Personalised smartphone advertising model: The influential factors for its effectiveness

Exposé

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Abstract

Keywords: advertising effectiveness, advertising value, flow, personalisation, smartphone advertising.

Background: According to the Interactive Advertising Bureau (IAB) report global mobile advertising revenue was $31.9 billion (€23.9 billion) in 2014 with an impressive growth of almost 65% from 2013. Europe represents 16.6% share, behind North America and Asia-Pacific, the regions with the highest penetration rate. Smartphone user penetration in Western Europe is expected to increase from 47.3% rate in 2014 to 67.3% rate in 2018 (Knapp, 2015). Mobile advertising is becoming increasingly important and advertisers and marketers acknowledge the central role of smartphone in an effective cross-device advertising strategy. According to Kim and Han (2014) advertising value and flow experience play an important role in forming purchase intention in smartphone advertisements. In their proposed model, cognitive (informativeness, credibility), affective (entertainment, irritation) and economic factors (incentives) influence advertising value and flow experience. Personalised advertisements increase cognitive and affective qualities, advertising value and flow experience.

Purpose: Three main purposes characterise this thesis. The first purpose is to generalize the research model to another cultural and country context, specifically to the European context. The second purpose is to investigate new determinant factors that positively influence consumers’ flow experience and hence the purchasing intention. The third purpose is to investigate the moderating effect of privacy concerns on personalisation, flow experience and consequently purchasing behaviour.

Method: The necessary data will be collected through an online survey based on a quantitative research method. PLS regression method will be employed to analyse the results. The methodology will be implemented with the help of the SmartPLS software application.
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I. List of abbreviations

  e.g. – exempli Gratia/ for example
  IAB – Interactive Advertising Bureau
  i.e. – id est
  ICT – Information and Communication Technologies
  IT – Information Technology
  LBA – Location-Based Advertising
  M-commerce – Mobile commerce
  PBLAMA – Permission-Based Location Aware Mobile Advertising
  PLS – Partial Least Square regression
  TAM – Technology Acceptance Model
  TAM 2 – Technology Acceptance Model 2
  UAUT – Unified Theory of Acceptance and Use of Technology
  UAUT 2 – Unified Theory of Acceptance and Use of Technology 2
  UGT – Uses and gratifications theory
  Vs. - versus
II. List of figures

Figure 1: Research model (Kim & Han, 2014, p. 264)

Figure 2: Research model adapted from Kim and Han (2014), Gao, Waechter, and Bai (2015)

III. List of appendices

Appendix A: Research constructs and measures
1. Introduction

1.1 Background
Global mobile advertising revenue was $31.9 billion in 2014. Mobile display advertisements represented nearly half (47.4%) of the total mobile advertising revenue and saw the highest growth rate (88%). Search advertising revenue accounted for 46.1% of total revenue, followed by messaging advertising revenue (13%). Europe represents 16.6% share, behind North America and Asia-Pacific, the regions with the highest penetration rate. Smartphone user penetration in Western Europe is expected to increase from 47.3% rate in 2014 to 67.3% rate in 2018 (Knapp, 2015).

Mobile advertising is becoming increasingly important and advertisers and marketers acknowledge the central role of smartphone in an effective cross-device advertising strategy. In fact, in 2014 mobile devices accounted for almost half of the total time spent by consumers on digital media (47.1%) and this trend is expected to quickly grow in the future (eMarketer, 2014). Customers are increasingly dependent on mobile devices such as smartphone and tablet PC to search information about products, services and to purchase. Hence, there is a growing importance of an effective smartphone advertisement able to support customers along their decision-making process in mobile purchase.

1.2 Problem statement
Advertisements may be perceived as invasive and may irritate customers who do not want to be interrupted while browsing the Internet or benefiting from the functionalities of a mobile app. This is the reason why some customers are also willing to pay for installing applications able to block advertisements (4.9% of all internet users according to the PageFair and Adobe 2014 report). This increasing trend, especially among the Google Chrome users (86 million monthly active users of adblock) and in European countries such as Poland, Sweden, Denmark and Greece (24% of their online populations), scares marketers and advertisers. Furthermore, with the launch of the new iOS 9 Apple in October 2015, is now possible to block ad contents not only on desktop but also on iPhones and iPads; tens of different adblocking Apps are ready to be downloaded and installed from the App Store (Nepori, 2015). Anyway, not all ads are blocked: Google’s search ads and “non-intrusive” ads are allowed (Hof, 2015). Therefore, the key challenge is to design affective smartphone advertisements that will positively influence consumers’ intention to buy.
1.3 Purpose

The purpose of this study is threefold. The first purpose is to generalize the research model proposed by Kim and Han (2014) to another cultural and country context, specifically to the European context. The second purpose is to investigate new determinant factors that positively influence consumers’ flow experience and hence the purchasing intention. Specifically, design quality and information quality are considered to be cognitive elements of a decisive impact on both advertising value and flow experience. The third purpose is to investigate the moderating effect of privacy and security concerns on personalisation, flow experience and consequently purchasing behaviour. Being risk avoidance a high scored factor in European cultures (Hofstede) privacy is one of the major concerns among customers. Government regulation in this field is much more strict in Europe rather than in USA. The Data protection directive and the E-privacy directive are the up-to-date directives ruling mobile advertising world. Regulatory protection of personal data is believed to increase customer trust and usage of mobile advertising but policies still lag behind the technology process (Lin, Paragas, Goh, & Bautista, 2015). Therefore, it is fundamental to take these aspects into considerations while designing an effective and non-invasive mobile advertising campaign.
2. Review of literature

The following section presents an overview of the literature and theoretical constructs to substantiate the research questions detailed and justified forward.

2.1 Mobile advertising

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Source (year)</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors influencing consumers’ willingness to accept mobile advertising: A conceptual model</td>
<td>Leppaniemi, Matti Karjaluoto, Heikki</td>
<td>International Journal of Mobile Communications (2005)</td>
<td>Development of a conceptual model of consumers’ willingness to accept mobile advertising. Four main factors are identified: the role of mobile medium in marketing mix, development of technology, one-to-one marketing medium and regulatory.</td>
</tr>
<tr>
<td>Mobile advertising: An empirical study of advertising response and search behaviour</td>
<td>Goh, K Y Chu, H Soh, W</td>
<td>ICIS 2009 Proceedings (2009)</td>
<td>Investigation of the relevance of mobile advertising and the interrelationships between ad content, information search behaviour and advertising response. Spatial and temporary proximity of mobile ad campaign may not lead to increased relevance of such campaigns.</td>
</tr>
<tr>
<td>Factors influencing consumer acceptance of mobile marketing: A two-country study of youth markets</td>
<td>Sultan, Fareena Rohm, Andrew J. Gao, Tao (Tony)</td>
<td>Journal of Interactive Marketing (2009)</td>
<td>Development of a conceptual model of the influences of risk acceptance and personal attachment on behavioural intention related to mobile marketing activities (providing information, sharing content and access content). Differences and similarities between USA and Pakistan.</td>
</tr>
<tr>
<td>Determinants of consumer perceptions toward mobile advertising — A comparison between Japan and Austria</td>
<td>Liu, Chia-Ling ‘Eunice’ Sinkovics, Rudolf R. Pezderka, Noemi Haghiriand, Parissa</td>
<td>Journal of Interactive Marketing (2012)</td>
<td>Investigation of factors influencing the perception of mobile advertising in different cultures (Austria and Japan). Entertainment and credibility are key factors for both cultures. Irritation majorly hits Japanese respondents.</td>
</tr>
<tr>
<td>Brand in the hand: A cross-market</td>
<td>Rohm, Andrew J. Gao, Tao (Tony)</td>
<td>Business Horizons (2012)</td>
<td>Examination of factors influencing consumers’ acceptance of mobile marketing across USA, China and...</td>
</tr>
<tr>
<td>Investigation of consumer acceptance of mobile marketing</td>
<td>Sultan, Fareena Pagani, Margherita</td>
<td>Journal of Business Research (2013)</td>
<td>Europe. Perceived usefulness, consumer innovativeness and personal attachment are the main influencers. In China and Europe also risk avoidance negatively influences attitudes towards mobile marketing.</td>
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<tr>
<td>Consumer attitudes towards mobile marketing in the smart phone era</td>
<td>Watson, Catherine McCarthy, Jeff Rowley, Jennifer</td>
<td>International Journal of Information Management (2013)</td>
<td>Consumers’ negative attitudes towards mobile marketing communications. Personal attachment (social use) negatively affects consumers’ attitude. Pull technologies (e.g. QR codes) are promising thanks to permission and control, ease of use, utility and incentives.</td>
</tr>
<tr>
<td>Exploring and modelling digital natives' intention to use permission-based location-aware mobile advertising</td>
<td>Richard, James E. Meuli, Paul G.</td>
<td>Journal of Marketing Management (2013)</td>
<td>Empirical test on digital-native mobile users’ behavioural intention of using Permission-based location-aware mobile advertising (PBLAMA). Informativeness, entertainment, incentives, subjective norms and perceived behaviour control have a positive effect on behavioural intention. Irritation has a negative effect.</td>
</tr>
<tr>
<td>How do motives affect attitudes and behaviours toward internet advertising and Facebook advertising?</td>
<td>Celebi, Serra Inci</td>
<td>Computers in Human Behavior (2015)</td>
<td>Study on motivations and attitudes toward Internet and Facebook advertising. Self-brand congruity positively affects attitude; invasiveness and privacy concern negatively affect attitude.</td>
</tr>
<tr>
<td>Understanding consumers’ continuance intention towards mobile purchase: A theoretical framework and empirical study – A case of China</td>
<td>Gao, Lingling Waechter, Kerem Aksel Bai, Xuesong</td>
<td>Computers in Human Behavior (2015)</td>
<td>Examination of the determinants that impact continuance intention towards mobile commerce. The main factors affecting trust are information quality, privacy and security concerns; service quality affects flow; system quality, privacy and security concerns affect satisfaction. Trust affects flow that affects satisfaction. The three factors jointly affect continued intention towards mobile purchase.</td>
</tr>
</tbody>
</table>
Customization in location-based advertising: Effects of tailoring source, locational congruity, and product involvement on ad attitudes

Lee, Sangmee Kim, Ki Joon Sundar, S. Shyam

Computers in Human Behavior (2015)

Study of the psychological effects of information tailoring, locational congruity and product involvement on user attitudes towards Location-based advertising (LBA) on mobile devices. Customisation and locational congruity (location, time and user activity) positively affect attitudes; perceived intrusiveness mediates the effects of product involvement.

2.2 Advertising model

Theory of Reasoned Action, Technology Acceptance Model (TAM) and the Web advertising model are taken into consideration in this study. In Ducoffe’s web advertising model the zoom is on the advertising value, i.e. “a subjective evaluation of the relative worth or utility of advertising to consumers” (Ducoffe, 1995, p.1). Cognitive (perception of informativeness and credibility) and affective (perceptions of entertainment and irritation) factors influencing this value are introduced.

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations</td>
<td>MacKenzie, Scott B Lutz, Richard J Belch, George E</td>
<td>Journal of Marketing Research (1986)</td>
<td>Attitude toward the ad influences brand attitude both directly and indirectly through its effect on brand cognitions</td>
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<tr>
<td>Topic</td>
<td>Author(s)</td>
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<tr>
<td>Consumer attitudes toward mobile advertising: An empirical study</td>
<td>Tsang, Melody M Ho, Shu-Chun Liang, Ting-Peng</td>
<td>International Journal of Electronic Commerce (2004)</td>
<td>Study of consumer attitudes toward mobile advertising and of the relationship between attitude and behaviour. Consumers generally have negative attitudes toward mobile advertising unless they have specifically consented to it; direct relationship between consumer attitudes and consumer behaviour.</td>
</tr>
<tr>
<td>Exploring factors affecting consumer intention to use mobile advertising in Taiwan</td>
<td>Yang, Kenneth C. C.</td>
<td>Journal of International Consumer Marketing (2007)</td>
<td>Application of the model Technology Acceptance 2 (TAM2) to the mobile advertisement context. Positive relationship between attitudes toward mobile commerce and attitudes toward and intention to use mobile advertising. Social norms significantly influence consumers’ attitude.</td>
</tr>
<tr>
<td>Understanding the acceptance of mobile SMS advertising among young Chinese consumers</td>
<td>Zhang, Jing Mao, En</td>
<td>Psychology and Marketing (2008)</td>
<td>Development of a modified TAM to analyse the intention to use SMS advertising. Perceived usefulness and perceived ease of use of SMS advertising messages predict the intention to use them. Trust and subjective norms have a positive influence on the intention to use.</td>
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</table>
2.3 Personalisation

Personalised advertisements: ability to deliver targeted message at the right time and at the right place. Content, context and individual characteristics are the key elements of personalisation.

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<thead>
<tr>
<th>Title</th>
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<th>Source (year)</th>
<th>Main findings</th>
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<tr>
<td>Direct mail privacy-efficiency trade-offs within an implied social</td>
<td>George R. Milne and Mary Ellen Gordon</td>
<td>Journal of Public Policy &amp; Marketing</td>
<td>Four attributes constitute the direct mail social contract: volume, targeting, compensation and permission. Consumers want improved targeting efficiency and lower mail volume.</td>
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<tr>
<td>contract framework</td>
<td></td>
<td>(1993)</td>
<td></td>
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<tr>
<td>Mobile advertising needs to get personal</td>
<td>DeZoysa, Sanjima</td>
<td>Telecommunications - International</td>
<td>Customers are receptive to advertising that is personalised and relevant to their lifestyle.</td>
</tr>
<tr>
<td>The influence of personalization in affecting consumer attitudes</td>
<td>Xu, David Jingjun</td>
<td>Information Systems (2004)</td>
<td>Investigation of the factors that affect consumer attitudes towards mobile advertising in China. Personalisation is one of the most important factors in affecting consumers’ attitude toward mobile advertising, particularly for female users.</td>
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<td>in affecting consumer attitudes toward mobile advertising in China</td>
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<td>University of British Columbia</td>
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<td>design research approach for personalized mobile advertising</td>
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<td>applications</td>
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Why smartphone advertising attracts customers: A model of Web advertising, flow, and personalization

Kim, Yoo Jung Han, Jinyoung

Computers in Human Behavior (2014)

Development of a comprehensive advertising model that combines a Web advertising model, personalization and flow theory in understanding the antecedents of purchase intention in the context of smartphone advertisements. Personalisation has a positive association with informativeness, credibility, and entertainment of the advertising message while having a negative association with irritation. Purchase intention is increased by advertising value and flow experience. Advertising value has a positive relationship with credibility, entertainment, and incentives. Flow experience is positively associated with credibility, entertainment and incentives.

2.4 Flow theory

Flow theory is a holistic experience that people feel when they act with total involvement; when people perceive high challenges and high skills, they feel more active, alert, concentrated, happy, satisfied and creative (Csikszentmihalyi & LeFevre, 1989). The flow theory seems to optimally adapt to the dynamic and fast-changing world of new technologies and specifically to the mobile context. Prior studies focused on the effects of flow on consumers’ buying behaviour and purchase intention, both online and offline.

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<tr>
<th>Title</th>
<th>Authors</th>
<th>Source (year)</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal experience in work and leisure</td>
<td>Csikszentmihalyi, Mihaly LeFevre, Judith</td>
<td>Journal of Personality and Social Psychology (1989)</td>
<td>Quality of experience is strongly affected by flow the great majority of flow experiences are reported when working, not when in leisure, even if more motivation is found in leisure. Individuals more motivated in flow than in apathy reported more positive experiences in work.</td>
</tr>
<tr>
<td>Time flies when you're having</td>
<td>Agarwal, Ritu Karahanna, Elena</td>
<td>MIS Quarterly (2000)</td>
<td>Cognitive absorption, being exhibited through the five</td>
</tr>
<tr>
<td>fun: cognitive absorption and beliefs about information Technology usage</td>
<td>dimensions of temporal dissociation, focused immersion, heightened enjoyment, control, and curiosity, is posited to be a proximal antecedent of two important beliefs about technology use: perceived usefulness and perceived ease of use; the individual traits of playfulness and personal innovativeness are important determinants of cognitive absorption</td>
<td></td>
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</tr>
<tr>
<td>Consumer adoption of mobile TV: Examining psychological flow and media content</td>
<td>Jung, Yoonhyuk Perez-Mira, Begona Wiley-Patton, Sonja</td>
<td>Computers in Human Behavior (2009)</td>
<td>Examination of the influences of cognitive concentration (or flow experience) and media content on consumers’ acceptance of mobile TV. Cognitive concentration (or flow experience) and content have a significant role in consumers’ intention to use hedonic information technology; content has a critical impact on cognitive concentration.</td>
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3. Hypotheses development

3.1 Research model
The research model is an extension and adjustment of the proposition of Kim and Han (2014) (Fig. 1). The latter is based on the assumption that purchase intention is the consequence of the positive relationship between perceived advertisement value and flow experience. This flow experience is influenced by cognitive factors (informativeness and credibility), emotional factors (entertainment and irritation) and economic factors (incentives). The personalisation stands as antecedent of these concepts.

![Diagram](image.png)

*Figure 1: Research model (Kim & Han, 2014, p. 264)*

The adjusted model takes into consideration the test results of the above mentioned research study and integrates them with the study of Gao et al. (2015). Informativeness and irritation were excluded since the relationship to both advertising value and flow experience was not supported. Specifically, informativeness was replaced by Information quality, a relevant direct influencer on flow experience and affecting factor of continued intention towards mobile purchase according to the results of Gao et al. (2015). The model introduces Design quality as a new influential cognitive factor and intends to question weather it is positively linked to both perceived value and flow experience or not. Moreover, the model introduces
privacy and security concern as a moderating variable that might increase or decrease the otherwise established effect of personalisation on perceived value, flow experience and consequently purchase intention. The adjusted research model of the current study is represented in figure 2.

![Research model adapted from Kim and Han (2014), Gao et al. (2015)](image)

**Figure 2**: Research model adapted from Kim and Han (2014), Gao et al. (2015)

### 3.2 Purchase intention

Numerous studies have confirmed that purchase intention represents the willingness for actual purchase in both online and offline settings (Chiu, Wang, Fang, & Huang, 2014; Hong and Cha, 2013). Intention to purchase increases when customers show a favourable attitude towards a product or service (Gorn, 1982; Ko, Cho, & Roberts, 2005; MacKenzie, Lutz, & Belch, 1986).

Advertising value is the perceived judgement of customers on the advertisement (Ducoffe, 1995). The more the advertisement is perceived as being valuable, the more consumers’ attitude to products or services would be positive. The study of Kim and Han (2014) is aimed at examining the relationship between perceived advertising value and purchase intention. In
smartphone advertisements advertising value is a proxy for purchase intention. Therefore, we propose the validated hypothesis:

**H1.** Perceived advertising value is positively associated with purchase intention.

Gao et al. (2015) define flow as a temporarily unaware experience, where an individual engages in mobile purchase activity with enjoyment, total concentration and control. Flow experience is unique and desirable and therefore consumers will continue to purchase online expecting to obtain this experience again. Flow experience positively influence online purchase intentions (Luna, Peracchio, & de Juan, 2002) and it can therefore be crucial on consumers’ decision to buy a product or service advertised on their smartphone. Therefore, we propose the validated hypothesis:

**H2.** Flow experience is positively associated with purchase intention.

If consumers perceive an advertisement as being valued, they will be positively impacted by its message and they will feel more involved in the campaign and consequently in the product or service (Kim & Han, 2014). This involvement will lead the customers to enter the internal state of flow by focusing entirely and uniquely on the information and the contents included in the advertisement (Hoffman & Novak, 1996). Therefore, we propose the validated hypothesis:

**H3.** Perceived advertising value is positively associated with flow experience.

### 3.3 Cognitive factors

Cognitive factors measure the extent to which an advertisement is recognised and remembered by consumers.

The primary goal of advertising is to inform customers about a new product or service (Kotler & Keller, 2006) or to make customers aware about the differences of products (Soberman, 2004). Information quality is therefore crucial to the effectiveness of the advertisement. Information quality reflects information relevance, sufficiency, accuracy and timeliness (Gao, Waechter, & Bai, 2015). The informativeness of smartphone advertisement messages positively influences perceived advertising value (Kim & Han, 2014). In this study
we integrate the construct of informativeness of Kim and Han (2014) with the more specific concept of Gao et al (2015). Therefore, we propose the following hypothesis:

**H4a.** Perceived information quality of smartphone advertisements is positively associated with perceived advertising value.

If the information is of a poor quality and thus irrelevant, insufficient, inaccurate or out-of-date consumers’ experience may be undermined. Jung, Perez-Mira, & Wiley-Patton (2009) demonstrated that content quality affects mobile TV user experience. L. Gao and Bai, (2014) affirmed the positive relationship between information quality and the experience of users of mobile social networking services. The same construct may be valid also for the smartphone context. Therefore, we propose the following hypothesis:

**H4b.** Perceived information quality of smartphone advertisements is positively associated with flow experience.

An advertisement is perceived to be credible when it is true and it is believable (MacKenzie et al., 1986). Credibility is another crucial factor to the effectiveness of advertising. Recent studies on mobile and web advertising prove the positive relationship between credibility and perceived advertising value. Therefore, we propose the validated hypothesis:

**H5a.** Perceived credibility of smartphone advertisements is positively associated with perceived advertising value.

Mobile marketing can be a nightmare for consumers due to the information overload we experience every time we browse the Internet or we use mobile services. Filtering data is fundamental in order to avoid over-exposition to information flow. Credibility is the main criterion we use in order to do that. More attention is given to the advertising message that is believed to be trustworthy. Customers are more likely to investigate the information and the content of an advertisement from a familiar and trusted brand (Kim & Han, 2014). A credible advertisement may enable the flow experience. Therefore, we propose the following validated hypothesis:
H5b. Perceived credibility of smartphone advertisements is positively associated with flow experience.

Only few researchers focused on the impact of design quality and aesthetics of the mobile advertisement on behavioural intentions. Cyr, Head and Ivanov (2006) found that design aesthetics influence the perceived usefulness, ease of use and enjoyment of the mobile service. Contradicting this result, Magura (2003) found that the relevance of the site design on mobile commerce acceptance is poor.

Recently, a study on consumer online behaviour in the context of online advertising found out that aesthetics is the most relevant criterion among the ad form features in the consumers’ judgement process. An online advertisement can be judged as negative if considered “not appealing” or “unattractive”; on the other hand, online “pretty”, “artistic” and “tasteful” advertisements are more likely to be judged in a positive way (Tang, Zhang, & Wu, 2015). According to Tang et al (2015), colour, picture, text, fanner and video lead consumers to adopt approach behaviours (consumers are willing to interact with the online ad) and therefore to favourable behavioural response while animation, pop-up and audio lead consumers to avoidance behaviours (consumers tend to avoid online ads) and therefore to negative behavioural response.

Perceived design quality of a smartphone advertisement reflects perceived usefulness, visual appeal, ease of use and enjoyment. If a smartphone advertisement is perceived to have a poor interface design, it is not appealing or it is difficult to use, consumers may feel that the advertisement is not appealing or out-of-fashion and this may make them think that vendors lack the ability to provide good quality and attractive communication messages. Therefore, we propose the following hypothesis:

H6a. Perceived design quality of smartphone advertisements is positively associated with perceived advertising value.

In addition, a poor design quality may undermine consumers’ flow experience. For instance if the advertisement has not clear indications where to click or it has slow access speed to the main web site of the vendor or, even worse, the navigation is abruptly interrupted, then the consumer will meet some difficulties that will affect his or her involvement in the advertising message and consequently his or her enjoyment. Therefore, we propose the following hypothesis:
H6b. Perceived design quality of smartphone advertisements is positively associated with flow experience.

3.4 Affective factors

Affective factors measure what the consumers think and feel about the advertisement. The IAB defines the physiological response as the extent to which the ad results in changes in respiration, circulation or other non-conscious physical reactions that correlate with emotion (Measuring digital, IAB report, p. 9).

The feeling of enjoyment plays a central role in determining the general attitude of consumers toward advertisements (Kellar, Kamvar, Patel, & Xu, 2009; Liu, Sinkovics, Pezderka, & Haghrian, 2012). Ducoffe (1995) demonstrated the positive relationship between entertainment and advertising value in web advertisement. The existing positive relationship was confirmed also in the mobile advertisement context by several prior studies (Haghiran, Madlberger, & Tanuskova, 2005; Liu et al., 2012). Entertainment may be determinant also in smartphone personalised advertisements. Therefore, we propose the following validated hypothesis:

H7a. Perceived entertainment of smartphone advertisements is positively associated with perceived advertising value.

If an advertisement is enjoyable than consumers pay more attention to it (Ducoffe, 1995; Haghrian et al. 2005; Liu et al., 2012). The more an advertisement is entertaining, the more consumers are delighted and do not realize the passing of time. Unrelated interests, activities or thoughts may be ignored (Hoffman & Novak, 1996). The same construct may be adapted to the smartphone context. Therefore, we propose the following validated hypothesis:

H7b. Perceived entertainment of smartphone advertisements is positively associated with flow experience.

3.5 Economic factors

Incentives such as gifts, discounts, coupons and competitions may be well welcomed by consumers, especially if they have previously agreed to receive an advertisement (Tsang, Ho,
& Liang, 2004) and on products or services of interest and relevance. Consumers want to gain monetary benefits from marketing activities (Milne & Gordon, 1993). Since incentives have a monetary or financial value, advertisements with incentives are considered to be valuable. Therefore, we propose the following hypothesis:

H8a. Perceived incentives of smartphone advertisements are positively associated with perceived advertising value.

Consumers need incentives. When advertisements respond to customers needs, they catch the customer attention (Hoffman & Novak, 1996). If an economic benefit is involved, customers try to figure out how to obtain this advantage. As a result, customers concentrate on the incentives and enjoy the ambition to get the discount or win the competition. We suggest that the construct is true also in the smartphone advertisement context. Therefore, we propose the following hypothesis:

H8b. Perceived incentives of smartphone advertisements are positively associated with flow experience.

3.6 Personalisation

Smartphones are very personal devices and they are becoming real companions of individuals. They allow virtual access at anytime and anywhere. Hence, personalisation is crucial. Advertisers need to personalise form and content of the messages they want to communicate to customers (Tsang et al., 2004). Customers expect the content of mobile services to match their interests and preferences (Robins, 2003). The format or design is also expected to match their preferences and needs. If the advertisement is perceived to be relevant, then customers are more likely to think the information include being useful (Milne & Gordon, 1993). Therefore, we propose the following hypotheses:

H9a. Personalisation of smartphone advertisement is positively associated with perceived information quality of smartphone advertisements.

H9b. Personalisation of smartphone advertisement is positively associated with perceived credibility of smartphone advertisements.
**H9c.** Personalisation of smartphone advertisement is positively associated with perceived design quality of smartphone advertisements.

According to UGT theory, entertainment is one of the many gratifications attached to mobile phones. Entertainment provokes diversion, emotional release and aesthetic enjoyment (McQuail, 2005). Customers like personalised message because they reflect their needs and interests. When they receive a personalised advertisement, they feel enjoyment. Therefore, we propose the following hypothesis:

**H9d.** Personalisation of smartphone advertisement is positively associated with perceived entertainment of smartphone advertisements.

Customers’ interest in personalised and relevant advertising has been confirmed by many studies focusing on traditional marketing channels as well as the positive impact of personalisation on perceived advertisement value (DeZoysa, 2002; Milne & Gordon, 1993; Rao & Minakakis, 2003; Robins, 2003). The construct may be valid also in the mobile context. Furthermore, as the main advantage of mobile advertising is to deliver targeted messages at the right time and at the right place (Saadeghvaziri & Hosseini, 2011), personalisation of smartphone advertisements may increase perceived advertising value. Therefore, we propose the following hypothesis:

**H9e.** Personalisation of smartphone advertisement is positively associated with perceived advertising value.

Personalisation enables involvement and concentration. The targeted message may cause the focused attention and the interest or desire of the audience, resulting in flow experience (Hoffman & Novak, 1996; Skadberg & Kimmel, 2004). Personalisation has a positive effect on flow experience. Therefore, we propose the following hypothesis:

**H9f.** Personalisation of smartphone advertisement is positively associated with flow experience.
3.7 Privacy concerns

Privacy concerns might be inhibitors to flow experience thus negatively affecting consumers’ purchase intention. It is therefore important to examine the relevance and the impact of such factor on personalised advertisement acceptance, attitude and behaviour. Privacy concerns arise when consumers feel worry about their personal information and their payment security e.g. unauthorised access and use, financial frauds, data collection etc. (Kim, Chung, & Lee, 2011; Tsai, Egelman, Cranor, & Acquisti, 2010). Past research has found the negative effect of privacy concern on user experience in location-based service (Zhou, 2013).

Several studies illustrate the relevant role of personal attachment to mobile devices in influencing mobile marketing acceptance and consequently in consumers willingness to access and share mobile content (Gao, Rohm, Sultan, & Pagani, 2013; Rohm, Gao, Sultan, & Pagani, 2012; Sultan, Rohm, & Gao, 2009). Sultan et al. (2009) found that the smartphone is the device to which people, especially young people, are more attached to; it is seen as the reflection of the self and it represents the accessory that convey not only the status quo but also the personal identity of the owner. Influences of personal attachment on accessing and sharing content have been empirically assessed (Sultan et al., 2009). Personalised smartphone advertisement might be felt as intrusive and might increase perceived risk and enable privacy concerns. Reactions to a personalised smartphone advertisement might be different depending on the level of risk avoidance of users (Gao et al., 2013; Rohm et al., 2012). Therefore, we propose the following hypothesis:

**H10a.** Privacy concerns negatively affect personalisation.

Before clicking on a smartphone advertisement, a customer may not know whether the vendor will protect his or her private information. When concerned about privacy, consumers may spend additional time and effort checking vendors’ policies, terms and conditions and this may decrease their enjoyment, breaching their experience flow (Gao et al., 2015). Therefore, we propose the following hypothesis:

**H10b.** Privacy concerns negatively affect flow experience.
4. Methodology

4.1 Scale development

Nine items measure the entire construct. The measurers for entertainment, incentives, advertising value, flow experience and purchase intention are adapted from Kim and Han (2014). Information quality, Privacy concerns scales consist of items adapted from Gao et al. (2015). Design quality is measured with the statement used in the survey by Cyr et al. (2006).

Following the study of Kim and Han (2014), a multiple-item method will be used. Items will be measured on a five-point Likert scale from “strongly disagree” to “strongly agree”. The survey will be accurately translated into different languages, avoiding any kind of inconsistency or discrepancy.

4.2 Data collection

An online survey is conducted to establish the validity of the hypothesis and the research model of this study. Data will be collected through social networks and emails. Sustain from the administrative staff of the university of Kassel, University of Savoy and University of Trento will be requested in order to reach a higher number of potential and valuable participants. Participants are required to own at least one smartphone.

Partial least squares regression method will be employed to analyse the data collected and to finally assess the validity of the above-explained hypotheses. The method will be applied with the help of SmartPLS application software.
5. Overview of chapters

Abstract
Table of content
Table of figures
Table of abbreviations

1. Introduction
2. Literature review
   2.1. Definitions: definitions of the key concepts will be given (mobile marketing, mobile advertisement…).
   2.2. Research model: in this section the research model of Kim and Han will be explained and discussed.
   2.3. Adjusted research model: in this part an adjusted version of Kim and Han model will be proposed.
3. Hypothesis development: on the basis of the literature review and the research model. The hypotheses will be presented and explained.
4. Research methodology: this section will be dedicated to the explanation of how the research will be conducted.
5. Analysis of results: this section will focus on the analysis of the results retrieved from the survey.
6. Discussion and implications: the practical and theoretical implications of the findings will be outlined.
7. Conclusions and limitations: a final conclusion will be drawn and the limitations highlighted.

Bibliography
Appendix
6. Work plan

<table>
<thead>
<tr>
<th>Period</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.09.15 – 22.09.15</td>
<td>Exposé</td>
<td>Topic definition, literature review, hypotheses definition and research model design</td>
</tr>
<tr>
<td>23.09.15 – 16.10.15</td>
<td>Literature Review</td>
<td>Deepen the literature review</td>
</tr>
<tr>
<td>17.10.15 – 30.10.15</td>
<td>Research Design</td>
<td>Study methodology and developing the survey</td>
</tr>
<tr>
<td>1.11.15 – 30.11.15</td>
<td>Field Research</td>
<td>Conduct pre-test and online survey</td>
</tr>
<tr>
<td>1.12.15 – 15.12.15</td>
<td>Analysis</td>
<td>Analyse the survey results and create figures</td>
</tr>
<tr>
<td>01.12.15 – 15.12.15</td>
<td>Finalization and delivery</td>
<td>Finalise and review the master thesis</td>
</tr>
<tr>
<td>16.12.15 – 25.01.16</td>
<td>Final presentation</td>
<td>Prepare the final presentation and discussion</td>
</tr>
</tbody>
</table>
Appendixes

Appendix A: Research constructs and measures

Five-point scales anchored with “strongly disagree” and “strongly agree”.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Measurement items</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalisation</td>
<td>I feel that smartphone advertisements are tailored to me</td>
<td>Xu et al. (2008), Ünal et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>I feel that contents in smartphone advertisements are personalised</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is personalised for my usage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is delivered in a timely way</td>
<td></td>
</tr>
<tr>
<td>Information quality</td>
<td>Smartphone advertising provides timely information on products or services</td>
<td>Wang and Sun (2010), Liu et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>Smartphone advertising supplies relevant information on products or services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smartphone advertising is a good source of information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smartphone advertising is a good source of up to date products or services information</td>
<td></td>
</tr>
<tr>
<td>Credibility</td>
<td>I feel that smartphone advertising is convincing</td>
<td>Liu et al. (2012), Yang et al. (2013)</td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is believable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is credible</td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td>I feel that smartphone advertising is interesting</td>
<td>Wang and Sun (2010), Yang et al. (2013)</td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is enjoyable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is pleasant</td>
<td></td>
</tr>
<tr>
<td>Design quality</td>
<td>The screen design of smartphone advertising (i.e. colours, boxes, menus, navigation tools etc.) is attractive</td>
<td>Cyr, Bonanni, Bowes, &amp; Ilsever (2005), Cyr, Bonanni, &amp; Ilsever (2004), van der Heiden (2003)</td>
</tr>
<tr>
<td></td>
<td>Smartphone advertising looks professionally designed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The overall look and feel of the smartphone advertisements is visually appealing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can easily recognize and find where product information is located</td>
<td></td>
</tr>
<tr>
<td>Incentives</td>
<td>I am satisfied to get smartphone advertisements that offers rewards</td>
<td>Ünal et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>I take action to get smartphone advertisements that offers rewards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I respond to smartphone advertising to obtain incentives</td>
<td></td>
</tr>
<tr>
<td>Advertising value</td>
<td>I feel that smartphone advertising is useful</td>
<td>Ducoffe (1995), Liu et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is valuable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel that smartphone advertising is important</td>
<td></td>
</tr>
<tr>
<td>Flow experience</td>
<td>I completely concentrate on smartphone advertising while I look at them</td>
<td>Novak et al. (2003), Chang (2013)</td>
</tr>
<tr>
<td></td>
<td>When I read smartphone advertising, time seems to pass by very quickly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>While I watch smartphone advertising, nothing seems to matter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>While I view smartphone advertising, I feel totally captivated</td>
<td></td>
</tr>
</tbody>
</table>
| Purchase intention | I would consider purchasing goods or services with smartphone advertisements  
I intend to purchase goods or services with smartphone advertisements  
I would probably buy goods or services with smartphone advertisements | Hong and Cho (2011), Wu et al. (2011) |
|---------------------|---------------------------------------------------------------------------------|
| Privacy concerns    | All things considered, smartphone advertisements would cause serious privacy problems  
Compared to others, I am more sensitive about the way mobile advertising companies handle my personal information  
To me, it is the most important thing to keep my privacy intact from mobile advertising companies  
I believe other people are too much concerned with mobile privacy issues  
Compared with other subjects on my mind, personal privacy is very important  
I am concerned about threats to my personal privacy today | Malhotra, Kim, & Agarwal (2004) |
| Mediators           | Sex: (1 = male; 2 = female).  
Age: (1 = 16-24; 2 = 25-34; 3 = 45-54; 4 = 55-64; 5 = over 65 years)  
Education: (1 = some school, no degree; 2 = high school graduate; 3 = some college, no degree; 4 = bachelor’s degree; 5 = master’s degree; 6 = professional degree; 7 = doctorate degree).  
Reference list


