Big browser is watching you

How Information Privacy Concerns and Involvement affect Purchase Intentions in Online Personalized Advertising.

Authors: Malin Karlsson, Sandra Karlsson and Amanda Malmberg

Tutor: Setayesh Sattari

Examiner: Anders Pehrsson

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Malin Karlsson       Sandra Karlsson       Amanda Malmberg
ABSTRACT

Course/ Level: 4FE07E/ Graduate Level
Authors: Malin Karlsson, Sandra Karlsson, Amanda Malmberg
Tutor: Dr. Setayesh Sattari
Examiner: Prof. Anders Pehrsson

Background: Consumers increasingly purchase products online due to the widespread use of the Internet. The decision for consumers to purchase online is predicted by their purchase intentions, which in turn is affected by their information privacy concerns. There is a lack of research on IPC and purchase intentions in the context of online personalized advertising.

Purpose: To extend the understanding of purchase intentions considering information privacy concerns and involvement in the context of online personalized advertising.

Methodology: A survey in form of a questionnaire was conducted in order to gather the information necessary to be able to analyse the relationship between IPC and purchase intentions in the context of online personalized advertising. The sample consists of 18-70 year olds from cities in southern Sweden.

Conclusion: Conclusions drawn in this thesis is that when applied in the context of online personalized advertising, there is no significant relationship between IPC and purchase intentions. However, involvement is suggested as having a positive relationship to purchase intentions, as well as a positive moderating effect on the relationship between IPC and purchase intention in the context of online personalized advertising.

Keywords: Purchase intentions, Information privacy concerns (IPC), Online personalized advertising, Involvement.
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1 INTRODUCTION

This chapter introduces the reader to the areas of purchase intention, information privacy concerns (IPC), online personalized advertising and involvement. It ends in the purpose, research questions and presents the structure of the study.

1.1 BACKGROUND

Consumers increasingly purchase products online due to the widespread use of the Internet (Michalak and Jones, 2003; Sharma and Krishnan, 2002; Fauska et al., 2014). The decision for consumers to purchase online is predicted by their purchase intentions (Pavlou, 2003), which are defined as "an individual’s conscious plan to make an effort to purchase a brand" (Spears and Singh, 2004, p. 53) and described as the likelihood that customers will buy a particular product (Dodds et al., 1991; Schiffman and Kanuk, 2000; Wang, 2015). Along with the escalation in online purchasing, online marketing has dramatically increased (Srinivasan et al., 2015) and it is estimated that approximately $550 billion will be spent on advertising worldwide in 2015 (eMarketer, 2015a). Western European countries are in the cutting edge among advertising in the digital environment (eMarketer, 2015b). In the Swedish market it is likely that 30% of the advertising budget is set to digital arenas in 2015, and that number is expected to intensify within the next few years along with the western neighbours (eMarketer, 2015b).

For companies to satisfy consumers’ needs in the online environment through marketing, they adapt the use of technology to target advertising accurately to specific consumers (Gordon, 1998; Brown and Muchira, 2004; White et al., 2008; Srinivasan et al., 2015). The recent advancement in online consumer-tracking technologies enables companies to personalize their offering via collection and usage of consumers’ personal information (Solove, 2007; Zhao and Xue, 2012; Toch et al., 2012; Baek et al., 2014). Personalized advertising is herein defined as “advertising that is created for an individual, using information about the individual” (Yu and Cude, 2009a, p. 504). Online personalized advertising is presently an emergent area of interest for marketers as it is an effective tool for extending consumers’ perceived value, if the fit is accurate to their preferences (Montgomery and Smith, 2009; Athanasiadis and Mitropoulos, 2010; Xu et al., 2011). This has made it possible among marketers to deliver personalized advertising in virtual environments (Pramataris et al., 2001; Howard and Kerin, 2004; Chellappa and Sin, 2005; Morimoto and Chang, 2006; Sääksjärvi and Pol, 2007; Yu
and Cude, 2009a; Baek and Morimoto, 2012; Kilic and Bozkurt, 2013). Companies’
confidence on online personalized advertising has grown exponentially (Alharbi et al., 2013)
which has made it widespread and a very common practice in the online domain of marketing
(Toch et al., 2012; Smit et al., 2014), with global estimations for 2014 to have been above
$2.6 billion (Zhao and Xue, 2012).

Personalized advertising is automated and does not require any explicit consent from
individuals (Treiblmaier et al., 2004). As a consequence, a possible shortcoming of
personalized advertising is the information privacy concerns (IPC) among consumers who
demonstrate concerns over the collection and usage of their personal information (Maslowska
et al., 2011; Chen and Hsieh, 2012; Cecere and Rochelandet, 2013; Perez and Steinhart,
2014). Westin (1967, p. 7) defined privacy concerns as “the claim of individuals, groups, or
institutions to determine for themselves when, how, and to what extent information about
them is communicated to others”. The collection and storage of consumers’ personal
information online has been increasingly noticed by individuals (Chen and Hsieh, 2012; Baek
et al., 2014). Concerns for how companies collect, store and use, as well as what information
they have, are hence brought up for consumers (Westin, 1967; Gurau et al., 2003; Malhotra et
al., 2004; Paine et al., 2007; Okazaki et al., 2009; Baek et al., 2014). In other words,
information privacy deals with the rights of the people whose information is shared (Okazaki
et al., 2009) and the right to control that information (Chen et al., 2008).

1.2 PROBLEM DISCUSSION

It is emphasized that IPC’ enhances in the online context (Toch et al., 2012; Alharbi et al.,
2013; Hong and Thong, 2013) could be negative for companies in terms of lost sales (Akhter,
2012), as it will hold back companies from continued implementation of online personalized
advertising and virtual growth (Alharbi et al., 2013). Further, IPC is argued to be a vital
determinant to predict purchase intentions (Brown and Muchira, 2004; Zorotheos and Kafeza,
2009) and it is also an important assess to gain competitive advantages (Dodds et al., 1991;
Cronin et al., 2000). Moreover, Pavlou and Stewart (2000) claim how online personalized
advertising increases purchase intentions due to the messages’ big importance for individual
consumers. Meanwhile some researchers discuss how IPC is one of the most pressing
problems in e-commerce (Miyazaki and Fernandez, 2000; Stewart and Segars, 2002; Perez
and Steinhart, 2014) as it could decrease purchase intentions (Kim et al., 2011; Wu and Chang, 2005).

The relationship between IPC and purchase intention has been thoroughly studied (Brown and Muchira, 2004; Basheer and Ibrahim, 2010; Ponte et al., 2014), although with dissenting results (Zorotheos and Kafeza, 2009; Kim et al., 2011). Tsai et al. (2011) state that IPC definitely have an effect on consumers’ online purchase intentions, which is somewhat supported by Ponte et al. (2014) who claim an indirect relationship between the two concepts. This is based on how Ponte et al. (2014) discuss how purchase intention is influenced by several factors, where IPC merely is one of those components. Zorotheos and Kafeza (2009) also announce IPC to have a direct impact on consumers’ purchase intention, although; only when consumers must unveil personal information to make an online transaction. Furthermore, Zorotheos and Kafeza (2009) state a large amount of consumers seem to be unaware of the possible use and collection of their personal information. The findings of Brown and Muchira (2004) also proclaim how IPC is of great value to consumers even when no conscious decision to share personal information is made, as personal information can be collected without consumers’ awareness (Treiblmaier et al., 2004). Additionally, when consumers obtain unwanted and unsolicited messages from companies it negatively impact their purchase intention (Brown and Muchira, 2004).

Thus, the subject of IPC’ influence on purchase intention has been deeply explored (Zorotheos and Kafeza, 2009; Basheer and Ibrahim, 2010; Akhter, 2012; Brown and Muchira, 2014; Ponte et al., 2014). Baek and Morimoto (2012) and Tucker (2012) assert that there is a strong need for studies addressing consumers’ IPC for online personalized advertising, and the relationship between IPC and purchase intention in the context of online personalized advertising have not been researched to a large extent. In addition, Yu and Cude (2009a) have suggested researchers to conduct such studies in a European setting.

Furthermore, the concept of involvement is often discussed when studying consumers’ purchase intentions (Richins and Bloch, 1986; Summers et al., 2006) and concerns for information privacy (Lin and Chen, 2006; Hanzaeed and Ghafelehbashi, 2012) as it has a strong connection to consumer behaviour (e.g. Shim et al., 1989; Foxall et al., 1998). Involvement is defined as “a state of motivation, arousal or interest, evoked by a particular stimulus or situation, displaying drive properties” (Rothschild, 1984, pp. 217). People are likely to act in accordance with their intentions (Ajzen, 1985; Bagozzi et al., 1990), although,
the intentions can transform due to new conditions (Ajzen, 1985; Ajzen, 2002), such as different degrees of involvement (Summers et al., 2006; Wang, 2015). Correspondingly, Wang (2015) and Summers et al., (2006) mean that it is more likely for a person to make a purchase when the product is perceived as having a higher degree of product involvement. Likewise, when an individual perceives a lower degree of product involvement they are less likely to purchase the product (Wang, 2015). Besides this direct relationship, O’Cass (2000) has also described involvement as a strong significant moderator on certain variables’ relationship to purchase intention. For example, the variables include consumers’ country-of-origin (Lin and Chen, 2006), perception of counterfeit branded products (Hanzaee and Ghafelehbashi, 2012) and online consumer reviews (Park et al., 2014). However, little research has yet studied involvements’ relationship to purchase intentions (Lambrecht and Tucker, 2013) and involvements’ moderating effect on the relationship between IPC and purchase intention (O’Cass, 2000) in the context of personalized advertising.

1.3 PURPOSE
To extend the understanding of purchase intentions considering information privacy concerns and involvement in the context of online personalized advertising.

1.4 RESEARCH QUESTIONS
RQ1: How does IPC in online personalized advertising influence purchase intention?
RQ2: How does the degree of involvement influence purchase intention in the context of online personalized advertising?
RQ3: How does the degree of product involvement influence the relationship between purchase intention and IPC in online personalized advertising?

1.5 RESEARCH STRUCTURE
A conceptual framework is presented in chapter 2 with a review of relevant literature. Chapter 3 describes the methodological path and choices for the study together with sample characteristics and quality criteria. Thereafter, chapter 4 presents results from statistical analysis which are further discussed and compared with previous research in chapter 5.
Chapter 6 presents conclusions and implications, and finally chapter 7 bring up important limitations and outlines further research opportunities.
2 CONCEPTUAL FRAMEWORK

This chapter includes theory of purchase intention, IPC and involvement in the context of online personalized advertising. Incorporated is also hypothesis conducted from the conceptual framework.

2.1 PURCHASE INTENTION

Online consumer behaviour has a lot in common with the offline behaviour when it comes to the purchase decision process; however, they differ on vital areas (O’Keefe and McEachern, 1998). Above all, online consumers have to interact with technology to purchase goods and services as the physical shop environment is replaced by an electronic environment (O’Keefe et al., 2000; Van der Heijden et al., 2003). Hence, the consumers need greater trust in an online environment than in a physical shop (Van der Heijden et al., 2003) as is can mitigate feelings of uncertainty and concern (Tan and Thoen, 2001). Therefore, it could be important to determine individuals’ purchase intentions to explain and predict human behaviour (O’Cass, 2000; Van der Heijden et al., 2003). For this reason, human behaviour is seen as a result of a person’s behavioural intention, which is determined by a person’s subjective norms and attitudes towards the specific behaviour, i.e. actual purchase (Ajzen, 1985; Bosnjak et al., 2006; Hansen, 2008).

2.2 INFORMATION PRIVACY CONCERNS

Despite the fact that the amount of individuals using the Internet is steadily increasing, many choose not to purchase products or services online (Kim et al., 2011). Brown and Muchira (2004) explains that the reason for this might be individuals’ concerns for information privacy. Information privacy is supposed to protect not only the actual data about individuals, but also the transmitted data and how it is communicated (Chen et al., 2008). Therefore, constructs has evolved for information privacy concerns (IPC) which have been collection, incorrect access, errors and unauthorized secondary use (Bellman et al., 2004; Chen et al., 2013). Furthermore, Malhotra et al. (2004) transformed those into three reliable and valid factors measuring consumers’ online IPC; collection, control, and awareness, which additionally, have been successfully applied by other researchers (e.g. Okazaki et al., 2009; Angst and Agarwal, 2009).
The first factor, collection, is concerned with the degree an individual worries about the quantity of data held by others, in comparison to the value of the benefits received (Malhotra et al., 2004). Meaning, consumers are acting in accordance to a risk-benefit-analysis (Culnan and Bies, 2003) where the pros and cons are weighed against each other (Awad and Krishnan, 2006). Consequently, individuals are doubtful to reveal personal information if they assume a negative result (Malhotra et al., 2004). The second factor, control, refers to which extent an individual has the liberty to reject or accept the procedure or outcome related to his or her personal information (Malhotra et al., 2004). In line with the behavioural research, Slovic (1987) argue that higher perceived control over private data results in an anticipated decrease in perceived risk of revelation. Although, if the individual would lose control, or anticipate losing control, it has a negative impact on IPC (Milne and Boza, 1999; Dinev and Hart, 2006). Finally, the third factor, awareness, refers to which extent a consumer worries about how companies handle information privacy practises (Malhotra et al., 2004). Aguirre et al., (2015), explains, when customers receive detailed information about how companies collect information about them, they are less likely to perceive a loss of control or to feel vulnerable, since they through their awareness already have accepted an implied agreement.

IPC IN ONLINE PERSONALIZED ADVERTISING
The three factors collection, control and awareness in IPC are ought to be important areas of concerns in relation to personalized advertising (Chen et al., 2008). Additionally, Awad and Krishnan (2006) argue that IPC resolves response to personalized advertising. In order to enable online personalized advertising through for instance social networks (Aguirre et al., 2015) and e-mail newsletters (Postma and Brokke, 2002), tracking of files are used to register an individual’s online behaviour (such as searches made and pages visited) (Tucker, 2012; Zhao and Xue, 2012). The tracking of customer’s online behaviour consequently allows firms to calculate and predict individual consumers’ value (Zhao and Xue, 2012) and filter out irrelevant data related to consumers’ unique interests and preferences (Zanker et al., 2010; Kim and Sundar, 2012). Subsequently, online companies utilize this data and provide personalized recommendations based on these preferences and similarities with other consumers (Montgomery and Smith, 2009; Cecere and Rochelandet, 2013). The strategy behind online personalized advertising relates to recognize its receiver by including personalized cues, such as interest or a name (Kiesel and Clougherty, 2010; Maslowska et al., 2011; Kim and Sundar, 2012), and regardless of what cues that are included, the advertised
offer remains coherent (Maslowska et al., 2011). Moreover, Maslowska et al. (2011) state that due to individuals’ cognitive sensitivity to personal information, their response when being addressed to by name, personalized advertising will result in self-referencing that makes the advertising relevant and interesting for the consumer.

A vast amount of research agrees that personalized advertising effect IPC in a negative way (e.g. Sheehan and Hoy, 1999; Miyazaki and Fernandez, 2000; Phelps et al., 2001), which is also consistent for studies with a focus on personalized advertising in an online context (e.g. Okazaki et al., 2009; Yu and Cude, 2009a, 2009b; Beak and Morimoto 2012; Chen and Hsieh, 2012; Perez and Steinhart, 2014). In contrast, as when consumers feel individually cared for, the result of personalized advertising has been anticipated to enhance information processing, resulting in better attitudes towards the advertising and further create a more convincing effect (Pavlou and Stewart, 2000; Kreuter and Wray, 2003; Tam and Ho, 2005; Franke et al., 2009; Kim and Sundar, 2012; Dijkstra, 2014). Although, as personalized advertising deals with private consumer information (Okazaki et al., 2009; Baek and Morimoto, 2012) privacy concerns among consumers is now questioning the validity of such a belief (Thota and Biswas 2009; van Doorn and Hoekstra, 2013; Aguirre et al., 2015).

McKnight et al., (2011) state that consumers are especially concerned with whether or not companies actually follow their privacy policies. When consumers receive unwanted e-mails from companies without giving out their personal e-mail address, IPC increase which furthermore might affect their purchase intentions (Sheehan and Hoy, 2000; Brown and Muchira, 2004). Brown and Muchira (2004) further argue that keeping inaccurate records of consumers could decrease their purchase intentions. It is rather clear that companies should take good care of consumers’ privacy policies, hence it could damage the sales (Campbell, 1997; Brown and Muchira, 2004). This is further supported by Dinev and Hart (2006) who shows how IPC negatively affects consumers’ purchase intentions. Additionally, concerns around information privacy is connected to online personalized advertising (Okazaki et al., 2009; Baek and Morimoto, 2012), which is expected to decrease information processing and generally persuasive effects among consumers if they have IPC (Thota and Biswas 2009; van Doorn and Hoekstra, 2013; Aguirre et al., 2015). Yu and Cude (2009b) further stated that the purchase intention was very low towards a product advertised in personalized advertisements. Therefore, it is hypothesized that:
H1: There is a negative relationship between IPC in online personalised advertising and consumers’ purchase intentions.

2.3 DEGREE OF INVOLVEMENT

Involvement is seen as a construct regarding an individual’s relative strength of a cognitive structure towards a focal object (Mittal and Lee, 1989; O’Cass, 2000). The focal object could be a product, service or promotional message which is essential when companies try to meet consumers’ needs, goals and values (Zaichkowsky, 1985; Vermeir and Verbeke, 2006; Bruwer and Huang, 2012). There are several types of involvement in the consumer behaviour literature (e.g. Houston and Rothschild, 1978; Zaichkowsky, 1985; Laurent and Kapferer, 1985). For instance, it has been classified into product situational involvement, enduring involvement, and response involvement (Houston and Rothschild, 1978, in Chen and Tsai, 2008). Furthermore, Zaichkowsky (1985) presented the constructs product involvement, advertising involvement, and purchase involvement which was further developed by O’Cass (2000) through adding consumption involvement as a construct.

Product involvement is seen as a key motivator influencing purchase decisions (Richins and Bloch, 1986) and the motivations vary depending on the nature of the product and level of involvement (Park and Moon, 2003). Product involvement is described as an individual’s relevance of objects/products within certain product categories based on inherent needs, values, and interests (Zaichkowsky, 1985; O’Cass, 2000). Further, the object is perceived as a reflection of the individual’s self-image when there is a high product involvement, and the object comes with a high price and high decisional risk (Petty et al., 1983). Hence, product involvement is related to purchasing behaviour and affects a consumer’s decision process (Mittal and Lee, 1989; Knox and Walker, 2003; Bruwer et al., 2011; Bruwer and Huang, 2012). Other researchers have researched involvement as it plays an important role in the operation of almost every major concept used to explain consumer behaviour (Shim et al., 1989; Foxall et al., 1998), including purchase intention (Summers et al., 2006).

Furthermore, when consumers begin a product search their involvement is initially relatively high (Lambrecht and Tucker, 2013). High involvement products are often products that are compared between their features on for example review sites (Lambrecht and Tucker, 2013). Consumers with a high degree of product involvement have a greater focus on detailed
product information, which makes them more likely to respond positively to personalised advertising and make a purchase (Lambrecht and Tucker, 2013). Because, browsing leads to collection of detailed information about consumers which in turn can lead to addressing them more appropriately, and they may see greater value in individual attention with messages (Xu et al., 2011; Cecere and Rochelandet, 2013; Sutanto et al., 2013). Consequently, studying the effect of involvement on purchase intention in the context of personalised advertising is of great importance, and is thus hypothesized as follows:

**H2:** There is a positive relationship between the degree of product involvement and consumers’ purchase intentions in the context of online personalized advertising.

This study further concerned with the moderating effect of product involvement in the same manner as O’Cass (2000), as it is stated that an independent construct is more determinant of purchase intention when a consumer has a high involvement than a low involvement (Petty et al., 1983; Vermeir and Verbeke, 2006). Further, Summers et al. (2006) argue that involvement is important to consider when predicting behaviour. Hence, the degree of consumer’s product involvement was also hypothesized as having a moderating role in the relationship between consumers’ IPC in online personalised advertising and purchase intention:

**H3:** Involvement has a positive moderating effect on the relationship between IPC and purchase intentions in online personalized advertising.

Figure 1 illustrates the conceptual model of this study and the proposed hypotheses.

![Figure 1. Conceptual Model](image-url)
3 METHODOLOGY

This chapter contains an explanation over how the study was conducted. The selected approaches, methods and strategies used in the research are justified with help of existing theories in the field of methodology in business research. To conclude there is a summary of the approach taken in the end of the chapter.

3.1 RESEARCH APPROACH

There are two major ways of approaching and viewing theory (Saunders et al., 2009; Bryman and Bell, 2011) where an inductive approach bases knowledge in collected data and develops theory as a result of the data analysis, while theory is the foundation of the research in deductive approach (Saunders et al., 2009). In this study hypotheses were deduced from theory in order to be tested empirically, as there was a foundation of previous research in the fields of purchase intention, IPC, personalized advertising and involvement to use (Holme et al., 1997; Bryman and Bell, 2011; Yilmaz, 2013).

Moreover, the deductive research approach is often connected to quantitative research methods due to its linear structure and strive towards generalizability and testing (Ghauri and Grønhaug, 2005; Saunders et al., 2009; Yilmaz, 2013) which also was a reason for applying the deductive approach together with the quantitative research method to this study. Furthermore, numbers were of interests in order to explain the relationship between the variables (Bryman and Bell, 2011). This research therefore had an explanatory research design, since the aim was to examine how (Gray, 2009) two variables (IPC and involvement) influence the value of another variable (purchase intention) (Malhotra et al., 2004; Saunders et al., 2009; Brown and Suter, 2011; Akhter, 2012).

3.2 DATA SOURCE

There are two different kinds of data sources; on one hand primary data where the sources of information are researchers themselves with a specific purpose in mind (Zikmund et al., 2010), and on the other hand, secondary data which has been collected by somebody else and for another purpose (Yin, 2009; Malhotra, 2010; Zikmund et al., 2010). Herein primary data was of essence as it provides up-to-date and tailored data in order to answer the specific research questions (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011).
3.3 RESEARCH STRATEGY

A research strategy defines the general path and direction of the study, hence it facilitates for the researchers to collect the data and answering the research questions (Gray, 2009; Yin, 2014; Bryman and Bell, 2011). In this research a survey strategy was applied in order to choose a number of individuals from a population as a sample to gather data in order to make statistical generalization on a certain issue (Yin, 2009). Further the study was focused on contemporary events (Yin, 2014) when collecting and analysing primary data (Zikmund et al., 2010; Bryman and Bell, 2011). Another justification for the survey strategy was that the research questions used herein were how-questions (Yin, 2014). Finally, a survey strategy was suitable since it is the most effective way to gather data from a large sample which is needed when there is an aim to generalize findings (Saunders et al., 2009). It namely supplies the ability to use smaller groups of people to make inferences about larger groups that would be prohibitively expensive to study (Bryman and Bell, 2011).

3.4 DATA COLLECTION METHOD

For quantitative studies where primary data is of essence, Bryman and Bell (2011) suggest the data collection methods survey questionnaires, structured interviews and structured observations. The survey questionnaire is a method which opens up for gathering information from a big sample, with the purpose of further generalization (Saunders et al., 2009). The other alternatives interviews and observation were not interesting for this study as they are time consuming and it is hard to reach out to a large sample (Bryman and Bell, 2011). In order to collect the primary data for the survey, a questionnaire was developed (Bryman and Bell, 2011) where respondents were asked about purchase intention, IPC and product involvement in the context of online personalized advertising. Which is an appropriate data collection method, since Saunders et al. (2009) argue that developing a survey questionnaire is suitable when conducting a quantitative explanatory research.

3.4.1 QUESTIONNAIRE DESIGN

In line with Hair et al. (2010) and Malhotra et al. (2004), all questionnaire items were seven-point interval Likert scales anchored with “strongly disagree” and “strongly agree”. Close-ended questions were used in order to facilitate the analysis method (Aaker et al., 2010). In a similar study, Summers et al. (2006) measured purchase intention through only one item, although, other researchers have emphasized the importance of measuring purchase intention with more than one item (Dodds et al., 1991; Ramayah et al., 2010; Kim et al., 2012). Herein
purchase intention was therefore measured in accordance with Kim et al. (2012) in order to give purchase intention a more comprehensive part. Kim et al. (2012) measured purchase intention with four items, which were statistically significant, reliable and valid. The questions measured whether the respondents could intend to purchase fashion clothing (O’Cass, 2000; Kim et al., 2012) set in the context of receiving personalized advertising with persuasive promotions.

The independent variable IPC was measured through three reflective variables (Malhotra et al., 2004; Engelhard and Wang, 2014) which were; collection, control and awareness of online IPC (Malhotra et al., 2004). Collection was measured with four items which captured whether the respondents’ exchange of personal information was equitable (Malhotra et al., 2004). Control was measured with three items which included whether the respondents had control over the data. Finally, awareness was measured with three items which measured whether the respondents were adequately informed about the use of the data (Malhotra et al., 2004).

Product involvement was an independent variable as well as a moderator. There are not any reliable general measures of involvement that could be applied to all product categories (Traylor and Joseph, 1984, in Bruwer and Huang, 2012), therefore the researchers adapted 15 items used to measure fashion clothing from O’Cass (2000). The items represented the degree to which consumer is involved in the product of fashion clothing and indicated a high internal reliability (O’Cass, 2000). These items have further been used by other researchers (Khare and Rakesh, 2010) and was similar to items used by for example Zaichkowsky (1994) as well as Michaelidou and Dibb (2006). The items measured the respondent’s degree of involvement by asking questions about their perceived importance, involvement, attention and interest to the product category (O’Cass, 2000). By using valid and reliable items from previous research for the different variables, the construct validity of this study was increased (Hair et al., 2006; Bryman and Bell, 2011). All items are found in the appendix.

3.4.2 PRE-TEST

Before the questionnaire was sent out, pre-tests were conducted in order to confirm that the questionnaire met the requirements and expectations of what was intended to be collected (Bryman and Bell, 2011). A marketing expert at Linnaeus University reviewed the questionnaire and provided feedback and critique as suggested by Malhotra (2010), which was carefully taken under consideration and corrected. Additionally, two focus groups were
conducted in order to confirm that the questionnaire met the requirements and expectations of what was intended to be collected and measured, thus that the correct information was obtained in relation to what was investigated (Aaker et al., 2010; Bryman and Bell, 2011). The respondents consisted in total of 15 subjects, which was a recommended amount of test pilots in this setting (Aaker et al., 2010; Malhotra, 2010; Bryman and Bell, 2011). The subjects used were students as it was convenient and because it was one part of the sample (Bryman and Bell, 2011). As the study was conducted in Sweden the questionnaire needed to be in Swedish (Bryman and Bell, 2011). Hence to ensure construct equivalence, one bilingual expert translated the items to Swedish and another independent expert translated the items back from Swedish to English (Cleveland et al., 2011). The respondents were asked whether the items were translated properly and that the questionnaire had a flow, if the instructions and wording were easy to understand, if the questionnaire items were there for a good reason and finally if the questionnaire length was adequate (Nardi, 2003; Bryman and Bell, 2011; Kim et al., 2012). The results from both pre-tests were that the items for measuring product involvement were reduced from 15 to eight items, due to the similarity among some questions. Furthermore, the formulating of some questions were changed to fit this research and redundant words were removed to increase the flow of the questionnaire.

3.5 SAMPLE

In order to collect data from the population of interest it is vital to choose an equivalent and representable sample (Malhotra and Birks, 2003). A sample is hence a subset of a population used to study the population as a whole (Chambliss and Schutt, 2010). A population is the sum of all entities or individuals that share similar characteristics, for example a group of people, a country or a region (Malhotra and Birks, 2003; Graziano and Raulin, 2010; Bryman and Bell, 2011).

When determining the target population herein, it was taken in mind that individual differences among internet users impact their privacy concerns (Taddicken, 2014). Therefore it was essential to include individuals with different demographics (Bryman and Bell, 2011). Consequently, the population consisted of Swedish citizens situated in larger cities in the south of Sweden (O'Cass, 2000). Furthermore, a wide age span was of interest since researchers have found that people of different ages have different IPC on the Internet.
Correspondingly, Yu and Cude (2009a) recommend further research on different age groups’ IPC and their response to purchase intentions in online advertising. The age span for this study was hence 18-70 years old (Zorotheos and Kafeza, 2009; Lee et al., 2009), extended from 60 years old (Zorotheos and Kafeza, 2009) because the Internet and social media are being fast adopted by older people in order to extend their social relationships (Chakraborty et al., 2013).

However, Hoofnagle et al., (2010) argue that age is not considered an important differentiating background characteristic to IPC compared to the impact of knowledge. Therefore, the respondents’ level of completed education and occupation were of interest to this research (Hoofnagle et al., 2010). Their result further shows that younger Internet users possess little knowledge about IPC which leads to less concern in the field (Hoofnagle et al., 2010). Two other characteristics connected to knowledge that were required for the population were the use of Internet at least two times per week and having at least two years of Internet experience (Zorotheos and Kafeza, 2009).

3.5.1 SAMPLING FRAME

Bryman and Bell (2011) further emphasise on the importance for researchers to find a sample frame that is generalizable to the population. A sampling frame is the listing of all units in the population from which the sample will be selected (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011). It is a representation of the elements of the target population and a list of directions for identifying the target population (Malhotra, 2010). For this study such a list would include all Swedish citizens situated in the 19 largest cities (population over 50 000) (SCB, 2010) in the south of Sweden within the age span between 18 to 70 years old, which use the Internet at least two times per week and have at least two years of Internet experience (Zorotheos and Kafeza, 2009). Although, the sampling frame was difficult to clearly define as the authors could not construct such a list, and there was no such list to be obtained. As the sampling frame of the target population is not specified, the choice of sampling technique were affected, as it creates limits of which technique may be used (Ghauri and Grønhaug, 2005).

3.5.2 SAMPLING TECHNIQUE

As mentioned, the decision of sampling technique was dependent on the defined target population and sampling frame (Ghauri and Grønhaug, 2005), and most important when considering whether the sampling technique should be probability or non-probability
sampling (Malhotra and Birks, 2003; Chambliss and Schutt, 2010). A probability sample allows the researcher to know beforehand exactly how likely it is for an entity of the population to be selected (Chambliss and Schutt, 2010). Contrary, in a non-probability sample the elements are not known beforehand (Chambliss and Schutt, 2010). However, as it is necessary to have a defined sampling frame in order to perform a probability sampling (Aaker et al., 2010) it was not an option herein. Instead, a non-probability sample was adapted. Malhotra (2010) means that a non-probability sample relies on personal judgement of the researcher and can provide good estimations of people's characteristics, even though it might not be statistically representable to the population (Malhotra, 2010). Accordingly, a convenience sample was used (Hair et al., 2006; Brown and Muchira, 2004). Except from previous justification, it was chosen due to the easy access (Bryman and Bell, 2011) and as it was considered less time consuming and expensive than other sample choices (Aaker et al., 2010; Bryman and Bell, 2011). Worth noting is that convenience sampling has flaws in generalizability of the findings (Bryman and Bell, 2011; Malhotra and Birks, 2013). It is therefore important that the sample is not biased, meaning that it does not represent the population from which it was selected (Bryman and Bell, 2011). In order to reduce the risk of having a biased sample, four control variables were added to the study (Treiblmaier et al., 2004; Zorotheos and Kafeza, 2009; Cleveland et al., 2011). The control variables concerned the respondents' gender, age (Treiblmaier et al., 2004; Cho and Fiorito, 2009; Baek et al., 2014), occupation and finally the level of completed education (Treiblmaier et al., 2004; Summers et al., 2006; Zorotheos and Kafeza, 2009; Cleveland et al., 2011).

3.5.3 SAMPLE SELECTION AND DATA COLLECTION PROCESS

The questionnaire was distributed to 806 individuals through a personal message online via Facebook as it was important that the questionnaire came to the right person (Bryman and Bell, 2011). After five and ten days all received a reminding message in order to increase the response rate (Bryman and Bell, 2011). The questionnaire was conducted online via Google Forms and was accessible during 13 days. Completion took between 5 to 10 minutes and the respondents were told that they were anonymous and highly appreciated, but they were not offered any incentives for participation, which might have affected the response rate (Bryman and Bell, 2011).

The survey data (278 collected, 274 usable) was reduced (Hair et al., 2006) as three respondents did not fit within the age requirements and one due to insufficient Internet
experience. Pinho and Soares (2015) argue that the responses were an adequate number for further analysis, and gave the study an effective response rate of 34% (Bearden et al., 2006). Detailed information about the respondents’ demographic statistics can be seen in Table 2.

3.6 DATA ANALYSIS METHOD

To understand the collected data and draw reasonable conclusions, a well-planned data analysis method was necessary since it made it possible to interpret the gathered information (Aaker et al., 2010). In the beginning of any research process it is important to make conscious decisions on which direction and choice of method that will be used in the research since it is not possible to change during the investigation (Bryman and Bell, 2011). The data was collected through a questionnaire and had to be prepared before analysis (Aaker et al., 2010). When entering the collected data into the statistical program SPSS V21, it was necessary to code the raw material (Malhotra and Birks, 2003). Data coding refers to when questions and answers are translated into numbers (Ghauri and Grønhaug, 2005; Aaker et al., 2010). Data consisting of close-ended questions is easier to code than open-ended questions, as it is possible to clearly state what the answers are (Aaker et al., 2010). When the data had been entered into SPSS V21 it was tested for missing numbers and outliers, but no irregularities were found which meant that nothing more had to be removed. The choice of data analysis method is based on the purpose of the study, therefore, the following analysis methods were applied: frequencies analysis, descriptive analysis, correlation analysis, reliability analysis and a regression analysis (Malhotra and Birks, 2003).

In order to describe the information about the respondents, a frequencies analysis was conducted (Aaker et al., 2011). The result presented mode values and percentages of the respondents answers, how frequently each alternative had been answered (Malhotra and Birks, 2003; Aaker et al., 2011). Thereafter, it was possible to detect if there was a balance regarding the respondents in the different categories (Aaker et al., 2011) regarding, age, gender, level of education and occupation. The frequencies are found in Table 2.

Descriptive statistics was used to summarize the mean for each item to be able to present the main features of information and the standard deviation (Nardi, 2003). It was included to show how the respondents answered the questions, as well as if the respondents were unanimous. The descriptive statistics were presented in Table 3.
A *correlation analysis* was conducted to increase the reliability but foremost the validity of the research (Bryman and Bell, 2011). The reason for applying this analysis method was because the data could be ensured in order to draw conclusions of the population (Bryman and Bell, 2011). To measure construct validity a correlation analysis, herein Pearson’s R was conducted (Ghauri and Grønhaug, 2005). The result from a Pearson’s R shows a number between -1 to 1, and the further away from zero the stronger the relationship between two variables (Bryman and Bell, 2011). According to Dancey and Reidy (2004), the correlation coefficient should lie between 0.3 and 0.9 which indicates a somewhat strong relationship. Below 0.3 indicate a weak relationship hence the indicators or items are too diverse and is therefore not measuring the same thing (Dancey and Reidy, 2004). Above 0.9 are the items too correlated and is measuring the same thing (Dancey and Reidy, 2004). The correlation analysis is showed together with the descriptive statistics in Table 3.

A *reliability analysis* was used to examine the consistency of the measured concept (Bryman and Bell, 2011). Reliable measurements are less affected by chance variation and random error (Bryman and Bell, 2011). To test the internal reliability Cronbach’s alpha was used (Bryman and Bell, 2011). The value of Cronbach’s alpha is generally accepted above 0.6, the higher the value is the more reliable the questions are (Hair *et al.*, 2006). The Chronbach’s Alpha for each constructs are found in Table 4.

*Linear regression analysis* was used to test the hypotheses, to which degree a dependent variable (purchase intention) was related to an independent variable (IPC in online personalized advertising) (Malhotra and Birks, 2003; Ghauri and Grønhaug, 2005; Aaker *et al.*, 2010; Hair *et al.*, 2010). Thereby, a linear regression presents the variation in one variable that is consistent with the variation in another variable (Bryman and Bell, 2011). A seven point Likert scale was used, it therefore consisted of close-ended questions which simplified the process (Aaker, *et al.*, 2010). In H3, the degree of involvement acted as a moderator between purchase intention and IPC. The control variables were also used herein in order to investigate whether they influence the dependent variable.

### 3.7 QUALITY CRITERIA

The quality in any research can be measured by validity and reliability (Bryman and Bell, 2011), which are the most important attributes when evaluating a research (Gignac, 2014).
Both validity and reliability aims at defining the strengths of a research and level of credibility (Yin, 2009).

3.7.1 VALIDITY
Validity determines whether what was intended to be measured actually was measured (Nardi, 2003; Ghauri and Grønhaug, 2005; Bryman and Bell, 2011). There are different ways to establish validity (Nardi, 2003). First, content validity concerns whether the measurements used seem reasonable or not and if they reached desired results (Nardi, 2003; Malhotra, 2010). It focuses on how the operationalization and the questionnaire questions are constructed, if the items cover the whole concept or if important items are missing (Malhotra, 2010). To ensure content validity one marketing expert on Linneaus University were asked to evaluate the measures and provide feedback (Nardi, 2003; Bryman and Bell, 2011). Additionally two pre-tests were conducted in order to ensure that the questions were understandable (Aaker et al., 2010; Bryman and Bell, 2011). Detailed information was presented in the pretest paragraph.

Second, construct validity refers to which extent an operationalization measure the construct it was intended to (Ghauri and Grønhaug, 2005; Yin, 2014). The accuracy of the measurement can be calculated through statistical methods (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011). Construct validity was measured through the correlation analysis Pearson’s R (Ghauri and Grønhaug, 2005) which is to be found in Table 3. Additionally, this study used previously developed and tested scales four measuring the constructs founded in the literature, which ensured the construct validity.

Finally, external validity is to what extent the results of the research can be generalized (Bryman and Bell, 2011) or applied to the population and other populations (Nardi, 2003). Bryman and Bell (2011) mean that it can be hard to apply the findings to other contexts in line with where the research has been conducted or the same context in another timeframe. The external validity was somewhat vague in this research. A non-probability sample was used, which, according to Malhotra, (2010) decreased the generalizability hence there is no way to determine the probability of sample selection since it is based on personal judgement. Furthermore, this research was conducted in larger cities in the south of Sweden, which means that this research may not be applicable to Swedish citizens on the countryside, nor in the north of Sweden. Likewise, this research might not be applicable to other countries. Furthermore, the fast changing online environment and the increased growth of online
personalized advertising (Zhao and Xue, 2012) decreases this research’s external validity, since it might not be applicable in another timeframe. Hence, there is clearly a lack regarding the external validity in this research.

3.7.2 RELIABILITY
Reliability is as well as the validity divided into different parts which measure the consistency of the measured concepts and if the research is repeatable (Bryman and Bell, 2011; Chambliss and Schutt, 2010). The external reliability in a research aims to let other researchers replicate the same study in another period of time (Gray, 2009). In order to increase the external reliability of the research, the methodological choices were clearly presented and all steps were thoroughly described. Furthermore, a measure has external reliability when it can assure the same result with the same measurements on several occasions (Nardi, 2003; Bryman and Bell, 2011). Therefore, previously used questions from Malhotra et al. (2004), Zorotheos and Kafeza (2009), O’Cass (2000) and Kim et al. (2012) were adapted (Saunders et al., 2009).

When applying questions from previous research it strengthen both the validity and the reliability since those questions have already been accepted by other researchers (Saunders et al., 2009). Moreover, the internal reliability of all constructs by its items were tested through their Cronbach’s Alpha (Nardi, 2003; Hair et al., 2006; Bryman and Bell, 2011) using SPSS V21.

3.8 SUMMARY OF METHODOLOGY
All the methodological approaches were summarised in Table 1 together with justifications for the choices made.
**Research Approach**

**Deductive**

As hypotheses were deduced from theory in order to be tested empirically (Bryman and Bell, 2011; Yilmaz, 2013). There was already a foundation of previous research to adapt (Ghauri and Grønhaug, 2005; Saunders, Lewis and Thornhill, 2009).

**Quantitative**

As numbers were of interests in order to identify, detect and measure the relationship between the variables (Bryman and Bell, 2011).

**Explanatory**

As the aim was to examine how one variable (IPC) influence the value of another variable (purchase intention) (Malhotra et al., 2004; Saunders et al., 2009).

**Data Source**

**Primary Data**

As up-to-date and tailored information was of essence to answer specific research questions (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011).

**Research Strategy**

**Survey**

As the study focused on contemporary events and the research questions considered how-questions (Yin, 2014). It also supplies the ability to use smaller groups of people to make inferences about larger groups that would be prohibitively expensive to study (Bryman and Bell, 2011).

**Data Collection**

**Questionnaire**

To gather the primary information with the purpose of further generalization of the chosen sample (Bryman and Bell, 2011).

**Pretest**

To confirm that the questionnaire met the requirements and expectations of what was intended to be collected, two focus groups were conducted (Bryman and Bell, 2011).

**Sample Selection**

**Population**

Swedish citizens aged between 18 to 70 years old situated in larger cities in the south of Sweden (O’Cass, 2000) which use the Internet at least two times per week and have at least two years of Internet experience (Zorotheos and Kafeza, 2009).

**Non-probability sample**

As a convenience sample (Hair et al., 2006) has easy accessibility (Bryman and Bell, 2011). It was also considered less time consuming and expensive than other sample choices (Aaker et al, 2010).

**Data Analysis**

**Frequencies Analysis**

To describe the information about the respondents, to detect if there is a balance between them in the different categories (Aaker et al., 2011).

**Descriptive Analysis**

To summarise the data into means and find standard deviations (Nardi, 2003).

**Correlation Analysis**

Pearson’s R was conducted (Ghauri and Grønhaug, 2005) to find correlations between variables (Bryman and Bell, 2011).

**Reliability Analysis**

Cronbach’s Alpha was conducted to examine the consistency of the measured concepts (Bryman and Bell, 2011).

**Regression Analysis**

Linear Regression to investigate to which degree a dependent variable was related to an independent variable and a moderator (Ghauri and Grønhaug, 2005; Aaker et al., 2010).

**Quality Criteria**

**Content Validity**

One marketing expert on Linneaus University evaluated the measures and provided feedback (Nardi, 2003; Bryman and Bell, 2011). Additionally two pretests were conducted (Bryman and Bell, 2011).

**Construct Validity**

Pearson’s R measured the relationship between variables (Ghauri and Grønhaug, 2005).

**External Validity**

A non-probability sample was used which ought to have decreases the generalizability (Malhotra, 2010).

**Internal Reliability**

Cronbach's Alpha was used to test consistencies (Hair et al., 2006).

**External Reliability**

Previously used questionnaire items were adapted (Saunders et al., 2009) and the study was clearly presented so it can be conducted again and reach similar results (Bryman and Bell, 2011).

Table 1. Summary of research methodology
4 RESULTS

In this chapter the extracted results from the tests are presented. First, statistics including the respondents’ demographics are found in 4.1, secondly descriptive statistics to ensure validity is presented in 4.2 while reliability statistics in the form of Chronbach’s Alpha is in 4.3. Finally, the results from the linear regression is presented and interpreted in 4.4.

4.1 DEMOGRAPHIC STATISTICS

The four control variables could give information about the respondents’ demographic characteristics as can be seen in Table 2.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>112</td>
<td>40.9</td>
</tr>
<tr>
<td>Female</td>
<td>162</td>
<td>59.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>60</td>
<td>21.9</td>
</tr>
<tr>
<td>25-30</td>
<td>66</td>
<td>24.1</td>
</tr>
<tr>
<td>31-40</td>
<td>34</td>
<td>12.4</td>
</tr>
<tr>
<td>41-50</td>
<td>42</td>
<td>15.3</td>
</tr>
<tr>
<td>51-60</td>
<td>59</td>
<td>17.9</td>
</tr>
<tr>
<td>61-70</td>
<td>23</td>
<td>8.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of completed education*</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior High School</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>High School</td>
<td>82</td>
<td>29.9</td>
</tr>
<tr>
<td>Folk High School/ Vocational School</td>
<td>12</td>
<td>4.4</td>
</tr>
<tr>
<td>University/ College</td>
<td>140</td>
<td>51.1</td>
</tr>
<tr>
<td>Master</td>
<td>39</td>
<td>14.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>79</td>
<td>28.8</td>
</tr>
<tr>
<td>Employed - Private Sector</td>
<td>80</td>
<td>29.2</td>
</tr>
<tr>
<td>Employed - Public Sector</td>
<td>70</td>
<td>25.5</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>32</td>
<td>11.7</td>
</tr>
<tr>
<td>Housewife/ husband</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Retired</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

*Level of completed education was measured through the Swedish school system and translated to the American system.

Table 2. Demographic Statistics

In total, there were 274 fully completed questionnaires that were answered by respondents within the given sample frame. Out of that number 59.1% were female and 40.9% were male.
Table 2 further show that there was a wide variety in age among the respondents, and just over half of them had a University- or College education. Moreover, almost 70% were in their working life as either employed through the public or private sector, or self-employed.

### 4.2 DESCRIPTIVE STATISTICS AND VALIDITY

Each of the 28 items, including the control variables, were further tested in terms for descriptive statistics and Pearson’s R to be presented, see Table 3.

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchase intention</td>
<td>1</td>
<td>7</td>
<td>3.330</td>
<td>1.483</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Information privacy concern (IPC)</td>
<td>1</td>
<td>7</td>
<td>5.088</td>
<td>1.218</td>
<td>-0.055</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Collection</td>
<td>1</td>
<td>7</td>
<td>5.329</td>
<td>1.495</td>
<td>-0.099</td>
<td>.903*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4. Control</td>
<td>1</td>
<td>7</td>
<td>4.990</td>
<td>1.431</td>
<td>-0.055</td>
<td>.881*</td>
<td>.713*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5. Awareness</td>
<td>1</td>
<td>7</td>
<td>4.944</td>
<td>1.267</td>
<td>.020</td>
<td>.823*</td>
<td>.620*</td>
<td>.569*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Involvement</td>
<td>1</td>
<td>7</td>
<td>3.307</td>
<td>1.579</td>
<td>.345*</td>
<td>.043</td>
<td>.099</td>
<td>.040</td>
<td>.039</td>
<td>-</td>
</tr>
</tbody>
</table>

N = 274

*p<0.01 (2-tailed)

**Table 3. Descriptive Statistics and correlations**

As can be seen in Table 3, the respondents had varied views on purchase intention, IPC and involvement as some chose *totally agree* and some *totally disagree* on similar questions, however, with a standard deviation between 1.218 and 1.579 for all cases. Out of the maximum score of 7 on the Likert scale, this gave a mean of 3.330 for purchase intention, 5.088 for IPC and 3.307 for involvement. The means show that the respondents were quite neutral on average for both purchase intention and involvement of fashion clothing, while the means were just above average for information privacy online.

The construct validity in this research was tested by the value of Pearson’s Correlation. It shows that the correlation between purchase intention and IPC is negative although negligible (Pearson’s R = -0.055), however, that purchase intention has a significant (p < 0.01) moderate positive relationship to degree of involvement (Pearson’s R = 0.345). Worth noticing was also the significant (p < 0.01) high correlation between IPC and collection, control and awareness (Pearson’s R > 0.8) as they were reflective constructs for IPC. Furthermore, the question error was minimized by the skewness and kurtosis, where skewness ranged within the accepted value between -1 and +1 while kurtosis was within -3 to +3.
4.3 RELIABILITY STATISTICS

As mentioned previously, the internal reliability was tested herein through the use of Chronbach’s Alpha for the different constructs and variables. The Alphas are to be found in Table 4.

![Table 4. Reliability Statistics](image)

It could be noted that all Alphas could be accepted as they ranged between 0.614 for awareness and 0.970 for involvement, which are above the limit of 0.6 (Hair et al., 2006; Brown and Muchira, 2004). The larger the value of the Alpha, the higher the consistency of the questions, indicating that involvement and purchase intention had very good consistencies and that IPC, when all the reflective constructs were taken together, had a good Alpha. Consequently, the questions are likely to gather similar result if the study is replicated.

4.4 LINEAR REGRESSION

A linear regression was conducted in order to test the hypotheses. The hypotheses concerned the relationship between IPC in online personalised advertising and consumers’ purchase intentions (H1), the relationship between involvement and purchase intention (H2) and whether involvement has a positive moderating effect on the relationship between IPC and purchase intention in online personalized advertising (H3). The regression included five models as can be seen in Table 5, where the dependent variable was purchase intention. The first model showed the relationship between purchase intention and the control variables, the second built in the independent variable IPC and tested H1, the third included involvement as an independent variable and tested H2, while the fourth included involvement as a moderator testing H3, and the fifth all variables together.
Model 1 and 2 showed a good significance in the ANOVA ($p < 0.01$), meaning that there is only a slight risk that the results would have occurred by chance and therefore the tests could be considered reliable. Model 1 showed a high significance ($p < 0.01$) on age as a factor influencing purchase intention. The relationship was negative which indicates that the lower the age of the respondents, the higher the purchase intention towards fashion clothing. Furthermore, gender was a significant predictor ($p < 0.05$) and in more detail, females had a higher purchase intention towards fashion clothing after receiving online personalized advertising than males ($\beta = 0.387$). Even though age and gender influence purchase intention, the adjusted $R^2$ indicated that the variability of all the control variables taken together could explain only 4.3% of individuals’ actual purchase intention. Moreover, the linear regression did not yield any significant results regarding IPC’ effect on purchase intention ($p > 0.1$) in Model 2. Although, the relationship between IPC in online personalized advertising and purchase intention was negative in the regression. This was hypothesized in line with previous research and further it was confirmed through the correlation analysis (found in Table 3). The finding that IPC does not have an impact on purchase intention within this context was also shown in the change in $R^2$ for Model 2, as there was no change from Model 1. Consequently, H1: “There is a negative relationship between IPC in online personalized advertising and consumers’ purchase intentions” was rejected.

Model 3, Model 4 and Model 5 were also reliable as the ANOVA reported very good significance ($p < 0.001$) as well as the change in $R^2$ ($p < 0.001$). Model 3 tested H2: “There is

<table>
<thead>
<tr>
<th>Control variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.174*** (.068)</td>
<td>-.171** (.069)</td>
<td>-.104 (.066)</td>
<td>.040 (.046)</td>
<td>.024 (.033)</td>
</tr>
<tr>
<td>Gender</td>
<td>.387** (.184)</td>
<td>.387** (.184)</td>
<td>.308* (.176)</td>
<td>.079 (.121)</td>
<td>.040 (.087)</td>
</tr>
<tr>
<td>Level of Completed Education</td>
<td>-.029 (.083)</td>
<td>-.029 (.083)</td>
<td>-.040 (.079)</td>
<td>-.075 (.055)</td>
<td>-.082** (.039)</td>
</tr>
<tr>
<td>Occupation</td>
<td>-.055 (.083)</td>
<td>-.055 (.083)</td>
<td>-.028 (.079)</td>
<td>-.052 (.054)</td>
<td>-.115*** (.039)</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
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<tr>
<td>IPC</td>
<td></td>
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<tr>
<td>Involvement</td>
<td>-.018 (.074)</td>
<td>-.030 (.048)</td>
<td>-.022 (.035)</td>
<td></td>
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</tr>
<tr>
<td>Inv Moderator</td>
<td></td>
<td></td>
<td></td>
<td>.286**** (.056)</td>
<td>-.696**** (.043)</td>
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</tbody>
</table>

$R^2$ | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
<table>
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<tr>
<td>.057</td>
<td>.057</td>
<td>.141</td>
<td>.598</td>
<td>.796</td>
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Adjusted $R^2$ | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
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<tr>
<td>.043</td>
<td>.039</td>
<td>.125</td>
<td>.589</td>
<td>.791</td>
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Change in $R^2$ | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
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<tr>
<td>.000</td>
<td>.084****</td>
<td>.541****</td>
<td>.739****</td>
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</table>

Std Error of the Estimates | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
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<tbody>
<tr>
<td>1.451</td>
<td>1.454</td>
<td>1.387</td>
<td>.951</td>
<td>.679</td>
<td></td>
</tr>
</tbody>
</table>

F-value | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
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<tbody>
<tr>
<td>4.040</td>
<td>3.232</td>
<td>8.780</td>
<td>66.115</td>
<td>68.264</td>
<td></td>
</tr>
</tbody>
</table>

Degrees of Freedom, Regression | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
<table>
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<tbody>
<tr>
<td>4</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td></td>
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</tbody>
</table>

$N$: 274

* $p<0.1$; ** $p<0.05$; *** $p<0.01$; **** $p<0.001$

Standard error is presented within parenthesis next to the Beta of each independent variable

Table 5. Linear Regression
a positive relationship between the degree of product involvement and consumers’ purchase intentions in the context of online personalized advertising.” It was found that involvement was highly significant (p < 0.001) and a positive relationship was exposed. Furthermore, the adjusted R2 argued that the variability of involvement and the control variables together explains 12.5% of purchase intention. Correspondingly, the change in R2 from previous models was 8.4% which indicated that the degree of involvement is a meaningful influencer of purchase intention. However, in Model 5 the direct influence of involvement showed a highly significant (p < 0.001) negative relation to purchase intention which had to be taken into consideration. Therefore, the results of the regression show that H2 was partly supported.

Model 4 tested the moderating effect of the degree of involvement on purchase intention. It was found that involvement had a positive moderating effect on the relationship between IPC and purchase intentions in online personalized advertising. This was suggested on the grounds that the moderator was statistically significant to a very large extent (p < 0.001). Further, Model 2 showed that IPC is not an important influencer of purchase intention, which means that the major contributors for explaining purchase intention is the moderating effect of involvement and to some extent the control variables. In addition, involvement was shown to be a very important moderator, as the model’s adjusted R2 explains as much as 58.9% of the relationship between IPC and purchase intention in this context. It is also possible to see that it is important for the relationship on the high change in R2 of 54.1% from Model 1, which was supported by the similarly high F-value. Hence, H3: “Involvement has a positive moderating effect on the relationship between IPC and purchase intentions in online personalized advertising” was supported.

In Model 5 the importance of involvement, both as an independent variable and as a moderator, was shown. Worth noticing was the independent variable involvements’ change from having a positive relation to purchase intention in Model 3 to having a negative relation in Model 5. This could be explained by the strong moderating effect of involvement which affects the independent variable. Therefore, and because previous research argue for a positive relation between the degree of involvement and purchase intention it was more relevant to draw conclusions from Model 3 concerning H2. In total the variance of the independent variable of involvement and the moderating effect could explain 79.1% of purchase intention. It could also be seen that the change in R2 from Model 1 was 73.9%
which is a very strong indicator together with the F-value meaning that involvement is important when anticipating purchase intention.

5 DISCUSSION

This chapter presents a discussion based on the survey results obtained from the questionnaire together with theory from the conceptual framework.

Previous studies handling the topic of information privacy concerns’ effect on purchase intentions are rather many, but the literature is not completely unanimous (e.g. Yu and Cude, 2009a; Tsai et al., 2011). All research shows a relationship between IPC and purchase intentions (Brown and Muchira, 2004; Dinev and Hart, 2006; Yu and Cude, 2009a; Zorotheos and Kafeza, 2009; Basheer and Ibrahim, 2010; Tsai et al., 2011), however some claim a direct relationship (Hoffman et al., 1999; Lee and Park, 2009; Zorotheos and Kafeza, 2009; Akhter, 2012) while others claim an indirect relationship between the two (Ponte et al., 2014). Moreover, Dinev and Hart (2006) along with other researchers (e.g. Tsai et al., 2011; Akhter, 2012) argued that the relationship between IPC and purchase intention is negative. Similarly, the Beta value for IPC in this study comprised a negative relationship in accordance with previous research. Although, this study showed an insignificant result regarding IPC’ relationship to purchase intentions, hence, the hypothesis (H1) was rejected. Therefore, the findings of previous research were not applicable in the context of online personalized advertising in the Swedish market. Based on this, it could be concluded that consumers’ IPC alone does not affect their purchase intention towards advertising they have gotten through online personalized advertising.

The relationship between involvement and purchase intentions has been evaluated in many different contexts in previous studies (Richins and Bloch, 1986; Mittal and Lee, 1989; Shim et al., 1989; Foxall et al., 1998; Knox and Walker, 2003; Park and Moon, 2003; Summers et al., 2006; Bruwer et al., 2011; Bruwer and Huang, 2012), although, research on the relationship between involvement and purchase intention in the context of online personalised advertising has been limited (Lambrecht and Tucker, 2013). This research showed a highly significant result and a positive relationship between the degree of product involvement and consumers’ purchase intentions. Hence a relationship between degree of involvement and consumers
purchase intentions was detected. This supported the findings of Summers et al. (2006), who claimed a direct relationship between involvement and purchase intentions. This research confirms this relationship as applicable in the context of online personalized advertising as well.

Furthermore, involvement is by many said to have a moderating effect on consumer behaviour (Shim et al., 1989; Foxall et al., 1998), purchase behaviour (Mittal and Lee, 1989; Knox and Walker, 2003; Bruwer et al., 2011; Bruwer and Huang, 2012) and in particular consumers’ purchase intentions (Richins and Bloch, 1986; O’Cass, 2000; Park and Moon, 2003; Summers et al., 2006; Vermeir and Verbeke, 2006; Montgomery and Smith, 2009; Yu and Cude, 2009a). The findings of this study support these researchers by obtaining a positive significant result when testing the degree of involvements’ moderating effect on the relationship between IPC and purchase intentions. Due to this study’s focus on online personalized advertising, it could hereby be suggested that previous research on the area could also be applicable on this new context. Previous research points in the direction of a negative relationship between IPC and purchase intention, which through the positive moderating effect of involvement would be enhanced. The negative relationship between IPC and purchase intention suggests that a higher IPC would decrease purchase intention. In short, the findings show that an individual’s degree of involvement for a product has positive impact on how the relationship between IPC and purchase intention is attributed. Or in other words, it is hereby suggested that in the context of online personalized advertising, the relationship between IPC and purchase intention is different depending on consumers’ degrees of involvement.
6 CONCLUSION AND IMPLICATIONS

In this section the major findings are concluded followed by theoretical- and managerial implications.

The purpose of this study was to extend the understanding of purchase intentions considering information privacy concerns and involvement in the context of online personalized advertising. Even though previous research argue for a relationship between IPC and purchase intention, similar conclusions could not be drawn in the context of online personalized advertising in the Swedish market. However, conclusions could be made confirming a positive direct relationship between involvement and purchase intentions. Finally, this study shows that the degree of involvement has a positive moderating effect on the relationship between IPC and purchase intention in the same context. Hence, in regards of previous findings, IPC might be a stronger determinant of purchase intention when consumers have a higher degree of involvement.

6.1 THEORETICAL IMPLICATIONS

The relationship between IPC and purchase intention is a well-researched topic (Brown and Muchira, 2004; Zorotheos and Kafeza, 2009; Basheer and Ibrahim, 2010), although it has not been deeply explored in the context of online personalized advertising. This research sheds light over the relationship between consumers’ IPC and purchase intentions when applied in the online personalized advertising in the Swedish market. Previous research claim the two concepts to be related through an indirect (Ponte et al., 2014) or direct relationship (Tsai et al., 2011). This research however, contributes by arguing for no direct or indirect link between them, due to the insignificant results. In other words, it was reasonable to believe that IPC and purchase intention were related due to previous research, especially together with other variables included in the behavioural literature.

Another contribution to the field of research concerned the direct positive relationship between involvement and purchase intention in the environment of online personalized advertising, which was highly significant. This is somewhat confirming previous research on the area (Richins and Bloch, 1986; Summers et al., 2006), although with the addition of putting the relationship in the context of online personalized advertising.
Involvement has long been seen as a key motivator of consumer behaviour (Shim et al., 1989; Foxall et al., 1998) and especially purchase intentions (Richins and Bloch, 1986; Summers et al., 2006), which is hereon supported by this study. In this study, involvement had a significant positive moderating effect on the relationship between IPC and purchase intentions, meaning the stronger degree of involvement a consumer has for a product, the stronger relationship between the two variables are. This moderating effect in the context of online personalized advertising has not been studied before, and it therefore a major contribution to the field.

6.2 MANAGERIAL IMPLICATIONS
The result from this research could be interpreted by marketers and other practitioners who strive towards increased online sales. As previously mentioned, information privacy concerns influence consumers’ purchase intentions in online settings (Brown and Muchira, 2004; Dinev and Hart, 2006; Yu and Cude, 2009a) and it is therefore recommended that companies are transparent in how they collect and handle customers’ personal information. Otherwise, consumers’ purchase intentions could decrease. However, in the context of online personalized advertising which is an increasingly common marketing practice (Toch et al., 2012; Smit et al., 2014), other implications might be in force as no significance was found in the direct relation between IPC and purchase intention herein. It can therefore not be argued whether IPC has an influence on consumers’ purchase intentions after receiving online personalized advertising. Even though such conclusions were made, there is reason to believe that IPC still has an influence as previous research has shown clear results within the online context which mean that the results of the first research question should be taken lightly due to several limitations (as can be seen in section 7 - Limitations and Further research).

Nevertheless, a direct positive relationship between involvement and purchase intention was found, which argue for a great importance to take in consideration when conducting online personalized advertising. As this study was solely conducted through the industry of fashion clothing, it is mostly practitioners within the chosen industry that can take part of the findings.
Moreover, this study contributed with significant results considering the third research question concerning the degree of involvement as a moderator for the relationship. In this area there are important implications for practitioners to take part of: When companies use online personalized advertising they should be aware of that consumers’ degrees of product involvement have a positive moderating effect on the relationship between IPC and purchase intention. Hence, if the consumer is highly involved in the marketed product it will indicate that IPC might be a stronger determinant of purchase intention in an online setting. In the context of online personalized advertising is is also possible to say that the degree of involvement has a positive moderating effect, but the relationship between IPC and purchase intention needs further investigation as explained below in chapter 7. These implications are important for marketers to have in mind since purchase intention is an important measure to gain competitive advantages (Dodds et al., 1991; Cronin et al., 2000).
LIMITATIONS AND FURTHER RESEARCH

There are some important limitations to this research. IPC is herein presented as a single factor influencing purchase intention, although other researchers include various other factors as influencers. This might have affected the result of this study as not all variables were taken into account. To elaborate on the findings, the three different constructs of IPC were also tested separately as suggested by Brown and Muchira (2004) although without significant results. However, among the three constructs of IPC, collection and awareness were closest to significance (p collection = 0.08; p awareness = 0.107) which argue for further research conducted through Brown and Muchira’s (2004) approach with split constructs, and foremost with a focus on the collection of personal information and the consumers’ awareness of how it is handled.

Moreover, results for a significant relationship between IPC and purchase behaviour could not be found, which makes it relevant to investigate what the difference between the offline and the online environment might be. This can be achieved by applying a qualitative research instead of a quantitative research, in order to gain a deeper understanding and provide explanations of this finding.

The result in this research might have depended on the number of respondent or the sample technique. Although, Pinho and Soares (2015) stated that 274 respondent were adequate for analysis, hence the number of respondent were accepted. Additionally, this study included numerous age groups, which brought a broad spectrum of opinions, therefore further studies could choose to focus on a particular age group. The non-probability, convenience sample that were used, might have limited the result since it has some flaws in generalizability of the findings (Bryman and Bell, 2011; Malhotra and Birks, 2013). Therefore, in order to increase generalization, further research can be conducted with a statistical random sample of the Swedish population.

This research is conducted within the fashion industry, and fashion clothes are the products of interest. It would be of great interest to conduct further research within another industry in order to detect similarities and differences.
REFERENCES


Yu, J. (Hyunjae), and Cude, B. (2009a), “‘Hello, Mrs. Sarah Jones! We recommend this product!’ Consumers’ perceptions about personalized advertising: comparisons across advertisements delivered via three different types of media”, International Journal of Consumer Studies, Vol. 33 No. 4, pp. 503–514.


APPENDIX - Questionnaire

**Product involvement** (O’Cass, 2000)
- Fashion Clothing means a lot to me.
- I think about Fashion Clothing a lot.
- For me personally Fashion Clothing are important products.
- I am very interested in Fashion Clothing.
- Fashion Clothing is an important part of my life.
- Fashion Clothing is central to my identity as a person.
- I am very much involved in Fashion Clothing.
- I pay a lot of attention to Fashion Clothing.

**Purchase Intentions** (Kim et al., 2012)
When receiving personalized advertising about Fashion Clothing:
- The probability that I would consider to purchase Fashion Clothing from the sender of the advertising is high.
- If I were to purchase Fashion Clothing, I would consider purchasing it from the sender of the advertising.
- The likelihood of me purchasing Fashion Clothing from the sender of the advertising is high.
- My willingness to purchase Fashion Clothing from the sender of the advertising is high.

**Information privacy concerns** (Malhotra et al., 2004)

**Collection**
- It bothers me when online companies ask me for personal information.
- When online companies ask me for personal information, I think twice before providing it.
- It bothers me to give personal information to so many online companies.
- I’m concerned that online companies are collecting too much personal information about me.

**Control**
- Consumer online privacy is really a matter of consumers’ right to exercise control over decisions about how their information is shared.
- Consumers’ control of personal information lies at the heart of consumer privacy.
- I believe that online privacy is invaded when control over my private information is lost as a result of personalized advertising.

**Awareness**
- Companies seeking personal information online specify how the data is used.
- A good consumer online privacy policy should be easy to access.
- It is very important that I am aware of how my personal information will be used by online companies.

**Control items** (Zorotheos and Kafeza, 2009)
- Gender
- Age
- Level of completed education
- Occupation
- Internet experience
- Internet usage