile advertising will be considered.
Chapter 2: Theory of Frambach and Schillewaert

Chapter two examines the underlying methodology and introduces the theory and framework of Frambach & Schillewaert (2002) on organizational innovation adoption and technology acceptance. This model is translated to the mobile advertising research domain and introduces new independent variables.

Introduction
The theory and framework of Frambach and Schillewaert (2002) on innovation adoption and technology acceptance plays a central role in the investigation and mapping of the main drivers of consumer acceptance of mobile advertising.

Previous research with regards to mobile commerce and marketing, such as Nysveen, Pedersen and Thorbjørnsen (2005), Bauer, Reichardt, Barnes & Neumann (2005) and Lee, Tsai and Jih (2006), has often made use of the Technology Acceptance Model (TAM) by Davis (1989), the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) and / or it’s extension, the Theory of Planned Behavior (TPB) by Ajzen (1985).

Frambach and Schillewaert provide a specific framework for the adoption decision, which incorporates several theories, including the Technology Acceptance Model (TAM) by Davis (1989) and the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975). The framework of Frambach and Schillewaert (2002) could be seen as an update of those two theories and provides a broader perspective on the adoption decision.

The framework explained
The framework of Frambach and Schillewaert (2002) includes both direct and indirect effects on the organizational innovation adoption decision and is split up into five blocks: supplier marketing efforts, social network, environmental influences, perceived innovation characteristics and the adopter characteristics (see Figure 1.1).

In the framework, the perceived innovation characteristics mediate the influence of the supplier marketing efforts, the social network and the environmental influences on the adoption decision.
Perceived innovation characteristics
The perceived innovation characteristics look at the perceived benefits and disadvantages of the innovation adoption decision. The perceived utility or benefit of the innovation adoption should outweigh the perceived risk associated with the adoption decision. This block contains the innovation characteristics that influence the adoption decision.

Adopter characteristics
The adopter characteristics are described as “the organizational characteristics that influence the adoption decision” (Frambach & Schillewaert, 2002). This includes characteristics such as size and organizational structure, which can positively (and negatively) influence the degree to which an organization is open to innovation adoption.

Supplier marketing efforts
Supplier marketing efforts stress the importance of targeting the innovation to potential adopters, communicating the innovation to create awareness and influence consumer perceptions and reducing the risk associated with the innovation, which can significantly influence the innovation adoption.

Social network
The influence of a social network and social interaction facilitate the adoption decision. Social interaction helps spread the information about the innovation and can increase the
speed and rate of the innovation adoption (Frambach & Schillewaert, 2002).

Environmental influences
The environmental influences involve the way the business environment influences the adoption decision. Business environment influences, such as competitive pressures, can facilitate the adoption decision.

Translation of the framework to the mobile advertising research domain
Translating the framework of Frambach and Schillewaert (2002) to the mobile advertising research domain, one must first be aware of the organizational focus of the original model. In order for it to fit the case study, the model is translated to the individual mobile advertising adoption decision.

In the adjusted framework, the environmental influences (the way the business environment facilitates the adoption decision through amongst others competitive pressures) will not be considered, since this is not applicable to the individual mobile advertising adoption decision.

The other four blocks (supplier marketing effort, social network, perceived innovation characteristics and the adopter characteristics) are considered and their heading remain unchanged. However, the following changes are made to fit the individual innovation adoption of mobile advertising:

Perceived innovation characteristics
The block perceived innovation characteristics contains the innovation characteristics that influence the adoption decision, but focus on the individual adoption decision of mobile advertising. In this thesis, the perceived innovation characteristics explain the significance of the supplier marketing efforts in driving the mobile advertising adoption decision.

The perceived innovation characteristics of mobile advertising are the perceived entertainment, informativeness, advertisement credibility, the perceived risk of control and the perceived risk of privacy (see Figure 1.2). The introduction of chapter 3.1 provides additional information regarding the selection of the independent variables.
**Adopter characteristics**

The focus of the adopter characteristics that influence the adoption decision is shifted to the individual and instead of considering size and the structure of the organization as its determinants. This block will focus on the influence of demographics (such as age, gender and location), the influence of the extended-self and emotional attachment, existing knowledge of mobile advertising and the attitude towards advertising in general. These variables are covered in chapter 3.3. As pointed out in the demarcation, demographics, existing knowledge of mobile advertising and the attitude towards advertising in general will not be considered in this thesis, given the scope of this research and / or the lack of empirical findings of their influence on the mobile advertising adoption decision.

**Supplier marketing efforts**

Supplier marketing efforts of mobile advertising involves targeting the message through personalization, reducing the risk of privacy and control issues through permission-based advertising and make use of incentives to create awareness and influence the consumer perception of mobile advertising. These variables are covered in chapter three and four.

**Social network**

The influence of a social interaction between consumers can help facilitate the adoption decision in much the same way as in organization. Social interaction helps spread the information. This block is not covered in the thesis due to the scope of the research and / or the lack of empirical findings of its influence on the mobile advertising adoption decision.

The changes result in a modified version of the theoretical framework of Frambach and Schillewaert (2002), which can be found on page 14 (Figure 1.2). The independent variables in this framework are covered in chapter three and four, with the exception of the variables mentioned below the demarcation on page 7. The structure of the chapters three and four is based on the general format of previous research.
Theoretical framework

Figure 1.2. The adjusted version of the framework of Frambach and Schillewaert, translated to the mobile advertising research domain.

Related research and reported relationships
An overview of the independent variables related to the adoption decision of mobile advertising, their reported relationship, the selected related research and the related chapters can be found in the appendix under Appendix A. This table is structured similarly to that of Frambach and Schillewaert (2002) and was added to improve the overall clarity of the research and to provide a quick overview of the reported relationships.
Chapter 3: Determinants of consumer attitudes

Chapter three introduces consumer attitudes and looks at how these are influenced by the message content, more specifically: the perceived entertainment, informativeness, credibility and personalization. Next, the perceived risk of privacy and control are considered, including their influence on the adoption decision of mobile advertising. The final subchapter explains the variable ‘extended self’ and looks at the role emotional attachment plays in influencing the consumer receptiveness of mobile advertising.

Introduction

Consumer attitudes, in this case a lasting, general evaluation of advertising through a mobile device (Solomon, Bamossy, Askegaard & Hogg, 2006), have been the central point of focus in most recent mobile advertising research. They are seen as key in driving the consumer acceptance of mobile advertising, given that more favorable attitudes towards mobile advertising are likely to result in higher consumer acceptance of mobile advertising.

Rettie, Grandcolas and Deakins (2005) discovered (using a database of 5,401 responses from 26 separate sets of research on mobile advertising acceptance) that 44% of all respondents found mobile advertising campaigns acceptable, compared to 21% who found it unacceptable. Why individuals find it acceptable, or not, is determined by the drivers of consumer acceptance of mobile advertising.

This chapter examines these drivers and looks at the influence of the advertising message and the role it plays in the adoption decision. Secondly, the influence of the perceived risk of privacy and control, and the role of the extended-self and emotional attachment are considered.

3.1 Message

Introduction

There is a general belief among mobile advertising authors that consumers will not accept mobile advertising unless, according to their perception, there is a benefit in receiving the advertisement messages (Kavassalis, Spyropoulou, Drossos, Mitrokostas, Gikas & Hatzistamatiou, 2003; Bauer, Reichardt, Barnes & Neumann, 2005).
An evaluation of advertising message provides the consumer with a perception of the perceived utility of the message, or in other terms, the benefits this message offers them. This benefit of the mobile advertising message Tsang, Ho and Liang (2004) believe to be linked to the perceived entertainment, informativeness, credibility and irritation associated with the message content.

These factors form the basis of this subchapter, which examines the key content related determinants for the mobile advertising acceptance. The factors identified as key determinants by Tsang, Ho and Liang (2004) have been subjected to empirical research in multiple mobile advertising studies. Perceived entertainment and informativeness were considered by amongst others Bauer, Reichardt, Barnes and Neumann (2005) and Barwise and Strong (2002). The significance of content credibility was tested by Drossos, Giaglis and Vlachos (2009) and Vatanparast (2010). Only the irritation variable of Tsang, Ho and Liang (2004) was not thoroughly tested in any other of the empirical research findings this thesis considered and was therefore left out, provided that the significance of this variable in the findings of Tsang, Ho and Liang (2004) was low.

Besides the perceived entertainment, informativeness and credibility, personalization is considered in this subchapter. In a ‘Mobile Advertising Industry Survey’ by the Wireless Advertising Association in 2004, 92% of the advertising professionals questioned stated they consider personalization of the mobile advertising medium key in order for it to become a success (via Kim and Jun, 2008). The last subchapter will therefore briefly touch upon personalization, providing a general picture of the underlying influence personalized messages have on the factors entertainment, informativeness and credibility.

Entertainment and informativeness
The influence of the perceived entertainment variable of the advertising message in driving the consumer attitudes was tested by Tsang, Ho and Liang (2004). Entertainment was the strongest factor influencing consumer attitudes in their model, which used a sample of 380 individuals, of which 47.6% (181) were males and 52.4% (199) were females, as its foundation.

As shown in Table 3.1, the Δ R² (change in the coefficient of determination) of
entertainment, 0.455, explains 45.5% of the variance, significantly greater than the credibility (8.7%), irritation (1.9%) and informativeness (0.06%). It must however be noted that their analysis is based on a stepwise regression. This type of regression is regarded as unreliable by academics, given that the variables with the highest multicollinearity end up on top.

<table>
<thead>
<tr>
<th>Factor</th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td>0.675</td>
<td>0.455</td>
<td>0.455</td>
<td>17.76</td>
<td>0.000 ***</td>
</tr>
<tr>
<td>Credibility</td>
<td>0.365</td>
<td>0.542</td>
<td>0.087</td>
<td>8.46</td>
<td>0.000 ***</td>
</tr>
<tr>
<td>Irritation</td>
<td>-0.163</td>
<td>0.561</td>
<td>0.019</td>
<td>-4.08</td>
<td>0.000 ***</td>
</tr>
<tr>
<td>Informativeness</td>
<td>0.115</td>
<td>0.568</td>
<td>0.006</td>
<td>2.36</td>
<td>0.019 *</td>
</tr>
</tbody>
</table>


The importance of perceived entertainment as a determinant for driving the consumer acceptance of mobile advertising was further reviewed by Bauer, Reichardt, Barnes and Neumann (2005), who used an internet survey with a response of 1,028 usable questionnaires, of which 40.9% (420) were female and 59.1% (608) were male.

Their findings suggest that a positive relationship between the perceived utility (referred to as PU in Figure 3.2) and the attitude towards mobile marketing exists. They report a positive influence of perceived entertainment, informativeness and social utility on the perceived utility. As shown in Figure 3.3, the influence of the total effect of the perceived utility of information (PUinf) on the behavioral intention is 0.1536 (0.36 * 0.54 * 0.79), while the total effect of the perceived utility of entertainment (PUunt) is even stronger: 0.2474 (0.58 * 0.54 * 0.79). The effect of the total utility (PU) listed in Figure 3.3 on the adoption decision of mobile advertising is strong and significant, namely 0.4266 (0.54 * 0.79).

Based on this data, Bauer, Reichardt, Barnes and Neumann (2005) conclude that entertainment and informativeness are the central acceptance drivers of mobile advertising and that messages that do not offer either are most likely to result in negative attitudes towards the mobile advertisement.
Barwise and Strong (2002) came to similar conclusion after conducting a survey among 1,000 mobile phone users in London, aged between 16 and 30 years old. When asked what constitutes a good mobile advertisement, 28% wanted it to be short and to the point, 26% found the entertainment value to be the most important and 20% were keen to receive information on an area of interest (informativeness). The factors eye catching and prize/promotion were favored less, 13% and 12% respectively. The researchers indicate that mobile advertisements that largely lacked the features mentioned above were still tolerated, which could be due to the incentives offered (£0.05 per advertising message).

The results presented above indicate a demand for the entertainment value, which is a recurring factor influencing the consumer attitudes towards mobile advertising. Informativeness is important, which the research of Barwise and Strong (2002) shows, but the findings of Tsang, Ho and Liang (2004), Bauer, Reichardt, Barnes and Neumann (2005), and Barwise and Strong (2002) suggest its significance is lower than that of perceived entertainment.

Credibility
As mentioned in the preceding section on entertainment and informativeness, the influence of advertisement credibility on consumer attitudes was examined by Tsang, Ho and Liang (2004). With an $\Delta R^2$ of 0.087, it explains 8.7% of the variation as shown in Table 3.2, significantly lower than that of entertainment (45.5%), but greater than
irritation (1.9%) and informativeness (0.06%).

Given the unreliable nature of the data (stepwise regression), more reliable empirical findings are required regarding the influence of the level of trustworthiness or believability (credibility) of the advertisement on the consumer attitudes towards mobile advertising.

Although empirical data regarding the importance of credibility in driving the consumer attitudes towards mobile advertising is limited, recent research by Drossos, Giaglis and Vlachos (2009) has resulted in the acceptance of the hypothesis that more credible advertisements will result in a more positive attitude towards the ad, with a beta coefficient of \( \beta = 0.10 \) and \( t = 2.90 \).

The results of Tsang, Ho and Liang (2004) and Drossos, Giaglis and Vlachos (2009) suggest a positive, but relatively low influence of advertisement credibility in driving consumer attitudes of mobile advertising. This is in line with the findings of Vatanparast (2010), who denotes advertisement credibility as a secondary factor behind primary factors entertainment and informativeness (which he refers to as the construct ‘message content’).

**Personalization**

A variable that has not been subjected to a lot of empirical research is personalization, where messages are catered to fit the individual and offer individualized content. Without personalization, mobile advertising is nothing more than impersonalized mass messaging, that may be neither informative nor entertaining to the receiver and can result in a negative attitude towards the advertisement (Bauer, Reichardt, Barnes and Neumann, 2005). A popular way of personalization is location-based advertising (also referred to as ‘location specific’ advertising), targeting users based on their current location.

Personalization influences the relevance a message has to the consumer and can therefore be directly linked to the entertainment and informativeness. If the mobile advertising message relevance increases, this message can offer more entertainment and / or become more informative. The link between personalization and advertisement credibility is obvious: when messages are impersonalized, to the point where they are considered spam, advertisement credibility is generally low.
Given the personal nature of a mobile device, consumers expect the advertisement to be highly relevant to them (Barwise & Strong, 2002), because there needs to be a benefit in receiving the advertisement message. The importance of personalization is confirmed in a ‘Mobile Advertising Industry Survey’ by the Wireless Advertising Association in 2004, which states that 92% of the advertising professionals questioned consider personalization of the mobile advertising medium key in order for it to become a success (via Kim and Jun, 2008).
3.2 Perceived risk of privacy and control

Consumer behavior is strongly influenced by the perceived risk, as consumers generally try to minimize risk rather than maximize utility (Bauer, Reichardt, Barnes & Neumann, 2005). Thus, to drive the consumer acceptance of mobile advertising, the risk associated with the adoption decision of mobile advertising must be minimized.

Besides the need for permission-based mobile advertising (covered in chapter 4), a clear requirement for the consumer to keep control over the messages they receive, the main risk associated with mobile advertising are that of data security and privacy, according to Bauer, Reichardt, Barnes and Neumann, 2005.

In general, the risk of data security involves the concern about unauthorized and/or unwanted data access and tracking of information. The privacy concern on the other hand is driven by the fear of privacy violations due to the interactivity of the mobile marketing medium, the highly personalized content and the ability to reach consumers at any place and time of the day.

Bauer, Reichardt, Barnes and Neumann (2005) were one of the first to measure the effect of the overall perceived risk on the attitude towards mobile advertising. Using an internet survey with a response of 1,028 usable questionnaires, of which 40.9% (420) were female and 59.1% (608) were male, they confirmed the negative influence of perceived risk. As shown in Figure 3.2, the perceived risk has a total effect of -0.09 (-0.11 * 0.79) on the consumer attitudes towards mobile advertising.

More extensive research was conducted by Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas and Leppäniemi (2007), who looked at the influence of perceived control over permission-based advertising and data on the acceptance of mobile advertising. In addition, the researchers judged the importance of trust in privacy on the willingness to accept mobile advertising.

In a survey among Finnish residents with a sample of 4,062 respondents, of which 48% were male and 52% were female, the relationship between perceived control and the consumer acceptance of mobile advertising was found to be positive, but not significant
The relationship between the trust in privacy and the consumer acceptance was also positive, but still very low (β= .11). As discussed in chapter 4, the researchers suggest that the laws to protect customers from these types of risks are likely to be the reason for these weak relationships.

Given the relatively insignificant results of the above study, a Japanese survey with a sample of 510 respondents by Okazaki, Li and Hirose (2009) provides a more into-depth look at the importance of privacy. Using a quasi-experimental design with two randomly selected scenario groups, Okazaki, Li and Hirose (2009) tested nine hypothesis related to privacy concerns and perceived risk. The hypotheses most applicable to this study are listed below and were all supported, with one exception. The results show a significant influence of information privacy concerns on both the perceived trust and perceived risk, with a very high beta coefficient for the path of information privacy concerns to perceived risk. According to hypothesis 7 (Table 3.3), there is not significant evidence to suggest that trust leads to a preference for less regulatory control, while hypothesis 8 indicates that perceived risk does significantly impact the preference for regulatory control.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Method</th>
<th>Statistics</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2: Information privacy concerns decrease mobile users’ trust in mobile advertising.</td>
<td>Path coefficient</td>
<td>β= -.34</td>
<td>Supported</td>
</tr>
<tr>
<td>H3: Information privacy concerns increase mobile users’ perceived risk in mobile advertising.</td>
<td>Path coefficient</td>
<td>β= .74</td>
<td>Supported</td>
</tr>
<tr>
<td>H4: Trust decreases mobile users’ perceived risk in mobile advertising.</td>
<td>Path coefficient</td>
<td>β= -.17</td>
<td>Supported</td>
</tr>
<tr>
<td>H7: Trust causes mobile users to prefer less strict regulatory controls in mobile advertising.</td>
<td>Path coefficient</td>
<td>n.s.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H8: Perceived risk causes mobile users to prefer more strict regulatory controls in mobile advertising.</td>
<td>Path coefficient</td>
<td>β= .17</td>
<td>Supported</td>
</tr>
</tbody>
</table>

p ≤ 0.001; n.s. = not significant

3.3 Extended self

As pointed out by Kolsaker and Drakatos (2009), previous research on the consumer acceptance of mobile advertising has focused primarily on the advertisement message, found in chapter three of this thesis, whilst ignoring the emotional attachment to a mobile device as a means of communication and a part of everyday life.

The theory of self extension suggests that “knowingly or unknowingly, intentionally or unintentionally, we regard our possessions as parts of ourselves” (Belk, 1988). This is because, according to Belk (1988), we are what we have and possessions contribute to the sense of self, through the role these possessions play in our life and as a part of our identity.

The extension of the self can be experienced at various levels, such as (but not limited to) an individual, family or national level and includes not just external objects, but also persons or places, amongst others (Belk, 1988).

Applying this theory to the case study, a mobile device can be seen as an individual extension of the self through the control of and habituation to an object. The mobile phone is a very personal device, as it is used for private and personal communication and is one of the few products people carry with them at almost all times. As Belk states, possessions can boost a person’s capability for doing and being and this also holds true for mobile devices.

The more an object is “cathected into one's extended self, the more care and attention it tends to receive” (Belk, 1988). Belk in turn suggests that possessions that are seen as an extension of the self, and are lost unintentionally or stolen, damage the self and reveal a vulnerability. This can lead to anger and rage or even feelings of invasion or violation in case of for example a burglary (Belk, 1988). Although burglary is an extreme example, one could argue that unauthorized messages are a form of losing control of a very personal possession, and thus are negatively perceived.

Whether the general acceptance of mobile advertising, not just unauthorized messages, is influenced by the role a mobile device plays in the identity of the consumer, is a different story. Although the concept of the extended self has not yet been directly applied to the influence on the consumer acceptance of mobile advertising, Kolsaker and Drakatos
(2009) have taken an important step in this direction with their research on the influence of emotional attachment to a mobile device on the receptiveness of permission-based mobile advertising.

The empirical research conducted by Kolsaker and Drakatos makes use of snowball sampling, with a sample size of 243 (questionnaires), of which 51% were female and 49% were male. 82% of this group was 35 years or younger, with 40% of the respondents being between 18 and 25 years old. The respondents were divided into three different groups based on their attachment to mobile devices. 20% of the 243 respondents belong to the group ‘connected but unattached’ (mobile phone used mainly for calls), 34% are regarded prosthetics, who consider the mobile phone to be an extension of the self, and 45% are cyborgs, who cannot live without their mobile device.

With regards to the differences between the three groups, the identified ‘cyborgs’ and ‘connected but unattached’ groups differ when it comes to three factors, namely ‘product recall’ (t (147) 2.994, p < .05), ‘like to take advantage of mobile advertising’ (t (148) 4.327, p < .05) and ‘would buy a phone to receive mobile advertising’ (t (151) 3.504, p < .05). In addition, all three groups varied in terms of the ‘willingness to use for special promotions’ (F (228) 4.314, p < .05).

On a five-point Likert scale, the attachment to mobile devices by the sample group of Kolsaker and Drakatos (2009) had an above average mean of 3.27, with a standard deviation of 1.06. The appreciation of the benefits of mobile advertising was less impressive, with a mean of 2.68 and a standard deviation of .996, while the mean of the level of receptiveness to mobile advertising (mean: 2.28; standard deviation: 1.079) was even lower.

Although these results in itself are not very promising, the researchers stress that emotional attachment does influence the consumer perception of mobile advertising and its receptiveness. They suggest that the results regarding the receptiveness of permission-based mobile advertising are more positive, although still not very positive, when involving users with a strong emotional attachment to their mobile phone. This finding shows the contrast between permission-based and unauthorized mobile advertising, where more negative attitudes can arise when a mobile device is seen as an extension of
the self.

It must however be noted that the empirical data regarding the exact influence of emotional attachment on the receptiveness of mobile advertising is limited, as Kolsaker and Drakatos (2009) do not provide an overview of the shift in the consumer receptiveness of mobile advertising based on the level of emotional attachment.

**Conclusion**

More credible mobile advertisements result in a more positive attitude towards the ad, but the influence of credibility in driving the consumer attitudes of mobile advertising is low, according to the findings of Tsang, Ho and Liang (2004), Drossos, Giaglis and Vlachos (2009), and Vatanparast (2010).

There is a positive and significant relationship between the perceived entertainment value and the consumer attitudes towards mobile advertising. Regarding the message content, perceived entertainment is the most significant factor influencing consumer attitudes towards mobile advertising, based on the findings of Tsang, Ho and Liang (2004), Bauer, Reichardt, Barnes and Neumann (2005) and Barwise and Strong (2002). The relationship between perceived informativeness and the consumer attitudes towards mobile advertising is also found to be positive, but less significant than perceived entertainment. Increased personalization has a positive effect on the message content relevance, which in turn positively influences the perceived entertainment, informativeness and credibility of the mobile advertisement. If the mobile advertising message relevance increases, this message can offer more entertainment and/or become more informative.

The relationship between trust in privacy and perceived control and the consumer acceptance of mobile advertising is positive, but very low. This could be the result of consumers taking these things for granted, given that in the European Union there are laws to protect individuals from unauthorized intrusion (Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas & Leppäniemi, 2007) and the only acceptable form of mobile advertising is permission-based. Trust decreases the perceived risk associated with mobile advertising, but it does not make individuals prefer less strict regulatory control (Okazaki, Li and Hirose, 2009). Privacy concerns increase the perceived risk and
decrease the level of trust mobile users have in mobile advertising (Okazaki, Li and Hirose, 2009).

Unauthorized mobile advertising messages can result in a negative attitude towards mobile advertising and this attitude can be increasingly negative when the mobile device is seen as an extension of the self, as it is a form of losing control over a very personal possession. In the case of permission-based advertising, the opposite holds true: a strong emotional attachment to a mobile device results in a more positive attitude towards mobile advertising (Kolsaker & Drakatos, 2009).
Chapter 4: Permission and Incentives

Chapter four introduces alternative forms of mobile advertising: permission- and incentive-based advertising and examines their influence in driving the consumer attitudes towards mobile advertising.

4.1 Permission-based mobile advertising

Permission-based mobile advertising, referred to as PBMA by Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas and Leppäniemi (2007) and Barwise and Strong (2002), is synonymous for ‘opt-in’ mobile marketing (Jayawardhena, Kuckertz, Karjaluoto & Kautonen, 2009).

Permission-based mobile advertising requires prior permission from the customer before the advertiser can send advertising messages and is the only acceptable form of mobile advertising in the European Union, where it is subject to law and requires an explicit agreement. In many other, but not all, countries unsolicited mobile advertising messages, often considered spam, are also regarded to be a violation of the law.

Giving permission is a decision made consciously, as pointed out by Bauer, Reichardt, Barnes and Neumann (2005), and there is a general consensus about the importance of permission-based advertising, which is key in the consumer acceptance of mobile advertising according to empirical research conducted by Barwise & Strong (2002) and Bauer, Reichardt, Barnes and Neumann (2005).

Jayawardhena, Kuckertz, Karjaluoto and Kautonen (2009) conclude that mobile advertising campaigns with unauthorized messages are negatively perceived and not as likely to succeed compared to permission-based advertising. They base this statement on a survey among 667 individuals, mainly students, in Finland (200), Germany (207) and the United Kingdom (260), of which 86.2% of the respondents were in the age group of 18 to 25 years, 54.7% were male and 45.3% were female.

The findings of this survey suggest that perceived control on permission for mobile advertising, which is absent in the case of unauthorized mobile advertising, has a significant influence, as shown in Table 4.1. This is not the case for Finland, but the researchers argue that the high level of institutional and personal trust, and a population who are more familiar with mobile advertising, compared to their German and British
counterparts, could lower the need for control.

<table>
<thead>
<tr>
<th></th>
<th>FIN model (n = 200)</th>
<th>UK model (n = 260)</th>
<th>GER model (n = 207)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSTRUST → PER (Influence of institutional trust on permission for mobile marketing.)</td>
<td>0.455 ***</td>
<td>0.444 ***</td>
<td>0.318 ***</td>
</tr>
<tr>
<td>PERSTRUST → PER (Influence of personal trust on permission for mobile marketing.)</td>
<td>0.190 **</td>
<td>-0.034</td>
<td>0.205*</td>
</tr>
<tr>
<td>EXPMM → PER (Influence of experience with mobile marketing on permission for mobile marketing.)</td>
<td>0.223 ***</td>
<td>0.158 **</td>
<td>0.170 ***</td>
</tr>
<tr>
<td>CON → PER (Influence of perceived control on permission for mobile marketing.)</td>
<td>-0.046</td>
<td>0.142 **</td>
<td>0.260 ***</td>
</tr>
<tr>
<td>R²</td>
<td>0.440</td>
<td>0.294</td>
<td>0.552</td>
</tr>
<tr>
<td>Q²</td>
<td>0.375</td>
<td>0.193</td>
<td>0.449</td>
</tr>
</tbody>
</table>

Notes: *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001


Drossos, Giaglis and Vlachos (2009) in turn consider it “the only realistic route to successful SMS advertising”, basing this statement on the findings of Bauer, Reichardt, Barnes & Neumann, 2005; Okazaki, 2005 and Tsang, Ho & Liang, 2004.

This statement is backed by research of Barwise and Strong (2002), who investigated consumer attitudes towards permission-based advertising among 1,000 mobile phone users in London, aged between 16 and 30 years old, who were all given £0.05 (5 pence) per advertising message they received. They too see consumer acceptance as a critical factor, stating that without it, the advertising is “at best ineffective, and at worst, could reduce brand equity by causing resentment”. Their findings suggest a generally positive attitude towards ‘PMBA’, with 51% of the respondents stating they were very satisfied and 42% who were fairly satisfied. In addition, 84% of the respondents stated they were likely to introduce a friend to the service (Barwise & Strong, 2002).

Tsang, Ho and Liang (2004) confirm this claim with additional empirical findings, making use of a questionnaire design with a five-point Likert scale and a sample of 380
individuals, of which 47.6% (181) were males and 52.4% (199) were females. Their findings, shown in Table 4.2, confirm that there is statistically significant empirical evidence to suggest that permission gives rise to a more positive attitude towards mobile advertising in comparison to unauthorized advertising.

On a five-point Likert scale, where 3 is neutral, 1 is the most negative and 5 the most positive answer, the overall attitude of the respondents towards mobile advertising was negative, with a sample mean of 2.76 (standard deviation: 0.69). Unauthorized advertisement messages resulted in a sample mean score of 2.41 (standard deviation: 0.69), while research findings suggest a positive attitude towards permission-based advertising with a sample mean of 3.27 (standard deviation: 0.64). With regards to the overall reliability, the data was tested with Cronbach’s alpha and is considered acceptable at worst (0.7), although in most cases it exceeds 0.8, which is considered good.

<table>
<thead>
<tr>
<th></th>
<th>N (sample size)</th>
<th>M (mean)</th>
<th>SD (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General mean</td>
<td>380</td>
<td>2.76</td>
<td>0.69</td>
</tr>
<tr>
<td>Unauthorized</td>
<td>380</td>
<td>2.41</td>
<td>0.69</td>
</tr>
<tr>
<td>Permission-based</td>
<td>380</td>
<td>3.27</td>
<td>0.64</td>
</tr>
</tbody>
</table>


In contrast to the above findings, a survey among 4,062 Finnish inhabitants by Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas, and Leppäniemi (2007) leads to an interesting conclusion regarding the acceptance of mobile advertising by the consumer. According to their findings, the perceived control of mobile advertising (permission versus unauthorized mobile advertising messages) did not result in statistically significant evidence to suggest that it affects a consumer’s willingness to accept this form of advertising (Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas & Leppäniemi, 2007). The beta coefficient of this relationship, β= .03, is positive, but very weak and not significant enough to suggest that perceived control affects consumer’s willingness.

They note that not receiving unauthorized messages might be taken for granted, given
that in Europe there are laws to protect individuals from this form of intrusion. This would suggest that permission-based advertising could be compared to an ‘order qualifier’, a characteristic that is required before even being considered by the customer. This idea is supported by a statement from Bauer, Reichardt, Barnes and Neumann (2005), who consider permission a “prime prerequisite for mobile marketing acceptance”. A person’s attitude towards the message content, covered in chapter three, combined with the perceived risk of privacy and control, would then qualify as an ‘order winner’.

4.2 Incentive-based mobile advertising

Tsang, Ho and Liang (2004) describe incentive-based mobile advertising as a form of advertising in which “specific financial rewards are given to individuals who agree to receive promotions and campaigns”. Most research however, such as Barwise and Strong (2002), and Vatanparast and Butt (2009), suggest that incentives are a way of getting permission from the consumer and label it as permission-based advertising.

Conclusion

Based on a literature review, consumer attitudes towards permission-based advertising are, in general, positive, ranging from very positive (Barwise & Strong, 2002) to just above average (Tsang, Ho & Liang, 2004). Unauthorized messages are negatively perceived, as shown by Jayawardhena, Kuckertz, Karjaluoto and Kautonen (2009) and Tsang, Ho and Liang (2004), and could reduce brand equity (Barwise & Strong, 2002). Permission-based advertising, which is the only acceptable form of mobile advertising in the European Union, gives rise to a more positive attitude towards mobile advertising in comparison to unauthorized advertising and is a critical factor in affecting the consumer acceptance of mobile advertising, based on the empirical findings of Bauer, Reichardt, Barnes & Neumann (2005), Barwise & Strong (2002), Jayawardhena, Kuckertz, Karjaluoto & Kautonen (2009) and Tsang, Ho & Liang (2004).
Synthesis

The synthesis provides a general conclusion of the preceding chapters and answers the central problem statement. Additionally, it lists the limitations of this research and provides recommendations for future research.

Conclusion

Consumers will not accept mobile advertising unless, according to their perception, there is a benefit in receiving the advertisement messages (Kavassalis, Spyropoulou, Drossos, Mitrokostas, Gikas & Hatzistamatiou, 2003). Key in the consumer acceptance of mobile advertising are the benefits of the determinants related to the message content, which this thesis identifies as the independent variables perceived entertainment, informativeness, credibility and personalization.

Of these four variables, the perceived entertainment value is the most significant determinant for driving the consumer acceptance of mobile advertising in the empirical research considered for this study. The related research on perceived informativeness provides varying results, but in any case its influence is less significant than that of perceived entertainment. The role of credibility is marginal.

Personalization in turn can be seen as an important driver of the perceived entertainment and informativeness. Increased personalization results in a higher relevance of the mobile advertising message to the individual consumer. If the mobile advertising message relevance increases, this message can offer more entertainment and / or become more informative.

The perceived benefits are however not the only drivers of consumer acceptance of mobile advertising. Consumer behavior is strongly influenced by the perceived risk, as consumers generally try to minimize risk rather than maximize utility (Bauer, Reichardt, Barnes & Neumann, 2005).

The relationship between trust in privacy and perceived control and the consumer acceptance of mobile advertising is positive, but very low. Given that in the European Union there are laws to protect individuals from unauthorized intrusion and the only acceptable form of mobile advertising is permission-based, consumers could take privacy
and control with regards to mobile advertising for granted (Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas & Leppäniemi, 2007). Trust decreases the perceived risk associated with mobile advertising, but it does not make individuals prefer less strict regulatory control (Okazaki, Li and Hirose, 2009). This underlines the importance of permission-based advertising as a means of increasing trust, and hereby reducing the perceived risk of privacy and control associated with mobile advertising.

Consumer attitudes towards permission-based advertising are, in general, positive, ranging from very positive (Barwise & Strong, 2002) to just above average (Tsang, Ho & Liang, 2004). For permission-based advertising, a strong emotional attachment to a mobile device results in a more positive attitude towards mobile advertising (Kolsaker & Drakatos, 2009). Unauthorized messages in turn are negatively perceived, as shown by Jayawardhana, Kuckertz, Karjaluoto and Kautonen (2009) and Tsang, Ho and Liang (2004), and could reduce brand equity (Barwise & Strong, 2002). This attitude can be increasingly negative when the mobile device is seen as an extension of the self, as it is a form of losing control over a very personal possession.

To conclude, the statement permission-based advertising is a “prime prerequisite for mobile marketing acceptance” by Bauer, Reichardt, Barnes and Neumann (2005) holds true. Consumers are likely to reject mobile advertising without it.

Limitations
This study involves a literary review, which means that no empirical research has been conducted and the information is based on previous empirical findings. Different research papers were considered, with samples from a variety of nationalities and with samples that might not reflect the true population, such as the research conducted by Barwise and Strong (2002) among mobile phone users in London, who were between 16 and 30 years old. Demographic factors, such as differences between countries, limit the generalizability. In addition, not all relevant variables (found in the framework on page 11) were considered due to the scope of this research and/or the lack of empirical research (social influences, theory of critical mass, demographics, existing knowledge of mobile advertising and the attitude towards advertising in general).
Lastly, the influence of emotional attachment on the receptiveness of unauthorized mobile advertising messages, as opposed to permission-based mobile advertising messages, has not yet been subjected to empirical research. The theory of the extended-self has also not been applied to a mobile advertising case study.

**Recommendations for future research**

A recommendation for future research is to conduct empirical research with an important focus on demographics, using a representative sample of the population of multiple countries to map the differences.

Open to future empirical research are the independent variables not covered in this thesis (social influences, the theory of critical mass, existing knowledge of mobile advertising and the attitude towards advertising in general) and their influence in driving the consumer acceptance of mobile advertising. Additionally, the influence of emotional attachment on the receptiveness of unauthorized mobile advertising messages and the theory of the extended-self offer room for future research.
Bibliography


Appendix

Appendix A provides an overview of the independent variables, their influence on the dependent variable, the selected related research and the related chapters.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Reported relationship</th>
<th>Related Research</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk reduction</td>
<td>Positive</td>
<td>Bamba &amp; Barnes, 2007; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas &amp; Leppäniemi, 2007; Okazaki, Li &amp; Hirose, 2009.</td>
<td>3.2</td>
</tr>
<tr>
<td>Permission</td>
<td>Positive</td>
<td>Barwise &amp; Strong, 2002; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Jayawardhena, Kuckertz, Karjaluoto &amp; Kautonen, 2009; Drossos, Giaglis &amp; Vlachos, 2009; Tsang, Ho &amp; Liang, 2004.</td>
<td>4.1</td>
</tr>
<tr>
<td>Personalization</td>
<td>Positive</td>
<td>Bamba &amp; Barnes, 2007; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Kim &amp; Jun, 2008.</td>
<td>3.1</td>
</tr>
<tr>
<td>Incentives</td>
<td>Positive</td>
<td>Tsang, Ho &amp; Liang, 2004</td>
<td>4.2</td>
</tr>
<tr>
<td>Privacy</td>
<td>Positive</td>
<td>Bamba &amp; Barnes, 2007; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas &amp; Leppäniemi, 2007; Okazaki, Li &amp; Hirose, 2009.</td>
<td>3.2</td>
</tr>
<tr>
<td>Informativeness</td>
<td>Positive</td>
<td>Barwise &amp; Strong, 2002; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Tsang, Ho &amp; Liang, 2004.</td>
<td>3.1</td>
</tr>
<tr>
<td>Advertisement</td>
<td>Positive</td>
<td>Drossos, Giaglis &amp; Vlachos, 2009; Tsang, Ho &amp; Liang, 2004; Vatanparast, 2010.</td>
<td>3.1</td>
</tr>
<tr>
<td>Advert. credibility</td>
<td>Negative</td>
<td>Bamba &amp; Barnes, 2007; Bauer, Reichardt, Barnes &amp; Neumann, 2005; Merisavo, Kajalo, Karjaluoto, Virtanen, Salmenkivi, Raulas &amp; Leppäniemi, 2007; Okazaki, Li &amp; Hirose, 2009.</td>
<td>3.2</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>Varies</td>
<td>Belk, 1988; Kolsaker &amp; Drakatos, 2009.</td>
<td>3.3</td>
</tr>
<tr>
<td>of control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographics</td>
<td>Varies</td>
<td></td>
<td></td>
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<tr>
<td>Extended-self</td>
<td>Varies</td>
<td></td>
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<tr>
<td>Existing knowledge</td>
<td>Varies</td>
<td></td>
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<tr>
<td>and general attitude</td>
<td>Varies</td>
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