Master Thesis

Google ads: Understanding millennials’ search behavior on mobile devices

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Abstract

Purpose: The purpose of this study is to understand millennials search behavior on mobile devices.

Research Questions: How do millennials value organic and sponsored search results on mobile devices? What are the Web advertising variables that affect millennials attitudes towards sponsored search ads on mobile devices?

Methodology: Data was collected from 103 Swedish millennials through an experiment and survey.

Conclusion: The findings of this research supports the variables of entertainment and incentives to have a positive association with millennials attitudes towards mobile search ads while irritation, informativeness and credibility were only partially supported when testing independently with attitudes. An overall negative attitude could be seen toward sponsored links when participants motivated their action to click. Moreover, the results illustrated a higher attitude value towards mobile search ads to reflect an increased click behavior on sponsored search results.

Keywords
4.7 Analysis of variance ANOVA

5. Analysis and results
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1. Introduction

1.1 Background

The advancement of the internet has led to an increased spending of advertisement online with an estimated spending of 270 million dollars during 2018, thus a 40 million dollar increase in comparison to 2017 (Statista, 2018a). A specific increase of focus has been recognized in online keyword advertising (Lo et al., 2014) where search engines (e.g. Google, Yahoo and Bing) have come to realize their powerful role as intermediaries between companies and their customers (Yang & Ghose, 2010). Google, who dominate the web search market, presented a total revenue of 78 million dollars in 2017, an increase of 15 million dollars in advertising revenue from previous year. A revenue which shows the impact of the internet and the keywords advertising value, as Google in 2001 displayed an advertising revenue of just 70 000 dollars (Statista, 2018b).

Google is the leading search engine in Sweden with 93.8 percent whilst Bing make up for 4 percent of the market share in Sweden and Yahoo about 1.5 percent (Statista, 2017). Since the habit of individuals searching for products and services online has been growing, companies have acknowledged the opportunity to use the process of keyword advertising on search engines to attract consumers (Murillo, 2017; Lo et al., 2014). Keyword advertisements have shown to generate high number of consumer interactions as it provides personalized offers and messages on the search engine result page that is coherent with consumers’ needs (Kim et al., 2012).

Search engines provide individuals with two different keyword search results, organic and sponsored results. The difference between the search results is that organic results are placed according to the relevance of keywords and hence most relevant by the search engines algorithm where the results are not affected by payment (Kritzinger & Weideman, 2013). In comparison to organic results, sponsored results placed in the search engine, are results where companies have paid for improved positions of which are placed above the organic search results (Google, 2018). However, Lu et al. (2017) describe the importance for sponsored results to meet the needs of both the search engine and the websites. Therefore, marketers can bid on specific keywords in an attempt to match the keywords that their target customers search for, in order to provide relevant information for the individual (Lu et al., 2017; Jansen et al., 2007).
It is important for companies to land on individuals first search engine result page to maximize the chance of being viewed by potential customers, since the predominant majority of people only look at the very first search result page (Kritzinger & Weideman, 2013). Moreover, sponsored ads on the first search result page have shown to generate much higher revenue compared to sponsored ads found on the second result page (Jansen et al., 2013). However, individuals still perceive keyword advertisements as online advertisements, in which affects their search results when seeking for information (Lo et al., 2014). Therefore, people more often tend to avoid sponsored search results and instead focus on the organic results presented in the search engine (Lo et al., 2014; Murillo 2017; Jansen et al., 2007).

1.2 Problem Discussion

Engaging in paid search marketing is a costly action for companies to consider and despite the growth of search engine marketing, the impact that sponsored search results have on people when in the presence of non-sponsored results have not been fully understood (Yang & Ghose, 2010). Aligned with Yang and Ghose (2010), Blake et al. (2015) argue for sponsored search engine ads to work as a costly substitute in comparison with organic entry channels for websites, hence questioning the effectiveness of using sponsored ads to increase consumer purchases (Blake et al., 2015). In addition, despite the opportunity for both search engines and advertisers to benefit from the use of search engine advertisement, Lu et al. (2017) still argue for the uncertainty of benefit from the consumers perspective and question the efficiency for companies to use the approach of sponsored results in order to promote oneself on the internet.

Authors emphasize the need for more research (Lu et al., 2017; Jansen et al., 2007; Yang & Ghose, 2010) where it is crucial for companies to understand what factors relate to individuals’ decision to click on sponsored search results (Jansen et al., 2007). Therefore, there is a need for online advertisers to further develop the presentation of sponsored links in order to increase the likelihood for people to click on the Google ads presented (Jansen et al., 2007). Thus, researchers have to consider focusing on the effect of sponsored results, rather than focusing on the organic results and their effect (Lu et al., 2017).

Previous research has focused on search engine marketing on the internet from computer platforms (Lu et al., 2017; Jansen et al., 2007; Lo et al., 2014). As the majority of consumers
today use internet to search for information (Lo et al., 2014) it is of need to focus on platforms which have not yet been investigated in depth. Thus, it is important to understand how individuals perceive sponsored material on all platforms in order for companies to efficiently communicate their message to capture individuals’ attention. Lane Keller (2001) argue for constantly developing marketing communication and argue for the need to understand the individual in order to perform the most appropriate marketing communicate in order to create a consumer response.

The mobile platform has been growing and an increase of content consumption has been presented, as more and more consumers move towards mobile commerce (Gupta & Mateen, 2014; Murillo, 2017). According to reports obtained by Statista (2018c), online search advertisement on mobile devices has during 2017 surpassed search advertising on desktop as the leading revenue in the search advertising segments. Moreover, search advertising on mobile devices is predicted to double the revenue in comparison to search advertising on computers (Statista, 2018c). The nature of searching on mobile phones, usually when “out and about”, combined with its smaller screen size could strongly enhance the effect of ad rank and imagery compared to sponsored search results shown on a computer (Gupta & Mateen, 2014). Mobile phones have shown to be especially important among millennials, individuals born 1981-1999 (Jansen et al., 2007), where the device is included wherever they go (Grant & O’Donohoe, 2007). For marketers, this as a huge opportunity to reach out to a young consumer market and communicate companies’ messages effectively through mobile devices (Grant & O’Donohoe, 2007). Millennials are portrayed as the first generation to use digital platforms on an everyday basis (Thompson & Gregory, 2012; Bolton et al., 2013) and is argued to be an important generation to investigate when trying to understand individuals’ search behavior on mobile devices (Murillo, 2017). Millennials are frequent users of search engines, Google in particular, to find information regarding products and services on the internet (Veloutsou & McAlonan, 2012). However, millennials have shown to have strong negative feelings towards mobile marketing communications (Grant & O’Donohoe, 2007). Grant and O’Donohoe (2007) state that the topic of mobile marketing communication has been little researched and emphasize the need of further studying how young consumers receive companies’ mobile advertisements. Therefore, there is a need to increase the understanding of millennials online search behavior and attitudes towards sponsored search results on mobile devices (Gupta & Mateen, 2014; Murillo, 2017).
1.3 Purpose

The purpose of this study is to understand millennials’ search behavior on mobile devices.

1.3.1 Delimitations

This study will be limited to understanding the search behavior of Swedish millennials with Google as the presented search engine due to its dominance on the web search market.

1.4 Research Questions

1. How do millennials value organic and sponsored search results on mobile devices?
2. What are the Web advertising variables that affect millennials attitudes towards sponsored search ads on mobile devices?
2. Literature Review

The literature review presents current theories regarding the topic and is divided into three major parts. These parts hold theoretical foundations concerning marketing communication, search engine marketing and factors affecting individuals’ attitudes toward internet advertising.

2.1 Marketing communication

Marketing communication is defined as the process of effectively communicating information regarding a company's' product or service to the target audience (Burnett & Morarity, 1998). Marketing communication reflects the attempt for companies and actors on the market to inform, persuade and remind individuals of offers, either directly or indirectly (Lane Keller, 2001). There are three key factors reflecting communication, the intentional creation of a message in order to capture a response, the transaction of a message to a receiver and that the communication is to be symbolic, meaning that the message transferred to a receiver is presented as sensory stimulants, which are used to create thoughts (Blythe, 2000). Over the last years, marketers have experienced a remarkable change in the challenges of marketing communication where challenges of presenting, designing and implementing marketing communication have occurred (Lane Keller, 2001; Blythe, 2000). New communication options have been developed and the communication alternatives are many, the non-traditional communication channels have been challenged by new alternatives. Sharma et al. (2018) who focused on understanding the effect of advertisement on search engine result pages, suggest for change in communication to affect the consumers’ behavior. Small and medium scale companies who change the communication on search engines have a higher chance of affecting consumers intentions and behavior. It is of importance to understand the company's targeted group as a change alert for consumers attention, if the communicated change is presented successfully (Sharma et al., 2018). Marketers need to understand their individuals in order to choose the most appropriate marketing communication to create a response of the individuals (Lane Keller, 2001). In the case of marketing communication through mobile phones, Grant and O'Donohoe (2007) found young consumers to have an overall negative perception of mobile ads and imply the need for more research.
2.2 Search engine marketing

Search engines provide consumers with both organic and sponsored results based on the keywords searched for by the consumer (Kritzinger & Weideman, 2013; Yang & Ghose, 2013). Organic results, hence non-paid results, are placed according to the search engine’s complex algorithm based on companies’ relevance to the search with respect to other links and can be enhanced by search engine optimization (Kritzinger & Weideman, 2013; Yang & Ghose, 2010). Sponsored results on the other hand are paid results, charging companies per click (Kritzinger & Weideman, 2013). This improves the ranking of the search result, placing sponsored results above organic results (Google, 2018). Yang and Ghose (2010) state that the effectiveness of sponsored search results is determined by the likelihood that a company's sponsored link appears in the same search result as the same company's organic listing.

Jansen et al. (2007) conducted a study examining the relationship between consumer search behavior and attitudes towards organic and sponsored search engine listings. The authors found a significant preference for organic links where the majority of consumers viewed organic search results before reflecting upon sponsored search results (Jansen et al., 2007). Although consumers often perceived sponsored links as advertisements, the sponsored links could still be appreciated and hence clicked on by consumers if the content was perceived as relevant to the consumer (Jansen et al., 2007; Gupta & Mateen, 2014). Aligned with Jansen et al. (2007), Jansen and Liu (2013) portrayed results indicating that individuals tend to not click on the first ad listing on search engine results. However, Jansen and Liu (2013) added by presenting new findings of individuals not clicking the first or second ad listing, individuals are presented to choose the third choice on the ad listing. Moreover, Jansen and Liu (2013) presented the decrease of number of clicks on the sponsored links, in comparison to earlier studies. This is strengthened by Veloutsou and McAlonan (2012) who reflect their studies in the context of communication and focus on loyalty and disloyalty towards brands who uses search engine marketing. The authors focused on computers as the platform of the study and provide results of how millennials no longer are welcoming the communication brands when sponsored material is presented, as companies during the later years have misused the opportunity of presenting commercial content online (Veloutsou & McAlonan, 2012). It is argued that young millennials are independent and critical individuals that tend to create their own rules of social behavior and engagement (Spero & Stone, 2004).
A more recent study, conducted by Lu et al. (2017), highlight the need to consider attitudinal effects of the online advertisement use in search engine results, as their results indicate for sponsored links to be an important factor to consider in order for companies to be effective online (Lu et al., 2017). Additionally, Cheng et al. (2018), who focus on search engine marketing from service firms’ perspective, highlight the need for companies to choose the right keywords in order to capture consumers’ attention, as inappropriate keywords may rather lead to negative consumer responses regarding the company.

By using an experimental method, Lo et al. (2014) investigated the behavior of consumers when evaluating search engine results. This study focused on capturing and analyzing consumers eye movement in order to understand their online search behavior. The results of the experiment indicated that consumers glance at sponsored material but rather click on organic search results. Lo et al. (2014) therefore address the need of more research in order to understand how to increase keyword advertisement effectiveness. The authors further present the need to focus on attitude or emotion in order to explain and understand the effects of sponsored advertisement (Lo et al., 2014).

The factors affecting consumers decision to click on sponsored search advertisements might be device sensitive to the search, hence if using a computer or a mobile device (Gupta & Mateen, 2014). Murillo (2017) argue for the growing importance of mobile search and previous research argue for the importance to further study consumers online search behavior on mobile devices due to the movement towards mobile commerce (Gupta & Mateen, 2014; Murillo, 2017) as well as the increase content consumption on mobile devices (Gupta & Mateen, 2014). The nature of searching on mobile phones, usually when “on the run”, combined with its smaller screen size could strongly enhance the effect of ad rank and imagery compared to sponsored search results shown on a computer (Gupta & Mateen, 2014).

2.3 Attitudes toward internet advertising

Early research conducted by MacKenzie et al. (1986) describe attitudes towards ads to be defined as a willingness to respond to a particular advertisement in a negative or positive manner, when being presented with an advertising stimulus in a particular occasion. Shimp (1981) presented findings indicating for attitudes toward ads to have a big impact of the choice behavior of individuals, which highlights the importance for understanding how one
may affect the attitudes of individuals in order to create a positive response. Lin and Hung (2009) further reflect upon attitudes toward ads to be formed through a cognitive and affective processing manner where individuals process information differently.

Existing studies (Kim & Han, 2014; Martins et al., 2017; Murillo, 2017) which focus on mobile marketing have considered to apply the model constructed by Ducoffe (1995) in order to create an understanding of individuals’ attitudes. The model predicts factors which affect the advertising value of a consumer and hence is used to understand the variables affecting attitudes towards advertisement in online marketing. The factors included in the model constructed by Ducoffe (1995) were; informativeness, entertainment and irritation which were described to have an impact and influence individuals’ attitudes towards advertisements online. The variable of informativeness reflects the concerns of presenting consumers with information of products and services. Irritation reflects the ability for advertisement to annoy and irritate consumers with unwanted material which affects attitudes negatively. While the third factor of entertainment, reflects whether or not advertisement material is enjoyable and affect the brand in a positive matter (Ducoffe, 1995). Further studies have added the factor of credibility (Murillo, 2017; Brackett & Carr, 2001) and incentives (Kim & Han, 2014) to be important variables when evaluating advertising value in online marketing.

2.3.1 Informativeness

Murillo (2017) found that the informativeness of mobile search advertisements had a significant positive effect on perceived advertising value as well as consumers’ attitude towards mobile search advertisements. This is aligned with the work by Martins et al. (2017) who present informativeness to affect consumers’ attitude of smartphone advertisement. However, Lin and Hung (2009) concluded informativeness in regard to individuals’ attitudes towards sponsored search advertisements to be of very little importance. Thus, there is an inconsistency in literature concerning the importance of informativeness when evaluating individuals’ attitudes towards sponsored search ads. Kim & Han (2014) argue that marketers and advertisers need to reflect informativeness in order to grasp consumer attention towards a brand. Okazaki (2004) predicted the relevance of a sponsored ad to be crucial when consumers take actions and make decisions whether or not to click on a presented ad as there may be an uncertainty of the information presented.
2.3.2 Credibility

In a research conducted by Martins et al. (2017), focusing on smartphone advertisement and its effect on consumers purchase intentions, the authors discovered credibility to be one of the factors affecting individuals’ attitudes toward smartphone advertisements. Further, Lin and Hung (2009) found credibility to be the most important factor when investigating individuals’ attitudes towards sponsored search advertisements. Advertisers need to present credible information to attract consumers (Kim & Han, 2014). MacKenzie and Lutz (1989), in their study of attitudes towards advertisement, argue for credibility to reflect the truthfulness and believability of the advertisement presented. Moreover, the sponsor of an ad also affects the credibility, and the sponsor has to be reflected as honest and truthful (MacKenzie & Lutz, 1989). The credibility of an ad is crucial in the decision-making process, determining whether consumers will click on the ad or simply avoid it (Okazaki, 2004). Thus, it is important for online advertisers to maintain and continuously improve search advertisements credibility to earn internet users trust (Lin & Hung, 2009). If the sponsored material is presented and perceived by consumers as credible and trustworthy, this will positively enhance consumers’ perceived value of the ad (Liu et al., 2012). Moreover, Liu et al. (2012) investigated consumers’ perception towards mobile advertising in a cross-cultural aspect and determined credibility to be a vital factor for companies to consider when establishing customer relationships.

2.3.3 Entertainment

Martins et al. (2017) found entertainment to be a factor affecting consumers attitude towards smartphone ads where Lin and Hung (2009) found it to play a significant role in regard to individuals attitudes towards sponsored search ads. It is argued that consumers are more likely to evaluate an advertisement if the material is perceived as entertaining (Ducoffe, 1995). The factor of entertainment has been argued by Ducoffe (1996) to have a positive effect on consumers’ attitude towards advertisements presented on the Web. In the competitive market of Internet, companies have to create interesting and enjoyable material in order to grasp the attention of consumers, creating an emotional link between customers and the company presenting the sponsored material (Liu et al., 2012).
2.3.4 Irritation

A smartphone advertisement which is perceived as annoying and unwanted will reflect in negative feelings of the consumer towards the brand presenting the advertisement (Martins et al., 2017). Presenting a great number of advertisements will most likely harm the consumer and create irritation, which is why advertisers should present credible and informative advertisements (Kim & Han, 2014). If an advertisement is perceived as annoying and offensive, this may create an irritation of the individual (Ducoffe, 1996). Lin and Hung (2009) found irritation to have a strong negative effect on individuals attitude towards sponsored links and consequently strongly recommend online advertisers to avoid raising users’ negative feelings and attitudes. Kim and Han (2014) argue for small screens, most often used on mobile platforms, to reflect more sponsored ads in comparison to computer screens (Kim & Han, 2014), which Murillo (2017) argue for can irritate the consumer. Most research points for the negative impacts of irritation towards ads, however Liu et al. (2012) present findings where the cultural context differs, as customers of different nationalities interfere with different numbers of sponsored ads, concluding that the more sponsored material a consumer is presented with, the impact of irritation is higher.

2.3.5 Incentives

Incentives can be referred to the benefits of both monetary and non-monetary nature. Monetary benefits refer to discounts, gifts and coupons while non-monetary benefits reflect level ups and status awards (Varnali et al., 2012). Martins et al. (2017) found the factor of incentives to strongly affect consumers’ attitude towards smartphone advertisement. When consumers are exposed to mobile advertisements that include opportunities, such as discounts or rewards, their perception towards the ad is positively influenced (Kim & Han, 2014). Varnali et al. (2012) conducted a study which examined consumer responses of SMS-based mobile advertisement. The study presented results of incentives to enhance the response behavior and extend the willingness to talk about the ad implying incentives with friends.
3. Conceptual Framework

A discussion based on the theories reviewed in the prior chapter is here conducted and formed into six hypotheses, H1-H6. The discussion is followed by a conceptual model that has been created where the connection of the hypotheses is visualized.

Previous research regarding search engine marketing have concluded a number of factors that affects individuals’ attitudes toward sponsored search results. The informativeness of a mobile search ad is a factor that researchers found to have a positive effect on consumers attitude towards mobile search ads (Murillo, 2017; Martins et al, 2017). Furthermore, researchers found that consumers are more likely to evaluate mobile advertisements that are perceived as entertaining (Martins et al., 2017). However, previous literature found that smartphone advertisements that are perceived to be annoying or unwanted will result in irritation towards the brand and hence be negatively associated with individuals’ attitudes toward the ad (Lin & Hung, 2009; Martins et al., 2017). Credibility was found to be a crucial factor that have a positive impact on individuals attitudes towards sponsored search ads (Kim & Han, 2014) where companies need to present their advertisements as honest and truthful (MacKenzie & Lutz, 1989). The last factor found to affect the attitude towards smartphone advertisement is incentives (Martins et al. 2017). Incentives reflect the benefits offered by mobile advertisements to consumers, presenting rewards, discounts and opportunities, which affect consumers attitude positively (Kim & Han, 2014).

It can be seen from previous research that marketers need to gain understanding of individuals to be able to choose the most appropriate way of communicating their marketing messages (Lane Keller, 2001). The majority of consumers tend to view organic search results before reflecting upon sponsored ads (Jansen et al., 2007) where the target group of millennials have shown to be skeptical towards sponsored material (Veloutsou & McAlonan, 2012). Therefore, it is of need to understand how millennials value organic and sponsored search results. Henceforth, six hypotheses have been developed in order to understand the relationship between the attitudinal factors and attitude towards mobile search ads.
Martins et al. (2017) along with Murillo (2017) present informativeness to affect consumers’ attitude of smartphone advertisement, however Lin and Hung (2009) contradicts to Martins et al. (2017) by arguing for informativeness as a variable to not affect attitudes towards sponsored search advertisements to a large extent. Thus, an inconsistency in literature concerning the importance of informativeness when evaluating individuals’ attitudes towards sponsored search ads is determined. By taking this in consideration, the following is hypothesized:

**H1:** The perceived informativeness of the mobile search ad is positively associated with the attitude toward mobile search ads

Credibility is one of the most important variables discovered to affect the attitudes of individuals when interpreting information on the internet (Martins et al., 2017). Lin and Hung (2009) argue for credibility to be the most important when investigating individuals’ attitudes towards sponsored search advertisements, which is why it is of importance to present credible information in order to attract potential consumers (Kim & Han, 2014). Okazaki (2004) argue for the variable of credibility to be crucial in the decision-making process, which also determines whether or not a consumer will click on the ad (Okazaki, 2004). If the sponsored material is perceived as credible, this will positively affect the consumer attitude and valuation of the presented material (Liu et al., 2012). Thus, the following hypothesis was developed:

**H2:** The perceived credibility of the mobile search ad is positively associated with the attitude toward mobile search ads

Lin and Hung (2009) presented findings indicating for the variable of entertainment to affect the attitude one has towards sponsored search results. Ducoffe (1996) reflected upon entertainment to affect the attitude of a consumer regarding web advertising. Moreover, Martins et al. (2017) found that the variable of entertainment was a variable affecting consumers attitude towards smartphone ads. Liu et al. (2012) argue for the need of companies to create entertaining and interesting material when presenting advertisement on the web in order to stay competitive, hence the following hypothesis was stated:

**H3:** The perceived entertainment of the mobile search ad is positively associated with the attitude toward mobile search ads
If presented with advertisement which is perceived as annoying, consumers may create an irritation towards the ad (Ducoffe, 1996). Lin and Hung (2009) presents irritation to have a negative impact on the consumer attitude towards sponsored ads which is why it is important for companies to evaluate the material presented in order to avoid raising irritation among individuals on the web. Moreover, the small screen on mobile devices are argued by Kim and Han (2014) to display a greater number of sponsored ads compared with computer screens, which may irritate the consumer (Murillo, 2017). Thus, the following hypothesis was developed:

**H4: The perceived irritation of the mobile search ad is negatively associated with the attitude toward mobile search ads**

The variable of incentives reflects benefits presented to consumers which may reflect both monetary and non-monetary benefits. Researchers argue for the variable of incentives to strongly affect the attitudes consumers have towards smartphone advertisement (Martins et al., 2017) where mobile ads which include opportunities, affect consumers perception of the ad positively (Kim & Han, 2014). Varnali et al. (2012) presented a study reflecting upon incentives to enhance the response behavior of consumers. Thus, the following was hypothesized:

**H5: The perceived incentives of the mobile search ad are positively associated with the attitude toward mobile search ads**

Researchers have investigated the relationship between search behavior and the attitudes towards sponsored search engine listing (Jansen et al., 2007). It is concluded that the majority of individuals tend to view the organic results before reflecting upon sponsored search results (Jansen et al., 2007) which is also aligned with the results presented by Jansen and Liu (2013). However, although consumers often perceived sponsored links as presented ads, the sponsored links may still be appreciated and hence clicked on if the content is perceived as relevant (Jansen et al., 2007; Gupta & Mateen, 2014). Millennials is one group of consumers who are no longer welcoming communicating brands when sponsored material is presented, which identifies the need to understand the click behavior of millennials as the consumer (Veloutsou & McAlonan, 2012). Hence the following hypothesis was constructed:

**H6: Millennials attitudes toward mobile search ads affect their click behavior.**
Hypotheses summary

H1: The perceived informativeness of the mobile search ad is positively associated with the attitude toward mobile search ads
H2: The perceived credibility of the mobile search ad is positively associated with the attitude toward mobile search ads
H3: The perceived entertainment of the mobile search ad is positively associated with the attitude toward mobile search ads
H4: The perceived irritation of the mobile search ad is negatively associated with the attitude toward mobile search ads
H5: The perceived incentives of the mobile search ad are positively associated with the attitude toward mobile search ads
H6: Millennials attitudes toward mobile search ads affect their click behavior.

Figure 1. Model visualizing how the key concepts will be measured through the hypotheses. The model displays the effect that the five attitudinal factors, H1-H5, have on Attitude towards mobile search ads. Whereas the last hypothesis, H6, demonstrate the possible connection between Attitude towards mobile search ads and Click behavior.
4. Method

This chapter holds presentations and justifications of the methodological actions that has been taken in this study. The justifications are supported with theories regarding methodological considerations and all practical actions are thoroughly explained to gain transparency in the research.

4.1 Research Approach and Research Design

A deductive research approach was utilized for this research as it builds on existing theories presented in earlier research. The process of the paper evoked from previous research, presenting a review which provides a foundation for the hypotheses presented, testing earlier theories and variables (Ghauri & Grønhaug, 2005). When utilizing a deductive approach, the use of quantitative and qualitative research is applicable to the research (Saunders et al., 2009). This study will reflect a combination of quantitative and qualitative research, also referred to as a mixed research method. Cohen et al. (2011) describe the application of mixed methods research to provide useful answers by combining a qualitative and a quantitative research approach. The approach of mixed methods enriches the data collection and strengthens the validity and the reliability of the research (Cohen et al., 2011). The major difference between qualitative and quantitative research is the aspect of qualitative research to concern words, while quantitative research rather focuses on numbers (Bryman and Bell, 2011).

The use of a mixed approach resulted in two different research designs. Murillo (2017) suggested future researchers to conduct experiments to be able to observe millennials actual behaviors and attitudes toward mobile search ads. This in order to get more realistic responses and hence a greater internal validity for the study (Murillo, 2017). An experimental research design has been used in some studies regarding search engine marketing (e.g., Jansen et al., 2007; Lo et al., 2014) which creates a more realistic environment to more accurately understand individuals search behavior. This study will therefore initially follow an experimental approach which is carried out qualitatively to add to body of literature and provide enriched data and how individuals value search engine results on a mobile device. This is in accordance to what Saunders et al. (2009) described as an exploratory research approach, as it focuses on a subject which has not yet gained the appropriate knowledge and
hence needs further understanding (Saunders et al., 2009). The quantitative approach of this research reflects a survey that has been created to better understand the relation of the variables; entertainment, incentives, irritation, credibility and informativeness towards individuals’ attitudes towards mobile search ads. The approach follows an explanatory research approach, as it focuses on understanding the relationship between variables of a specific situation (Saunders et al., 2009).

4.2 Research method

4.2.1 Experiment

Experiments can be conducted in a field or laboratory environment where field experiments refer to actual market conditions and laboratory environments are constructed by the researchers with the desired conditions (Malhotra & Birks, 2003). Malhotra and Birks (2003) argue that laboratory environments offer a higher degree of control for the researchers, generate a higher internal validity and is less time consuming compared with field experiments. To conduct a field experiment regarding individuals’ search behavior would not work without having access to users’ personal search data. It would also run the risk of violating people’s online search privacy. Therefore, the experiments in this study have followed the structure of a laboratory environment where each participant was presented with a search scenario (Appendix A1) and was asked to search for a service on Google on his/her mobile phone. The participants were asked to think out loud during the search process, in line with the study conducted by Jansen et al. (2007). This in order to note how the participants valued organic and sponsored search results on mobile devices and which link the participant clicked on. The experiment was followed by a survey where the respondent answered questions regarding their attitude towards sponsored search advertisements on mobile devices and how it is affected by the ads informativeness, credibility, entertainment, irritation and incentives.

4.2.2 Survey

A survey is a type of method of collecting primary data where respondents answer questions regarding attitudes, knowledge and preferences concerning the phenomena of study (Armstrong et al., 2012). Muji (2014) emphasize the advantages of collecting data quantitatively with the use of surveys since they include a standardized questionnaire that is
the same for all respondents. Moreover, Bryman and Bell (2011) describe the advantage of surveys to provide a large sample size, which strengthens the generalizability of the research. Previous studies regarding individuals’ attitudes towards sponsored search ads have used surveys as a method to collect data (Murillo, 2017; Jansen et al., 2007; Yang et al., 2017) which strengthens the choice of utilizing surveys for this particular field of research. Additionally, the independent variables; informativeness, entertaining, irritation, credibility and incentives have been tested towards the dependent variable of attitudes towards advertisements in different contexts through surveys in previous studies. Thus, indicating that these are well elaborative concepts to quantitatively measure with the use of a survey. The survey (Appendix B) was constructed by the indications of Saunders, Lewis and Thornhill (2016), by using a Likert-scale rating from 1-7. This provides the ability for participants to assess their agreement or disagreement towards the presented statements. The Likert-scale rating ranged from (1) “strongly disagree” to (7) “strongly agree”.

The survey was conducted face-to-face with the participants after the completion of the initial experiment where the respondents had the possibility to ask questions throughout filling out the survey. The disadvantages of conducting face-to-face surveys are that they are more time consuming and often more expensive to conduct in research in comparison with online surveys (Szolnoki & Hoffmann, 2013). However, face-to-face surveys usually result in a high response rate (Szolnoki & Hoffmann, 2013) where this study resulted in 103 fulfilled surveys with only 4 respondents who declined participation in the study. As the respondents immediately answered the survey after the experiment, it was clear to follow the answer rate.

4.2.3 Pretest of Experiment and Survey
Initially, a pretest was held with ten millennials in order to validate the experiment scenarios where Jansen et al. (2007) argue that researchers should use real e-commerce needs of real web searchers to acquire the best accuracy and generalizability. The ten participants were individually asked what they search for when using Google on mobile devices, in order to create an understanding of what scenario is of main interest for the target group. The answers were scattered, however, cheap flights was a search which more than two participant mentioned.
The survey consists of questions presented by earlier researchers (Kim & Han, 2014, Ducoffe, 1995; Liu et al., 2012) in order to validate the questions of the research. Further, a pretest was conducted with three participants to test the understanding of the survey and the experiment to ensure a clear understanding and interpretation of the questions (Saunders et al., 2016). In order to validate the questions further, the questions were presented to a senior lecturer of the marketing department of the Linnaeus University. Once the remarks of the questions had been made, the questions were adjusted for a clear understanding for the participant before presenting the survey to the participants.

4.3 Sampling

Thompson and Gregory (2012) and Bolton et al. (2013) describe individuals born within the time span of 1981-1999 to be an important generation to investigate, as this generation is argued to be the first generation to use digital platforms in everyday life. This age group is defined as millennials, who are defined as the most frequent users of mobile devices (Murillo, 2017). As this research focuses on understanding the search behavior on mobile devices, millennials may be argued as the most suitable sample to target in order to contribute to the topic of search behavior on mobile devices. The biggest age group in Sweden 2016 consisted of people aged 20 to 39 years old, hence constituted mostly of millennials, and accounted for 2.61 million inhabitants (Statista, 2018). Thus, strengthening the importance of investigating the target group of Swedish millennials particularly. Therefore, Swedish millennials were approached, a target group which has been limited researched, providing extended research within the topic. As the respondents reflected Swedish millennials, the respondents were to feel familiar with the presented search engine in the experiment and survey for a better understanding. This research therefore focused on the search engine provided by Google as Google is the leading search engine in Sweden with a 94 percent market share (Statista, 2017).

Bryman and Bell (2011) refer to non-probability sampling as a sampling method of gathering data from selected individuals. As this research focuses on a convenience sample, the data was gathered by asking students around the university to take part of the experiment and survey as students are reflected and accepted as suitable respondents from an age target (Bryman & Bell, 2011). Therefore, the sampling reflects selected respondents, rather than randomly selecting respondents of the research. Bryman and Bell (2011) on the other hand
describe probability sampling as the most valid sampling approach, an approach of which participants are randomly selected. However due to the selected target group, this method was not carried out in the gathering process. Additionally, snowball sampling was reflected in the gathering of data (Bryman & Bell, 2011), as respondents assisted with potential respondents throughout the process. To ensure a suitable number of respondents, the formula created by Green (1991) was considered as an accurate indicator for a relevant sample size. Green (1991) who suggested the relevant sample size by the formula; \( N > 50 + 8m \), with \( m \) reflecting the number of independent variables considered in the research. Considering the variables of this study, the relevant number of respondents for this research is 90 respondents. A total of 103 responses were gathered in order to have a margin of security and increase the possibility of attaining a more generalizable study.

4.4 Operationalization

An operationalization (Table 1) has been created to clearly define and organize the measures of concepts in this research. The advantages of creating an operationalization is to show how information can be collected to test the concepts and hypotheses that are being used in a study (Ghauri & Grønhaug, 2005; Saunders et al., 2009). The conceptual definitions need to be specifically elaborated in the context in which they are to be used (Ghauri & Grønhaug, 2005). The concepts are presented and defined in the operationalization followed by the appertaining questions that have been included in the survey. The questions connected to the concepts are based on previous research concerning online advertisements and have hence already been tested in different contexts (Martins et al., 2017; Jansen et al., 2007; Lin & Hung, 2009) which is argued to increase the validity of the questionnaire.
<table>
<thead>
<tr>
<th>Concepts</th>
<th>Adapted from</th>
<th>Conceptual Definitions</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informativeness</strong></td>
<td>Kim &amp; Han, 2014. Ducoffe, 1995. Liu et al., 2012.</td>
<td>The informativeness creates a positiveness towards a brand. Information is needed in order to grasp the attention of the consumer.</td>
<td>1. Google ads provide timely information on products or services&lt;br&gt;2. Google ads provide relevant information on products or services.&lt;br&gt;3. Google ads are a good source of information.&lt;br&gt;4. Google ads are a good source of up to date products or services information.</td>
</tr>
<tr>
<td><strong>Credibility</strong></td>
<td>Kim &amp; Han, 2014. Liu et al., 2012.</td>
<td>Credible information is needed to attract consumers. The credibility influences the response of consumers.</td>
<td>5. I feel that Google ads are convincing.&lt;br&gt;6. I feel that Google ads are believable.&lt;br&gt;7. I feel that Google ads are credible.&lt;br&gt;8. I believe that Google ads are a good reference for purchasing products.</td>
</tr>
<tr>
<td><strong>Entertainment</strong></td>
<td>Kim &amp; Han, 2014. Ducoffe, 1995.</td>
<td>Advertisement needs to be entertaining to attract a consumer. If consumer find entertainment entertaining this may enhance the attitude of a consumer.</td>
<td>9. I feel that Google ads are interesting.&lt;br&gt;10. I feel that Google ads are enjoyable.&lt;br&gt;11. I feel that Google ads are pleasant.&lt;br&gt;12. I feel that Google ads are entertaining.</td>
</tr>
</tbody>
</table>
| **Irritation** | Kim & Han, 2014. Ducoffe, 1995. Liu et al., 2012. | Presented material which is perceived as annoying and unwanted will reflect in negative feelings of the consumer towards the brand presenting the advertisement | 13. I feel that Google ads are irritating.  
14. I feel that Google ads are annoying.  
15. I feel that Google ads are intrusive. |
| **Incentives** | Kim & Han, 2014. | Rewards and discounts reflect a positive perception of an advertisement. Rewards can be of both monetary and non-monetary nature and may enhance the ability for consumer response. | 16. I am satisfied to use Google ads that offers rewards.  
17. I take action to click on Google ads that offers rewards.  
18. I respond to Google ads to obtain incentives. |
| **Attitude (towards mobile search ads)** | Varnali et al, 2012. Lin & Hung, 2009. MacKenzie et al., 1986. | Attitudes towards ads reflect the willingness to respond to a particular ad in a negative or positive manner, responses which are interpreted differently by individuals. | 19. I appreciate sponsored links on the result page.  
20. Overall, I like sponsored links.  
21. I consider sponsored links a good thing. |
| **Search and click behavior - Experiment** | Jansen et al., 2007. | The majority of people only look at the very first search result page. Individuals tend to avoid sponsored search results and instead focus on the organic results presented in the search engine. | What are you looking at?  
Why did you click on that?  
What do you think of the results? |
4.5 Data analysis method

4.5.1 Qualitative data analysis

For the analysis of the experiment, a qualitative approach was utilized. Bryman and Bell (2011) describe the rich and large amount of data obtained when gathering data from qualitative approaches, however in order to grasp the data collection it is of importance for the researcher to imply a comprehensive analysis. A transcription was created in order to make the reader feel present, and to imply the opportunity for the reader to create his or her own interpretation of the data gathered (Bryman & Bell, 2011). The transcription of the gathered data regarding the experiment is presented in Appendix A2, while a summarization is portrayed with the most important data gatherings in the results and analysis in order to focus on the most important implications of the data.

The analysis of the qualitative data involves a coding process. The coding process reflects identifying essential empirical data. The coding process involves reducing the unnecessary data which will not add to the research needed to answer the purpose of the research. Once the reduction of data is made, the data coding is converted into themes and codes, which link together the gathered data (Bryman & Bell, 2011). The data analysis of the experiment followed the coding process in order to provide an ease of presenting the gathered empirical data for further analysis. The answers were divided into two categories, attitudes towards mobile search ads and motivation of click, in order to ease the interpretation of the data. The coding table is presented in Appendix A3.

4.5.2 Quantitative data analysis

With the quantitative approach that follows this research, it is important to verify the validity and the reliability of the data gathered (Barber et al., 2000; Heale & Twycross, 2015). The dependent variable of this study is the attitudes towards mobile search ads, which is affected by the independent variables of entertainment, credibility, incentives, and informativeness. The research includes three control variables, gender, age and occupation. These variables may have an impact on the link between the independent and dependent variables (Bryman & Bell, 2011). In order to analyze the relationship between independent and dependent variables, multiple regression analysis was carried out (Malhotra, 2010). These analyses were
conducted through SPSS software. Before starting the analysis, it is important to code the gathered data assigning a number to all responses (Malhotra, 2010; Saunders et al. 2016).

Regression

From a quantitative perspective, a survey was presented to the participants in order to distinguish the relation between the addressed variables in connection to the attitude of search engine results on a mobile device. Multiple regression analyses were carried out in order to analyze the relationship between independent and dependent variables (Hair et al, 2009; Malhotra, 2010) providing evidence of how strongly the independent variables affect the dependent variable. In comparison to simple regression, the multiple regression analysis handles more than one independent variable. The analyses were conducted through the use of SPSS, where the data was coded for a simplified use of the data (Hair et al, 2009; Malhotra, 2010; Saunders et al. 2016). The control questions where coded by applying a number to the potential answers. The coding was presented with 0= female 1= male 2=prefer not to say, which simplified the use of data. The analyses reflect the relations between the independent variables and the dependent variable, mending out in five regressions considering the independent variables of entertainment, informativeness, irritation, credibility and incentives.

When applying the data analysis method of multiple regression, one is to look for a statistically significant value, which may be portrayed as the change in R-squared. With a significance level lower than 0.1, this describes the sense of how explanatory the independent variables are and how much they may account for change in the dependent variable. Moreover, the higher the provided value of adjusted R-square, the higher explanatory factor the value has (Hair et al., 2011). With the adjusted R-square value ranging between 0-1, a value closer to 1 has a higher explanatory factor where the dependent variable is explained with the use of the independent variable (Bryman & Bell, 2011).

Continuously the importance of a regression analysis provides, is the significance level and the beta value. The significance value provides the researcher with the value which determines rather to reject of accepted the stated hypothesis. For an accepted value, the significance value shall be lower than 0.05. In contrast to the significance value, the beta value provides an estimate of the relationship between the independent and the dependent variables. If beta reflects a value of 0, no relationship is presented, however if presented with a negative/positive value, the independent variable has an effect on the dependent
variable which is either negative/positive (Aaker et al., 2011). Moreover, Aaker et al (2011) present the use of multiple regression to examine the relations between the presented variables. However, one may also test the independent variables separately, which may indicate for the hypothesis to be partially supported if a statistically significant value is presented when tested individually rather than with all independent variables together.

4.6 Quality Criteria

Cronbach's Alpha
A Cronbach’s Alpha test can be conducted in SPSS to test the internal reliability of the questions used in a survey (Bryman & Bell, 2011). The result will show a number between 0 and 1 after running the test. A Cronbach’s Alpha result that is equal to zero indicate that the tested questions do not have any internal reliability whereas a perfect internal reliability is found when Cronbach’s Alpha is equal to one (Bryman & Bell, 2011). Sekaran and Bougie (2013) argue that a Cronbach’s Alpha value equal or above 0.6 can be considered internally reliable while Mujis (2004) and Bryman and Bell (2011) argue for 0.7 to be a reliable value.

Pearson Correlation
Construct validity reflects the issue of understanding what the scale is measuring. With the use of construct validity, one is to attempt to answer the theoretical questions of why the scale works (Malhotra, 2010). To test the construct validity Pearson’s Correlation was considered in order to test the strength of associations between two variables and to interpret to what degree one variable is related to another variable. This approach may be used to determine to what extent a linear relationship exists. The value varies between -1 and 1, where 0 indicates no association between the variables, indicating that the variables are absolute independent of each other. The value may be either negative or positive, depending on the relationship between the variables. A number below 0 indicate a negative relationship, while a number above 0 indicate for a positive relationship (Malhotra, 2010; Malhotra & Birks, 2003). With the use of construct validity and Pearson correlation the theoretical contribution of the research was investigated by using the statistical tool of SPSS, which concluded the correlation between the applied variables of the research.

4.7 Analysis of variance ANOVA
In order to examine differences between mean values of different populations, the analysis of variance may be interpreted. The analysis of variance also known as ANOVA, reflects a measurement with two variables. A dependent variable which is measured as a metric value and with at least one independent variable which is categorical is needed for the measurement. This technique provides the possibility to examine the differences among means for one or more populations (Malhotra, 2010). As this research focuses on the behavior of individuals with regard to the attitudes towards search engine ads, the use on ANOVA will distinguish differences or similarities between the behavior of the participants. The population reflected in the research is clicking or not clicking on a sponsored search result.
5. Analysis and results

This chapter presents the results of the gathered data concerning the experiment and the survey including tables that explain the quantitative parts of the study. The chapter is followed by an analysis based on the results, connected to the hypotheses H1-H6.

5.1 Descriptive statistics

The participants in this study initially participated in the experiment and thereafter answered the survey. The following descriptive statistics therefore refers to participants that have participated in both the experiment and the survey. A total of 103 experiments and surveys were conducted with 44 females and 59 males. All participants were between the age of 18 and 29 with the majority of 69 participants being between 22 and 25 years old. The majority of respondents, 97 participants, claimed to be full time students whereas two people claimed to be part time students and four people employed. In the beginning of the survey, the participants answered the question of how often they use Google on their mobile phones where 91 respondents claimed to be using Google daily or almost daily, eleven respondents answered that they use the search engine weekly and only one respondent claimed to never use Google on his or her mobile phone.

Experiment results

During the experiment, the participants were asked to search for a specific service on Google through their mobile phones and to think out loud during the search process. The participants search and click behavior was observed where 55 individuals clicked on an organic link on the search result page whereas 48 people clicked on a sponsored link. Thus, the click behavior of the participants demonstrated that there was not a substantial difference in quantity between the participants who clicked on organic links versus the ones who clicked on sponsored links.

The coding of the experiments has been transcribed (Appendix A2) and here follows a summary of experiment findings. Participants who clicked on an organic link in the experiment used the following words to describe how they perceive sponsored search results to be; misleading, unreliable, annoying, irrelevant for the search, irritating, non-trustworthy
and “not legit”. By observing the participants search behavior, it could be seen that some people automatically scroll down without having a glance at the sponsored search results without necessarily reflecting much upon it. When asking those participants how come they skipped the advertised results, they responded “That is an old habit, I never click on ads because I know they have paid to be positioned on top”, “Once I have passed the sponsored ads I literally click on anything relevant, as long as it is not sponsored”, “I just do not like ads and never click on them, even though they could state the same thing as organic links”, “I never choose the sponsored material, but I don’t really know why. I do not think I trust them and may think that they lead me to strange sites”.

Participants motivation of click action was shown to depend upon the relevance of the search, the familiarity with the website, website ratings or simply because it was the first alternative and hence perceived to be the most suitable result for the search. Some participants stated that their motivation of click action was positively affected by organic links that claimed to offer low prices for the searched product. Another participant was also motivated to click on a search result that offered incentives, however for a sponsored link. One participant particularly expressed her disapproval of search ads that presented very cheap prices since it made her suspicious and hence worked as a motivation to not click on the ad.

The participants of the experiment searched for one to five keywords on Google based on the scenario of searching for a cheap flight to London (Appendix A1) that was presented to them. Common search keywords were “Cheap flights London” and specific search terms where 34 participants searched for specific websites that they usually visit when looking for flights. The majority of respondents who clicked on a sponsored link in the experiment explained that they did so because the sponsored link reflected a website that the respondent intended to visit; “I know that it will get me to the same website and do not need to look through other options”, “I click on the first sponsored alternative since I have used this website before and do not reflect upon it being an ad. As long as it provides me with relevant results”, “I have no issue with clicking on sponsored links. It gives me the right direction and information I need”.

On the contrary side, the respondents who searched for a specific website and clicked on an organic search result instead of an ad expressed their disapproval of Google search ads, even though they provided the same result as the organic links; “I prefer organic results, even though I know the ad take me to the same website. I have never liked ads and do not want to
provide a benefit for Google when ads are presented”, “I quickly scroll past the sponsored results and go through the information of the organic material before clicking on the preferred choice (Norwegian.se). I saw the same search result as an ad as well (Norwegian.se) but prefer organic material. There are too many ads already”, “I know what I am looking for, but I know that Google is making money when I click on the sponsored results. I find it irritating that paid material is placed above the relevant material. So that is why I choose organic search results “.

Some participants expressed the difference when making searches on a mobile phone in comparison to a computer; “On my phone I usually click on the first choice, but when on a desktop I would evaluate the alternatives and have a longer look”, “I read a bit of the different results but would have read more on a computer screen”, “I would probably evaluate more results if I was using a computer when searching for something”.

Survey results

Quality Criteria

Cronbach’s alpha was calculated in order to test the internal reliability of the questions provided in the survey. As Bryman and Bell (2011) argue for a 0.7 to be a reliable value, Cronbach's alpha for the questions used should not generate a lower number. Table 2 presents the variables of the research with the number items and the Cronbach's Alpha value. As presented, no values are found below 0.878, providing evidence of reliable variables.

Table 2: Reliability test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Cronbach’s Alpha</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informativeness</td>
<td>Q1-Q4</td>
<td>0.878</td>
<td>4</td>
</tr>
<tr>
<td>Credibility</td>
<td>Q5-Q8</td>
<td>0.902</td>
<td>4</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Q9-Q12</td>
<td>0.947</td>
<td>4</td>
</tr>
<tr>
<td>Irritation</td>
<td>Q13-Q15</td>
<td>0.914</td>
<td>3</td>
</tr>
<tr>
<td>Incentives</td>
<td>Q16-Q18</td>
<td>0.885</td>
<td>3</td>
</tr>
</tbody>
</table>
Table 3 presents the construct validity which was measured by the use of Pearson correlation. The correlation between the variables of; attitude, informativeness, credibility, entertainment, irritation and the variable of incentives are all within the range of -1 and +1. All variables except the variable of irritation have a positive relationship to one another. The variable of irritation has a negative relationship to the alternative variables, as the hypothesis is stated from a negative approach. The relationship between the variables vary from the score of -0.499 to 0.799 which defines the relationship. Further, all variables are significant since the significance level is defined at a 0.05 level and a 0.01 level of significance.

Hypothesis Testing

In order to test the first five hypotheses, H1-H5, a multiple regression analysis was carried out. Table 4 describes the direct relationship between the dependent variable of attitudes and the independent variables; informativeness, credibility, entertainment, irritation and incentives. Model one, presented in Table 4, solely tests the relationship between the control variables and the dependent variable. Model two to six tests the relationship between the dependent and the independent variables separately. Model seven reflects the control variable and the independent variables in relation to the dependent variable. Model seven is the model...
reflected to either accept or reject the stated hypotheses. Interpreting the seventh model, it is clear to the significant relationship between attitudes towards mobile search ads and the independent variables of entertainment and incentives, which accepts hypotheses three and five. However, interpreting model two to six, it is clear to see that each of the five independent variables have a significant relationship when tested separately. The independent variables of model two, three, four and six have a positive beta, indicating that there is a relationship to the dependent variable. Model 5 however, presents a negative beta, but as the hypothesis is stated negatively, the beta value indicates for an acceptance of the independent variable. Therefore, hypotheses one, two and four can be partially supported.

Interpreting the adjusted R2 value, which explains the explanatory factor of the variables (Hair et al., 2011). It is clear to see that the control variables found in model one accounts for none or very little effect. Model two to six present values between 0.123 to 0.373, describing the independent variables to be of higher explanatory effect as the higher the provided value of R2, the higher the explanatory effect. Model seven provide a value of 0.486, hence a higher explanatory factor which explains the effect of the independent variables.

Table 4: Describes the relationship between the dependent and independent variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7 All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intercept</td>
<td>Intercept</td>
<td>Intercept</td>
<td>Intercept</td>
<td>Intercept</td>
<td>Intercept</td>
<td>Intercept</td>
</tr>
<tr>
<td></td>
<td>2.770 (1.051)</td>
<td>-1.252 (1.003)</td>
<td>-0.528 (0.956)</td>
<td>0.789 (0.862)</td>
<td>3.535*** (0.994)</td>
<td>0.918 (0.898)</td>
<td>-0.506 (0.972)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.052 (0.267)</td>
<td>-0.004 (0.215)</td>
<td>-0.030 (0.215)</td>
<td>-0.069 (0.210)</td>
<td>0.011 (0.251)</td>
<td>-0.034 (0.218)</td>
<td>-0.020 (0.195)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.129 (0.304)</td>
<td>-0.097 (0.244)</td>
<td>-0.070 (0.246)</td>
<td>-0.185 (0.240)</td>
<td>-0.091 (0.284)</td>
<td>-0.032 (0.252)</td>
<td>-0.077 (0.227)</td>
</tr>
<tr>
<td>Occupation</td>
<td>0.067 (0.365)</td>
<td>0.146 (0.295)</td>
<td>0.114 (0.294)</td>
<td>0.269 (0.286)</td>
<td>0.098 (0.340)</td>
<td>0.047 (0.298)</td>
<td>0.096 (0.265)</td>
</tr>
<tr>
<td>Google</td>
<td>0.055 (0.354)</td>
<td>0.122 (0.286)</td>
<td>0.123 (0.286)</td>
<td>0.262 (0.278)</td>
<td>0.119 (0.333)</td>
<td>0.038 (0.289)</td>
<td>0.097 (0.258)</td>
</tr>
</tbody>
</table>

Independent variables
Table 5 and 6 provide the possibility to examine the differences among means for two populations (Malhotra, 2010) and demonstrate the testing of hypothesis six, H6. For this hypothesis, millennials attitudes towards mobile search ads was tested in regard to the click behavior. Table 5 provides a presentation of the average mean in relation to participants click behavior (0= organic, 1=Ad). The experiment demonstrated 55 participants to click on organic search engine results, while 48 clicked on the sponsored search results. The two populations (organic vs sponsored) were tested in regard to the mean difference of the dependent variable of attitudes. The organic results presented a mean of 2,764 while the sponsored results presented a mean of 3,333. Indicating for a difference between click behavior in relation to attitudes. Moreover Table 5 displays a mean of 3,029 for the total
number of participants. In order to interpret the possibility for differences between the two populations the significant relationship value was tested at a 95% significance level. With a significance value of 0.049 (Table 6) the sixth hypothesis, H6 was accepted, indicating for a difference between the two populations of the research. Hence, it is presented that respondents’ attitudes affect the choice of clicking on organic or sponsored search results.

Table 5: Descriptive statistics of organic search results and sponsored ones

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = Organic</td>
<td>55</td>
<td>2.764</td>
<td>1.422</td>
<td>0.192</td>
<td>2.379</td>
<td>1.00</td>
<td>6.00</td>
</tr>
<tr>
<td>1 = Ad</td>
<td>48</td>
<td>3.333</td>
<td>1.473</td>
<td>0.213</td>
<td>2.906</td>
<td>1.00</td>
<td>6.67</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>3.029</td>
<td>1.467</td>
<td>0.145</td>
<td>2.742</td>
<td>1.00</td>
<td>6.67</td>
</tr>
</tbody>
</table>

Table 6: ANOVA interpreting the level of significance between Attitudes and Click Behavior

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>8,319</td>
<td>1</td>
<td>8,319</td>
<td>3.977</td>
<td>0.049 *</td>
</tr>
<tr>
<td>Within Groups</td>
<td>211,261</td>
<td>101</td>
<td>2,092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>219,579</td>
<td>102</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level
* Correlation is significant at the 0.05 level

Table 7 concludes the acceptance and the rejection of the stated hypotheses. As presented in the results, H3 and H5 are accepted providing a significant relationship between the variables of entertainment and incentives and attitudes towards search results on mobile devices. H1, H2 and H4 were only partially supported, hence rejecting the hypothesis. H6 was accepted, indicating for a difference between the respondents’ attitudes based on the click behavior of either organic or sponsored search results.
Table 7: Explaining the acceptance and rejection of hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Accepted or Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
6. Discussion

This chapter presents a discussion of the analysis results from the experiment and survey in relation to previous research.

Prior studies (Kim & Han, 2014; Martins et al., 2017; Murillo, 2017) focusing on mobile marketing in order to understand individuals’ attitudes towards online advertisements have applied and modified the model constructed by Ducoffe (1995). The latest models tested have implied the five factors of informativeness, entertainment, irritation, credibility and incentives which were described to have an impact and influence attitudes towards online advertisements (Kim & Han, 2014). Murillo (2017) provided evidence of irritation and informativeness to affect millennials attitude towards search engine marketing, while Martins et al. (2017) and Kim and Han (2014) provided research of incentives, entertainment and credibility to also affect attitudes towards mobile marketing. None of the previous studies focused on reflecting upon the behavioral aspect in order to understand the underlying factors and attitudes of clicking on sponsored ads on search engine results.

This study portrays differences and similarities with earlier research. The quantitative data collection tests the five independent variables of informativeness, credibility, entertainment, irritation and incentives to see the relationship with attitude towards mobile search ads of the research (H1-H5). It is clear to see that only the independent variables of entertainment and incentives proved to have significant positive results and being fully supported, hence, accepting H3 and H5. Kim and Han (2014) described that consumers are positively influenced when mobile advertisement reflect discounts or rewards, which indicates the importance of incentives. The data is collected from millennials of which most are students which may reflect the importance of offering incentives of monetary value to capture the attention of millennials. Furthermore, the variable of entertainment was in line with earlier research by Martins et al. (2017) who described consumers to be more likely to evaluate entertaining advertisements. As many participants searched for specific companies that they were familiar with, those search results may be considered as entertaining since they match the relevance of the participants search.

On the other hand, H1, H2 and H4 were only partially supported, as the factors provided significant results when tested independently. Thus, meaning that informativeness, credibility
and irritation have a relationship with attitudes towards mobile search ads, to some extent. As only two variables of this study were accepted to provide a relationship with attitudes towards mobile search ads, this research contradicts earlier research in regard to attitudes towards online marketing on mobile devices (Murillo, 2017; Martins et al., 2017; Kim & Han, 2014). Despite of being partially accepted, H1, H2 and H4 provided R2 values which vary in between 0.123 to 0.373 indicating that the variables alone account for more than 12 percent of the explanatory power. Despite not being fully accepted, one may argue for the relevance of the variables despite not meeting the significant value of accepting the stated hypothesis. This provides evidence of this research to be aligned with earlier research within online marketing, however, the variables may not affect search engine marketing to as a large extent as online marketing portrayed on other platforms.

By conducting an experiment with 103 participants, a click behavior was detected where 53 percent clicked on the organic results rather than the sponsored results. Just as stated by Jansen and Liu (2013), the results provided evidence of participants having a tendency to not click on the first listings on search engine results. Although the experiment did not show an extensive difference in the participants click behavior quantitatively, on organic versus sponsored links, an overall negative attitude could be seen toward sponsored links when participants expressed their action to click qualitatively. Jansen et al (2007) describe that there is a difference of preference when viewing results, where individuals most often prefer to view the organic results (Jansen et al., 2007). The experiment provided evidence of participants scrolling past the sponsored results, without having a glance on the sponsored results. This may have to do with the fact that consumers most often perceive sponsored results as advertisements which often resolves in negative effects (Jansen et al., 2007; Gupta & Mateen, 2014). The results showed that participants found sponsored ads to be “misleading”, “unreliable” and “irritating” which highlights negative standpoints towards sponsored results.

From the experiment it could be seen that most participants actively avoided to click on or even glance upon sponsored search results, unless the participant conducted a specific search for a certain company or website. This can be due to the fact that millennials are independent and critical individuals (Spero & Stone, 2004) that have issues with embracing brands communication in the form of sponsored material (Veloutsou & McAlonan, 2012). However, sponsored links have been argued to still be appreciated in the case of relevant presented
content that correspond with the individuals’ search (Jansen et al., 2007; Gupta & Mateen, 2014). Thus, the participants were overall more acceptant to click on sponsored links that provided relevant content for their search and that reflected a website that the individual intended to visit.

Earlier studies have highlighted the importance of considering the attitudinal effects when investigating the behavior of individuals when presented with search engine advertisement (Lu et al., 2017). As presented in the results, the attitude towards mobile search ads provide an effect of individuals click behavior. As the research focuses on millennials, it may be argued that millennials prefer organic results than sponsored results which is aligned with Veloutsou and McAlonan (2012) who presented that millennials are no longer welcoming sponsored material when presented to them. This may affect the attitude towards the sponsored ads, and hence affect the click behavior.

MacKenzie et al. (1986) early described that attitudes towards ads affect the willingness to respond to a certain ad. Shimp (1981) further argued for attitudes toward ads to have an impact in the choice of behavior. The results reflecting the attitudes towards search engine ads in correlation to the click behavior is aligned with the authors (MacKenzie et al., 1986; Shimp, 1981), accepting H6 at a significance level of 0.05. The results indicate that individuals who have a higher attitude value towards the ads are arguably more recipient to click on sponsored results. In accordance to MacKenzie et al., 1986 and Shimp, 1981, the attitude did have an impact when reflecting upon search engine results, which highlights the need to create a positive attitude in order for consumer to click on the sponsored search engine result.

The nature of searching on mobile phones have been argued to possibly affect consumers click behavior in a different manner compared with searching on computers (Gupta & Mateen, 2014). A support from this could be understood from the experiment where participants expressed that they would have evaluated the search results differently if they were to do the same search on a computer instead. The participants explained that they would have evaluated more results longer and more carefully on a computer. This could be due to search context where mobile phones are usually used in a more active setting combined with the smaller screen size (Gupta & Mateen, 2014) where sponsored ads usually make up for the whole mobile screen.
7. Conclusions and contributions

This chapter presents a conclusion of the study as well as how the study contributes to previous knowledge within the field of research.

The purpose of this study was to understand millennials search behavior on mobile devices. The research primarily wanted to describe how different variables affect the attitudes towards search engine ads. The results conducted through this research supports the variables of entertainment and incentives, whiles irritation, informativeness and credibility are only partially supported, as they are supported when testing independently with attitudes. Secondly the study wanted to understand the search behavior of individuals on mobile devices. The results present that 55 of 103 participants click on organic results over sponsored results, demonstrates that there is a minor indication of preferable clicking on organic results over sponsored results. Moreover, the results illustrate a relation between the click behavior and the attitude towards search engine ads, where a higher attitude value reflects an increased click behavior on sponsored search results. Concluding the research, an overall negative perception of sponsored ads among millennials could be understood based on the experiment, even though the research presents to suggest that only two variables have a significant effect towards the attitude of sponsored ads. The research contributes with a clear picture how millennials search for information on search engines and how individuals arguably tend to select organic results over sponsored ads.
8. Limitations, Implications and Further Research

This chapter presents the limitations of the study, managerial implications and suggestions for further studies to be conducted within this field.

This research primarily contributes with an understanding of how different variables affect the attitudes towards search engine ads. Moreover, the research contributes with an understanding of how attitudes affect the behavior of millennials in the context of search engines on mobile devices. The topic of mobile marketing communication is limited, and more research has been emphasized in order to create a further understanding of how young consumers interpret and act upon mobile advertisement (Grant & O’Donohoe, 2007; Gupta & Mateen, 2014; Murillo, 2017). Engaging in paid search marketing is an expensive action, however the theoretical contribution of how sponsored results impact individuals in contrast to organic results is limited (Yang & Ghose, 2010). Due to the fact that the results provide evidence of accepting two of the five independent variables, this research presents a difference to early research within the context (Murillo, 2017).

This study has been limited to the sample of Swedish millennials only and can therefore not be fully generalizable in an international context. Moreover, students reflect the majority of respondents in this research, providing a weakness of the generalizability of the study on other individuals. Furthermore, the study is limited to Google as the considered search engine. Google have been used in this study due to its domination of the web search market, making it the search engine that most people, not least Swedish millennials, are familiar with and hence making the search scenario more realistic for the participants in the experiment and survey. However, it is worth mentioning that search engines like Yahoo and Bing also offer similar mobile search ads that could be included to extend the study. Although, it is necessary to refer to a search engine that respondents are familiar with to maintain a credible study, alternatively referring to an unspecified search engine of the respondents’ choice.

The scenario that was presented to the participants in the experiment was based on a pretest where cheap flights was a common search term on mobile devices. Hence, the results from the experiments are based upon this specific search scenario where another scenario might have resulted in a different outcome. Hereof, future researchers are advised to conduct the experiment based on other scenarios in order to validate this study or to detect possible
differences in millennials click behavior concerning different product or service categories. Additionally, this research focused on the five earlier researched variables which have been tested in different contexts. A suggestion for future research would therefore be to investigate additional variables in order to increase the understanding of what variables affects the attitude towards search engine ads.
References


Appendices

Appendix A1 – Experiment Presentation

Greetings:
Hi. We are two master students who are studying the usability of search engine marketing on mobile devices. What we are interested in is how the search engine Google works on mobile phones and how individuals evaluate search results. This short experiment will only take a few minutes and contribute a lot to our study. Your participation will remain anonymous.

Explanations:
We will give you a scenario with a specific product or service to search for on your mobile phone and we want you to click on the search result that you prefer. During this process we ask you to think out loud and hence inform us of what you are considering when viewing search results and choosing a specific link.

The participant is asked to open Google on his or her mobile phone.

Scenario:
“Imagine you and your friends have decided to go abroad for the weekend. You have decided to go to London, and you want to find a cheap flight to take you there. Find a low-priced flight to London using Google as your search engine.”
Appendix A2 – Experiment Transcription

O = Organic
A = Ad

O - Respondent 1. Search for flight London and then I scroll down to the organic choice of flygresor.se. I know the website and I know how they provide me with information. The ads usually feel like ordinary advertisements and may not be the best alternative. They want to lead me to expensive pages.

O - Respondent 2. I search for London flights. Choose the alternative showing a low price, in this case flights 30 SEK. I also use Skyscanner because I usually use them. I never press the ads, do not want to give google money. I would probably evaluate more results if I was using a computer when searching for something.

A - Respondent 3. I search for flygresor.se on the google platform. I click on the first alternative. Many ads appear but as I know Flygresor, I can click the ad as I know where it takes me. Ads do not bother me.

O - Respondent 4. I choose to search for Momondo on google. I choose the organic choice. I never press the ads, even if it matches my search. You know it is an ad and do not want to click.

A - Respondent 5. Search for Momondo on google. Click the first choice, as I know where I want to go. But if Momondo had not appeared, and the results did not reflect my search I would not press the ads.

A - Respondent 6. Search for Momondo on Google. I press the first choice as this is what I search for. I do not care if the results are sponsored as long as it gets me to Momondo.

A - Respondent 7; I search for Flights. I press the first one I see. Because I know what it is and where it takes me. Do not care about the ad, because as I said it takes me to a website I know.
O - Respondent 8; I enter Momondo and then scroll past the ads. Even though the first ad reflects the website I am looking for I choose the organic choice. Ads are annoying and I do not like them.

O - Respondent 9. I search for flights but never click on the ads, as I know that they receive money. So instead I go to the website I want to go to. Never click on ads, irritating.

A Respondent 10. When looking for flights I Google flygresor.se and press the first choice, just because I know that the first alternative (ad) is the same as the other results further down.

O Respondent 11. I search for cheap flight London. Do not press the ads. They do not always have to be the best just because they are on top. I click on something that I have heard of before, which are not ads.

O - Respondent 12. I search for flights to London. I check the ads, but always go to the organic material and press the results which say, “cheap flights to London from 30 SEK”. I prefer the organic material as they are more reliable.

O - Respondent 13. Fly to London cheap. Do not press the ad as it is not always cheap. Even though I know some of the results I prefer to click on the same webpage but in the organic material. I check the organic material and click on the most relevant choice.

A - Respondent 14; Search for cheap flights London. I click on the first thing, as I know what Skyscanner is. Do not reflect upon the ads. Just focus on the results on the search engine.

O - Respondent 15. I search for Ryanair and scroll past the sponsored material. even though Ryanair appeared in the ads, I prefer the organic as Google does not make money when me clicking the link.

O - Respondent 16; Search for Momondo and press the third results (the first organic result). I never choose the sponsored material, but do not really know why. I do not think I trust them and may think that they lead me to strange sites.
O - Respondent 17. I search for flights on Google. Scroll past the ads and then click on the first organic results. I do not like how people pay to get a greater market space. I want relevant material, so I go with the organic results.

O - Respondent 18; First I go into private search mode, I do not want Google to use my data when searching for flights. I search for flights and go to the first organic result. They also give me a price in the link and is related to what I search for.

O - Respondent 19; Searches for cheap flights London. Skips the first ads and then I use Google’s own search (ad). But gave me bad results so I go to the organic results and look at the rating then I click.

A - Respondent 20; I search for flygresor.se London. I click on the first choice (ad). I am loyal to Flygresor.se and have used them before. Therefore, I click them when I saw them first, but if it does not match I look into more results.

A - Respondent 21; I search for flygresor.se and click on the first choice without scrolling for more information. This was also the only result seen on the mobile screen. I know what the sight provides so I enter the website.

O - Respondent 22; I search for flights London. I look through the results and I usually do not click on the ads, as they are not always the best. I click on the organic results of Flygresor.se. It says flights for 30 SEK and I want a cheap flight.

A - Respondent 23. Search for Momondo. Clicks the first sponsored. I know that it will get me to the same website and do not need to look through other options. I know what benefits the website has and that they provide me with cheap prices.

O - Respondent 24. Search for cheap flights Malmö to London. Scrolls past the sponsored results and chooses the first organic results. I always scroll past the ads, I find them irritating and I know people pay to get a better spot. I chose the first organic as I know the website since earlier. The sponsored results are usually more expensive.
O - Respondent 25. Searches for Momondo, scrolls past the sponsored results even though Momondo appears on top. Clicks on the first organic results. I don't know why but I always scroll past the ads. It is something about them that I do not like.

O - Respondent 26; Searches for flights to London. Scrolls through the results and examines the different results. Clicks on Flygresor.se which is the first organic result. I have heard of Flygresor.se before and remember their commercial on TV. I do not click on the sponsored results as I think they are unreliable. Even though I see the same results, I always click on the organic over the sponsored links. Do not like unreliable results.

A - Respondent 27. Searches for cheap flights London, checks the ads and looks what results and companies one has heard of before. Click on Flygresor.se because they give me a good price and I have heard of them before. I go through the results but usually click ads, they are on top.

O - Respondent 28. Searches for cheap flights and evaluates the different results before making a choice. Do not click the Google ads as they are not relevant and provide unreliable results. I can find better results in the organic section.

O - Respondent 29. Searches for cheap flights to London. Scrolls past the ads. I do not like that they have paid to be on top. Once I have passed the sponsored ads I literally click on anything relevant, as long as they are not sponsored.

A - Respondent 30. Searches for and clicks on the first results which is an ad. I know that it is an ad, but it takes me to where I want to go so it does not matter if I click on the sponsored or the organic results.

A - Respondent 31. Searches for Momondo and then clicks on the first ad. I reflect upon the ad, but I know where this ad takes me and I know it works. If it was a more unspecified result I might look at other alternatives.

A - Respondent 32. Searches for flights. Clicks on the first alternative. On my phone I usually click on the first choice, but when on a desktop I would evaluate the alternatives and have a longer look. Do not care about the ads.
A - Respondent 33. Searches for Expedia. Clicks on the first choice (ads) as I know it is Expedia website and I know where it takes me. But if the results would not match my search I would look for other alternatives.

A - Respondent 34. Searches for Norwegian. Looks through the results and clicks on the second Google ad. I search for Norwegian because my boyfriend is a pilot. However, I do not click on the first ad because it was not the primary Norwegian website.

A - Respondent 35. Googles Momondo and clicks on the first sponsored results. I did not reflect upon the ads, actually I do not really know what the ads are. They give me information, so I press the first one, I think that it will give me what I am looking for.

O - Respondent 36. Searches for cheap flights to London. Looks through the results and scrolls down to the first organic results and clicks on Supersavertravel. I click on the result because I have used them before but would probably look through more than one result. Goes back and clicks on the results saying, “one way flight 190 SEK”.

O - Respondent 37. Searches for flights Oslo London and looks on the different sponsored alternatives but continues down and clicks on the third organic result. I look at the sponsored results but prefer the organic results. The sponsored results do not always give me what I am searching for.

O - Respondent 38. Googles flights London Copenhagen, looks through the results and scrolls past the ads. Clicks on Flygresor.se which is the first organic results. Goes back and checks more ads but do not reflect upon the sponsored material. I know that the ads are paid for even though I think that they provide me with the right results. But I know they are paid for and I do not like paid material which tries to influence me.

A - Respondent 39. Googles on Momondo and clicks on the first sponsored results which is the website of Momondo. Do not reflect that much on the ads, I usually use Momondo.
O - Respondent 40. Searches for Norwegian but scrolls past the sponsored results and clicks on the first organic results. Even though I saw Norwegian on the sponsored results I prefer to click on the organic. I prefer not to click on sponsored, I find them irritating.

A - Respondent 41. Googles cheap flights. Clicks on the first choice. As I find them on top I think that they are relevant, and the name of the website is something I have heard of before so I know what it gives me.

O - Respondent 42. Searches for Flygresor.se but scrolls past the sponsored results and clicks on the same link in the organic results. I know that the website is both found in the organic and the sponsored results, but I prefer to click on organic material. The sponsored material is paid for, I prefer the most relevant which is found in the organic results.

O - Respondent. 43. Googles Momondo but scrolls past the sponsored results and click on the results found in the organic results. I do not like to click on the ads. It feels more legit to click on the organic results. If you click on the sponsored material, you do not know where it gets you.

O - Respondent 44. Googles Momondo flight London and scrolls down past the sponsored results and click on the first organic results which is Momondo, found in both the sponsored and the organic results. Do not click on the ads because it is based on what I have searched for before. I didn’t even think of the ads, I always scroll past them by reflex.

A - Respondent 45: Googles flight London and goes through the results, and clicks on the sponsored results, where Flygresor.se appears. I know who they are, so I use their website. I know they are the cheapest, so I do not need to look for more results.

O - Respondent 46. Googles flights but scrolls past the sponsored results. And clicks on an organic result. I know that the sponsored results are paid for, so I do not want to click them. I never enter sponsored links. I find them irritating. Always organic results.

O - Respondent 47. Searches for cheap flights London, scrolls past sponsored results. Clicks on a known website results found in the organic results. I usually click on all organic results and compare, but never click on the sponsored results. They are not always relevant, and I find it disturbing when they appear.
O - Respondent 48. Googles cheap flights London. Goes through the results and scrolls past the ads, even though they are identified. Clicks on the first organic results which is a website I have visited and used before. Prefer to not use the sponsored results as they are not always relevant. It is advertisement and I prefer not to click on advertisement.

A - Respondent 49. Googles Ryanair and clicks on the first sponsored result. I know that they have cheap flights to London. I have no issue with clicking on sponsored links. It gives me the right direction and information I need.

A Respondent 50: Searches for cheap flights London. Clicks on a familiar website which is the first choice found in the sponsored results. But looks through the other options. Do not think too much about the ads, I have heard of the website before, so I click on it.

A - Respondent 51; Search for Momondo. Clicks on the first alternative found in the sponsored results. Does not need to scroll down further as the relevant results are found on top. I know where it gets me.

A - Respondent 52; Search for cheap flights to London. Clicks on the first results which is ad. I know the actor from earlier experience, so I click it. If the results are relevant I click the ad. But I will look at other alternatives if it does not meet my target.

A - Respondent 53; Search for Momondo. Clicks on the link provided by Momondo which is a sponsored result. The ad also states cheap flights as that it something I prefer. I do not need to go through the organic results, as I have found relevant information.

A - Respondent 54; Search for Skyscanner. Clicks on the first alternative, which is Skyscanner. I clicked on the first ad as it is a direct link to where i want to go. The ad provides me with relevant information and gets me to Skyscanner.

O - Respondent 55; Search for flights to London. Scrolls past the ads and selected Momondo as the first organic result. I know the website and have used it before. I prefer not to click on sponsored ads as the organic results are more relevant and provides me with what I am looking for. Sponsored results do not always do that.
O - Respondent 56: Search for Flights London. Scroll passed the ads since they have paid for their position as being at the top of the search results instead of giving me what I am looking for. I look through the organic material instead since it is more believable.

O - Respondent 57: Search for cheap flights London. Scrolls past the ads and clicks on an organic result. I prefer not to click on the ads as I now companies have paid to be presented higher than organic results. I want relevant results, which are usually found in the organic section.

A - Respondent 58; Search for Flights London weekend. Look through the links and see what I have heard of and am familiar with. Click on Flygresor.se, which is an ad, because I have used it before.

O - Respondent 59; Search for Copenhagen London flight. Scroll down to Momondo (organic result). I never take the first results that are advertisements since I know they have paid for it, it is an old habit of mine.

A - Respondent 60; Search for Momondo. Click on the first result (ad) and do not scroll down to the organic results. It provides me with what I am searching for and I usually use Momondo.

O - Respondent 61; Search for Cheap flights to London. Enter Tripadvisor (organic result) and then goes back to compare it with other organic results like SAS, Ryanair, Norwegian etcetera. I always scroll past the ads.

O - Respondent 62; Search for Flight London. Look at different options that are relevant for what I am searching for. I do not want to click on an ad though since they seem “fake”, that they have paid their spot as the top result. I rather choose relevant material.

A - Respondent 63: Search for Skyscanner London. Press the first sponsored material since it still gives me what I am searching for. Relevant for my search. Do not have any problem with sponsored ads.
O - Respondent 64; Search for Cheap flights London. Scroll and evaluate different options but go for an organic result. I think that the ads offer are more expensive for me as a consumer, therefore I rather click on organic results.

A - Respondent 65; Search for Cheap flights. Scroll down and view different results but click on Flygresor.se which is an ad. Choose an option that I am familiar with and that provides me with different flight options, not like SAS for example.

A - Respondent 66; Search for Flygresor.se. Click on the first option (ad) since it is what I am looking for and am familiar with. Do not look through the other links but I might have entered Ryanair's webpage as well to compare which is the cheapest.

A - Respondent 67; Search for Cheap flights London. Click on the first option Flygresor.se (ad) and do not scroll down to the organic results since I usually go with Flygresor.se

A - Respondent 68; Search for Weekend London. Click on the first result (ad) which is Trivago. I do not scroll down further to the organic results since I am familiar with Trivago and usually go to that webpage.

O - Respondent 69; Search for Cheap flights to London. Scroll down past the ads, look for options. I choose Momondo (third organic option) since I have visited that website before. It feels like the ads are more expensive, that they just want to sell you things and might not be cheapest option.

O - Respondent 70; Search for expedia.se. Scroll past the first results that are ads. I choose the organic result instead (Expedia), a bit skeptical towards the ads, even though the sponsored ad also was an Expedia-page.

A - Respondent 71: Search for London flight. Look for information, want to compare and evaluate the results. I did not reflect upon the fact that it was an ad.

A - Respondent 72; Search for Cheap flights to London. Scroll down, look at the ads primarily. Enter Flygresor.se, which is the second search result (ad), because that is the one I always use.
A - Respondent 73; Search for Cheap flight London. No problem with ads give me the information. Have to know what i click. Have tried it before.

A - Respondent 74; Search for momondo.se. Choose the first option (ad), do not scroll down to the organic results because I usually use Momondo when looking for flights. Cheap flights Copenhagen to London, always choose the first one.

A - Respondent 75; Search for flights London. Then I would have chosen the first result (ad), thus I do not scroll down to organic results. Takes too much time. Better to test the alternatives.

A - Respondent 76: Search for Flights London. Take the first best result (ad) since that result reflects a webpage that I am familiar with and have used before.

A - Respondent 77. Search for Momondo. Clicks on the first alternative found as a sponsored result. I have used Momondo before. Do not reflect upon it being an ad. As long as it provides me with the relevant results.

A - Respondent 78; Search for cheap flights London 28 April. Scrolls past the ads. However, uses the Google search. An ad presented by Google. Does not reflect upon ads, just want relevant results to make it easy to find travels.

O - Respondent 79; Searches for flights. Scrolls past the sponsored results and selects the first organic results found. The same results were found in both the organic and the sponsored. However, I never click on the ads. Does not matter what I say, I always look past them. They are irrelevant and is paid for.

A - Respondent 80; Search for flights. Clicks on the second sponsored results. No hesitation. I wanted to go to Momondo, and I have used it before. I do not reflect upon the sponsored results. If the results are relevant I use them.
O - Respondent 81. Search for cheap flights London. Scrolls past the sponsored results. Clicks on the first organic results. I do not like the ads, I know that companies pay for their spot. The sponsored results are often not specific and are sometimes irrelevant.

O - Respondent 82; Search for cheap flights. Scrolls past the ads and reads the different results. I read a bit of the different results but would have read more on a computer screen. I do not click on the ads as I find every advertisement very annoying.

A - Respondent 83; Search for flight to London. Does not scroll past the sponsored results. Selects the first presented ad. Flygresor.se. This is a site I am familiar with and have used before. I know the site, so it does not matter that it is an ad. No need for me to scroll down further as it provides me with the relevant choices.

A - Respondent 84; Search for flight London. No hesitation, clicks the first and best choice found in the sponsored field. I believe that the ads provide me with relevant material and that it is reliable. Does not matter it is an ad or not.

O - Respondent 85; Search for Norwegian. Quickly scrolls past the sponsored results and go through the information of the organic material before clicking on the preferred choice. I saw Norwegian as an ad as well but prefer organic material. Too much ads already.

A - Respondent 86; Search for London Flights. Scrolls past the results. I always reflect upon the ads but usually skip them as they are irrelevant. However, these results match my search, so I would click on Flygresor.se as I have used the site before. The ads that present cheap prices or rewards do not address me. If they present results with “Fly to London for 53 SEK”, the websites seem suspicious and I would not click the ad.

A - Respondent 87; Search for Skyscanner.se. I usually go directly to this website since I have used it before and am familiar with the site. That is where I find the best results. But if I were to make another search, I would search for “London Flight student price”, to get the cheapest results. It the results are relevant I click on the first results. Clicks on the sponsored results. I have no problem with ads, as long as they are relevant.
O - Respondent 88; Search for flights Arlanda London. Scrolls past the sponsored results. Clicks on the first results after the sponsored results. The organic result is Flygresor.se, which was also found in the sponsored results. I prefer organic results, even though I know the ad take me to the same website. I have never liked ads and do not want to provide a benefit for Google when ads are presented.

A - Respondent 89; Search for cheap flights London. I go this the first alternatives. In this case I use the third alternative as I know the company presented on the results since before. I know that I am clicking on an ad, but I also know where I go and the ads take me there.

O - Respondent 90. Search for Weekend London. Scrolls past the sponsored results. I would not click the results with the symbol of the ad. I think that they have paid for their spot, while others provide more relevant information then what they do. Click on the first results after the ads.

A - Respondent 91; Search for Weekend London. Clicks on the first alternative of the sponsored results. The first result showed Apollo. I am familiar with the brand and the company so that is why I clicked the ad. I always click the first choice. Do not reflect much upon the ads.

O - Respondent 92; I reflect upon where I find the best flight. Search for “flights London”. I always skip the first results, the ads. I do not know why, but I think that they are not as legit as the organic results. But I scroll past the sponsored results and click on the first best result. If I cannot find anything I like there I go through the same procedure again.

O – Respondent 93; I search for cheap flights London. Scrolls past the ads. I literally hate the ads I always skip the ads even though you can land on the same website as the other results. I want something that matches what I search for and ads do not always match my key words. I see the sponsored results as doping, paying to land above others.

O - Respondent 94; Search for Momondo. Scrolls past the ads. I know what I am looking for, but I know that Google are making money when I click on the sponsored results. I find it irritating that paid material is placed above the relevant material. So that is why I choose the organic results.
O - Respondent 95; Search for Flights Stockholm London, do not click on the ads. Scrolls past. I have learnt not to click on the ads. I do not like ads anywhere, so I rather select the organic results, even though they take me to the same website as the sponsored results.

O - Respondent 96; Searches for Flygstolar.se, selects the first result which is not an ad, that takes me to the website. I never choose the ads as I have always thought that the ads are suspicious and that companies make money when I click the ads. Now I have learnt that it is Google who makes money when I click and that the company pays them, I have started to consider clicking the ads.

O - Respondent 97; Search for Fly to London. quickly scrolls passed the sponsored results. I never use the sponsored results, I immediately scroll down to the organic results as they usually reflect what i search for. Sponsored results do not give me the best options.

O - Respondent 98; Search for London flights. I always scroll passed the sponsored ads. They are irritating and do not always reflect what i search for. I want the results to be in line with what I am looking for.

O - Respondent 99; Search for cheap flights London. Scroll passed the ads. Except for maybe when I look for a specific company/brand that I am familiar with and the product that I am looking for (e.g. Zalando when I search for a shirt). Otherwise I read information about the different results.

O - Respondent 100; Search for London flights. I usually scroll passed the sponsored ads as they are not always relevant, selects the best relevance of choice.

O - Respondent 101; Search for flights London, scroll by the ads, as they often are irrelevant and rather than providing me with information make me irritated. I read the alternatives on the organic search results and then go with the one most suitable. Never go to the second page.

O - Respondent 102; Search for flights London Sweden, mentioning where I want to go and from where. Looks at the ads but scrolls past. Reads the information of the results before
making a choice. I always skip the ads. Do not like them. Search for relevant information in the organic results before making a choice.

A - Respondent 103; Search for flights. Chooses the second option of the ads. I have heard of the website before and I think I have used it before as well. Do not think about the ads. They get me where I want to go anyways. Then I make my choice of where I am to go.
Appendix A3 – Experiment Summary

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<th>Coding scheme</th>
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<td><strong>Attitudes towards mobile search ads</strong></td>
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Appendix B - Survey

Section 1/6

Google ads on mobile devices

Hi!

We are two marketing students who are writing our master thesis with the aim to understand individuals’ search behavior on mobile devices. Thank you for participating in our initial experiment and we would appreciate if you could take the time to fill in the short survey which follows since it would contribute a lot to our study. It will take approximately 4 minutes to complete the survey.

It is voluntary to participate in the survey, but we gladly appreciate your participation. All participants will remain anonymous.

Thank you,
Henrik Gedda (hg222cy@student.lnu.se)
Jennifer Claesson (jc222gz@student.lnu.se)

Section 2/6

Age

18-21 [ ]
22-25 [ ]
26-29 [ ]
30+ [ ]

Gender

Female [ ]
Male [ ]
Prefer not to say [ ]

Occupation
Full time student [ ]
Part time student [ ]
Employed [ ]

How often do you search with Google from your mobile phone?
Never or almost never [ ]
Monthly [ ]
Weekly [ ]
Daily or almost daily [ ]

Section 3/6
Please answer the following questions when reflecting upon your search on mobile phones.

Google ads provide timely information on products or services.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Google ads provide relevant information on products or services.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Google ads are a good source of information.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Google ads are a good source of up to date products or services information.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are convincing.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree
I feel that Google ads are believable.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are credible.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Section 4/6
I believe that Google ads are a good reference for purchasing products.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are interesting.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are enjoyable.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are pleasant.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are entertaining.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are irritating.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are annoying.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I feel that Google ads are intrusive.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree
Section 5/6

I am satisfied to use Google ads that offers rewards.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I take action to click on Google ads that offers rewards.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I respond to Google ads to obtain incentives.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I appreciate sponsored links on the result page.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Overall, I like sponsored links.
Strongly Disagree (1) (2) (3) (4) (5) (6) (7) Strongly Agree

I consider sponsored links a good thing.
Strongly Disagree. (1) (2) (3) (4) (5) (6) (7) Strongly Agree

Section 6/6

Thank you for your participation!