



MASTER THESIS

WHY AM I RESPONDING TO THIS ADVERTISEMENT?

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Abstract

Personalization is an effective advertising strategy that enables advertisers to create more accurate advertisements by presenting personalized content. The use of personalization, however, is a double-edged sword. On the one hand, personalization can help advertisers enhance advertising effectiveness. On the other hand, the consumers' perceived concerns of privacy can be infringed due to personalized advertising. Numerous studies have investigated how level of personalization and the trust-building strategies such as website trustworthiness, influence advertising effectiveness, and whether perceived privacy concerns could mediate their effects. However, little is known about the role played by privacy fatigue in this process. This research examines the effects of level of personalization, trustworthiness of the advertising website, perceived privacy concerns, and privacy fatigue on click-through intentions and forward intentions. This study predicted that perceived privacy concerns have a stronger influence on click-through intentions and forward intentions in the case of low privacy fatigue. To test the hypotheses, this research combined 2 (i.e., less trustworthy website vs. more trustworthy website) x 3 (i.e., no personalization vs. low personalization vs. high personalization) between-subjects in a factorial experimental design by using an online survey. The experiment contained six conditions and enrolled 205 participants from over 20 countries. The results demonstrate that the effectiveness of advertising is more positive with greater extent of personalization, and that perceived privacy concerns have a negative influence on click-through intentions and forward intentions. Furthermore, privacy fatigue and perceived privacy concerns show no interaction effects on click-through intentions and forward intentions.

Keywords: Personalization, personalized advertising; advertising effectiveness; click-through intentions; forward intentions; perceived privacy concerns; trust-building strategies; privacy fatigue

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Introduction

The popularity of the Internet has increasingly led the retail industry to choose to advertise online. Online advertising has become one of the fastest-growing forms of marketing. A new method in online advertising is to add personalization to advertisements (Boerman, Kruikemeier, & Borgesius, 2017). Personalization, as a customer-focused marketing strategy, has attracted much attention in the online advertising field (Bleier & Eisenbeiss, 2015). One of its advantages is that it allows the advertisers to reach and appeal to specific customers based on their online behavior and personal data (Boerman et al., 2017). Therefore, personalized advertising is often closely related to the consumer's preferences and it is more likely to meet the consumer's needs (Eagly & Chaiken, 2005; Noar, Harrington, & Aldrich, 2009; van Doorn & Hoekstra, 2013).

As personalization has become an increasingly popular approach in the online advertising industry, it has also become a heated research topic in academia (Boerman et al., 2017). Many scholars have explored the effects of personalization on advertising effectiveness, and their results showing that advertising effectiveness of personalized advertisement is greater than that without personalization (Tran, 2017; Van Noort, Antheunis, & Verlegh, 2014; Walrave, Poels, Antheunis, van den Broeck, & van Noort, 2018; Wessel & Thies, 2015). Furthermore, different levels of personalization in advertising may stimulate various levels of effectiveness of advertising (Wessel & Thies, 2015). Many studies used various outcomes to measure and to compare the effectiveness of advertising in different levels of personalization (e.g. van Doorn & Hoekstra, 2013; Walrave et al., 2016). However, these studies yielded inconsistent results. Researchers such as Walrave et al. (2018) and de Keyzer, Dens, and de Pelsmacker (2015) indicated that consumers show greater appreciation to the brand and toward the advertisement, brand engagement, click-through intentions, and forward intentions when the received advertisement is perceived by them as highly personalized. Conversely, contradictory results reported by Aguirre, Mahr, Grewal, de Ruyter, and Wetzels (2015) showed that compared with low-personalized advertisements, highly personalized advertisements do not increase click-through intentions but decrease them. Further exploration into the impact of personalization on advertising is needed.

The practice of personalization requires the gathering of a vast amount of personal information, including not only the name, address and age data but also details of consumers' online behavior (e.g. previous search and purchasing activities). Personal data can be sourced in different ways (Kazienko & Adamski, 2007), such as collecting from consumers' online profiles (e.g. social network sites) and tracking by cookies (Boerman et al., 2017; Keith et al., 2014). Personalized advertisements may make users to be suspicious of advertising and concerned about the privacy of their personal data, however, since the practice of personalized advertising entails not simply collecting but also using and sharing personal data (Boerman et al., 2017; Walrave et al., 2018). Researchers have investigated whether perceived privacy concerns influence the impact of personalization on advertising effectiveness (Lee, Liu, & Cheng, 2018; Taylor, Lewin, & Strutton, 2011). Since privacy concern is a complicated phenomenon, further research in this area is needed (Boerman et al., 2017).

Moreover, studies suggested that trust can help advertisers to reduce the privacy concerns of consumers in personalized advertising (Brown & Muchira, 2004). Various trust-building strategies have been developed to obtain consumer trust in advertising. A frequently used example is to place advertisements on trustworthy websites (Brown & Muchira, 2004). Bleier and Eisenbeiss (2015) suggested that consumers are more willing to respond to advertisements from trusted websites. Such result can be explained by the findings of Brown and Muchira's (2014) research, which found that compared with untrusted online servers, trusted online servers are more likely to reduce consumers' perceived privacy concerns. Placing advertisements on trustworthy websites can be therefore be regarded as a way of reducing consumers' perceived privacy concerns about personalized advertising.

Even though the effects of level of personalization and trust-building strategies on advertising effectiveness have been investigated in many studies. While it has sometimes been demonstrated that increased privacy concerns were responsible for these effects (e.g. White, Zahay, Thorbjørnsen and Shavitt, 2008), other studies failed to detect any such influence from perceived privacy concerns on advertising effectiveness (e.g. Nordberg, Nogawa, Nordberg, & Friedmann, 2007). To further explore the effects of level of personalization, trust-building strategies, and perceived privacy concerns on advertising

effectiveness, this research introduces and implies the concept of privacy fatigue. In research by Nordberg, Nogawa, Nordberg, and Friedmann (2007), it was found that individuals' perceived privacy concerns do not always predict their actual online behavior. The inconsistency between Internet user attitudes toward privacy and users' actual online behavior can be explained by "the privacy paradox" (Barne, 2006). Proposing the concept of privacy fatigue to explain this, Choi, Park, and Jung (2018) examined the effects of privacy fatigue on online privacy behavior and suggested that perceived privacy concerns negatively influence users' online privacy behavior only when consumers have a lower sense of privacy fatigue. The concept of privacy fatigue is relatively new, and it remains to be further explored. The current study therefore intends to examine the role of privacy fatigue in personalized advertising. More specifically, it aims to provide insights into the extent to which privacy fatigue moderates the effects of perceived privacy concerns on advertising effectiveness. As predicted in the research model, perceived privacy concerns have stronger influence on click-through intentions and forward intentions when privacy fatigue is low.

The study by Boerman et al. (2017) demonstrated that the intention to forward the advertisement plays an important role when measuring advertising effectiveness and consumers' responses to advertisements. Moreover, the intention to click on the advertisement is always used in measuring personalized advertising effectiveness (Aguirre et al., 2015; Walrave et al., 2018). In this study, therefore, forward intentions and click-through intentions were selected as the outcomes of advertising effectiveness, leading to the research question:

RQ: To what extent do level of personalization, trustworthiness of the advertising website, perceived privacy concerns, and privacy fatigue affect (a) click-through intentions and (b) forward intentions?

In summary, this research is of both theoretical and practical relevance. Academic research on the effects of privacy fatigue on advertising effectiveness has so far been lacking. A second point is that personalization is often used in the online advertising context to ascertain how levels of personalization, trustworthiness of the advertising website, perceived privacy concerns, and privacy fatigue influence personalized advertising, thereby helping advertisers to target more accurate pool of customers and to increase advertising effectiveness.

Theoretical framework

Personalization and Personalized advertising

Companies regard personalization as a customer-focused marketing strategy that delivers a unique message to a specific recipient (Boerman et al., 2017). The essential idea of personalization is to provide people with relevant messages (Li, Liu, & Hong, 2018). In a personalized communication process, the message sender should be aware of the preferences of the message recipients and the message created should be based on the recipients' preferences (Li et al., 2018).

Personalization can be practiced in both offline and online environments (Aguirre et al., 2015). In the offline environment, personalization can be used in a situation where shop assistants deliver recommendations for products to accommodate the consumer's needs (Aguirre et al., 2015). Personalization is also often used in the web-based environment (Aguirre et al., 2015); for instance, Google recommends online retailers to its users based on the users' prior online shopping behavior (Aguirre et al., 2015).

Internet enables firms to choose to advertise online (Bleier & Eisenbeiss, 2015). In the online advertising context, personalization provides opportunities for advertisers to create more accurate advertisements by adding the target consumer's previous online behavior to the communication message (Aguirre et al., 2015). Personalized advertising is an effective advertising strategy that aims to design an advertisement based on a consumer's personal data and then deliver this advertisement individually to the specific consumer (van Doorn & Hoekstra, 2013). This definition of personalized advertising is close to that of Boerman et al. (2017) who defined it as "the practice of monitoring people's online behavior and using the collected information to show people individually targeted advertisements". An example of personalized advertising is advertising about the opening of a new mall in Amsterdam to users whose current location is Amsterdam (Walrave et al., 2018).

Advertisers use a variety of personal data to create personalized advertisements (Aguirre et al., 2015). Such as using cookies to track consumers' online behavior (Boerman et al., 2018) and collect user information from consumers' online profiles (Kazienko & Adamski, 2007). The use of different types and amounts of personal data leads to a different level of personalization (Boerman et al., 2017). According to de Keyzer et al. (2015), the

personalization of advertising can range from no personalization at all, to general personalization (e.g. delivering an advertisement of the brand which the user searched before), to a high level of personalization (e.g. fully tailored, the content of an advertisement is based on various concepts such as a combination of the recipient's name, gender, location, and previous searches). Many studies compared different levels of personalization in advertising by combining zero or one or more types of information (e.g. Aguirre et al., 2015; Li et al., 2018; Stiglbauer & kovacs, 2018; van Doorn & Hoekstra, 2013; Walrave et al., 2016).

Personalized advertising effectiveness

Existing research examined the effects of personalization in advertising, and results show that personalization has a positive impact on advertising effectiveness (Noar et al., 2009; Tran, 2017; Van Noort et al., 2014; Walrave et al., 2018; Wessel & Thies, 2015). For instance, Noar et al. (2009) conducted a study to investigate the role of message tailoring in the communication messages and results suggest that, compared with non-personalized messages, personalized messages are more memorable and more likely to meet receivers' needs. A study by Eagly and Chaiken (2005) found similar results: compared with non-personalized messages, personalized messages are often closely related to the user's preferences and attitudes, and the high relevance of the information has a positive effect on the consumer's attitude towards the messages. In regard to personalized advertising, Tran (2017) examined the effects of personalization on personalized advertisements on Facebook and the results provide evidence that consumer responses to advertising on social media are more positive when the perceived advertisement is regarded as personalized. This result is close to the results of the research conducted by Aguirre et al. (2015), who found that, when advertising a financial services brand, personalized advertisements receive higher click-through rates than non-personalized advertisements.

Research has also found that different levels of personalization in advertising may stimulate personalized advertising effectiveness (Aguirre et al., 2015; Bleier and Eisenbeiss 2015; Li et al., 2018; Tucker 2014; Van Doorn and Hoekstra 2013; Walrave et al., 2018; Wessel & Thies, 2015). Previous studies indicated that personalized advertising is most effective when the received advertisement is considered to be highly personalized (de Keyzer

et al., 2015; Walrave et al., 2018). Walrave et al. (2018) designed three advertisements of different levels of personalization (low, medium, and high) to investigate adolescents' responses (attitude toward the advertisement, brand engagement, and intention to forward) to these advertisements, the results showed that the highly personalized advertisement gathered the greatest number of responses. De Keyzer et al. (2015) also achieved similar results in their study of consumers responses (measured by the consumer's attitude towards the brand and click-through intentions) toward personalized advertising on social network sites. According to de Keyzer et al. (2015), consumer responses to advertising on Facebook can be improved by perceived degrees of personalization; in other words, perceived levels of personalization positively influence consumer responses to an advertisement.

However, there are also studies that found some contradictory results (e.g., Aguirre et al., 2015; van Doorn & Hoekstra 2013). Although advertising effectiveness is greater in personalized advertising than in non-personalized advertising, participants show greater click-through intentions in low-personalized advertisements than in advertisements which are highly personalized (Aguirre et al., 2015). The reason for this effect is that highly personalized advertisements contain a large amount of personal information which increases consumers' perceived uncertainty and vulnerability (Leeraphong & Mardjo, 2013). Similar results from the study by van Doorn and Hoekstra (2013) showed that banking related advertisements with higher levels of personalization will not increase consumers' purchasing intentions, but will actually reduce those intentions. Thus, it seems that if personalization is too extreme, this will have negative effects on advertising effectiveness.

Moreover, many studies used different outcomes to measure the effectiveness of personalized advertising (Aguirre et al., 2015; Bleier and Eisenbeiss 2015; Li et al., 2018; Tucker 2014; van Doorn and Hoekstra 2013; Walrave et al., 2018; Wessel & Thies, 2015). However, these studies yielded inconsistent results. To further explore the impact of personalization on advertising, in this research, click-through intentions (Boerman et al., 2017) and forward intentions (Walrave et al., 2016) are selected as the outcomes of advertising effectiveness. Based on these findings, it is proposed that:

H1: Highly personalized advertisements lead to (a) higher click-through intentions and (b) higher forward intentions than less personalized advertisements.

Privacy concerns

Many companies create personalized advertisements and place them on websites because these websites are used by a considerable number of people and thus, truly astonishing amounts of data on all their users is available (Tran, 2017). Although personalization can help companies to improve advertising effectiveness and increase consumer responses to personalized advertising, van Doorn and Hoekstra (2013) warned that the use of personalization is a double-edged sword. In general, the practice of personalized advertising requires collecting personal data; however, the process of collecting, using, and sharing personal data can make consumers feel that their privacy has been violated (Boerman et al., 2017; Walrave et al., 2018). Users' privacy can be violated in various ways: for example, Internet servers state that they collect the user's personal data for certain purposes, such as safety, but some websites use the collected data for other purposes (e.g. commercial purposes) without the permission of the users (Wu, Huang, Yen, & Popova, 2012).

Westin (1967) defined privacy as "the ability of the individual to control the terms under which personal information is acquired and used". As mentioned earlier, research by Altaweel et al. (2015) showed that when consumers use online services, ever-increasing amounts of personal data are collected by online portals through cookies. These cookies can help online servers to collect detailed information (e.g. preferences and location) about online users, and online servers can reveal a large amount of additional information, such as consumers' interests and life track by analyzing cookies (Nowak & Phelps, 1995). In general, consumers have little control over how the personal data they provide during their Internet activity are used by the websites (Wu et al., 2012).

Previous research also indicated that perceived privacy concerns have a significant effect on advertising effectiveness (Taylor et al., 2011). When the presented advertisement is too personalized, it is likely to increase the consumers' perceived privacy concerns as they process the presented information more thoroughly (Lee, Liu, & Cheng, 2018). Awad and Krishnan (2006), too, confirmed that individuals with highly perceived privacy concerns are anxious that their information privacy will be threatened when companies collect and use personal data. White et al. (2008) examined how email personalization influences consumers' click-through intentions on email marketing, and their results showed that making targeting

mechanisms too explicit in the email message increases consumer reluctance and therefore decreases marketing effectiveness. Baek and Morimoto (2012) explored the determinants of advertising avoidance in personalized advertising and they found that perceived privacy concerns negatively affects the consumer's intentions to accept the advertisement. The present researcher, therefore, hypothesizes the following:

H2: Highly personalized advertisements lead to higher perceived privacy concerns than less personalized advertisements do.

H3: Higher perceived privacy concerns lead to **(a)** low click-through intentions and **(b)** lower forward intentions than lower perceived privacy concerns do.

H4: The effects of personalization on **(a)** click-through intentions and **(b)** forward intentions are mediated by perceived privacy concerns.

Trust-building strategies

Trust is needed in social relations and exchanges since cooperation with others often requires interdependence (Mayer, Davis, & Schoorman, 1995), but researchers from different disciplines define trust variously (Beldad, de Jong, & Steehouder, 2010). A literature review by Beldad et al. (2010) stated that trust is defined from two major perspectives: as an expectation regarding the behavior of other people, and as the acceptance of and exposure to vulnerability.

Defining trust as an expectation regarding the behavior of other people applies to a relationship where the individual expects that other people are likely to treat them positively (Beldad et al., 2010; Koller, 1988). For instance, the Internet allows consumers to communicate with others in the e-community (Cheung & Lee, 2006). Consumers tend to interact with trustworthy suppliers because consumers expect that, when purchasing products from trusted firms, they can rely on the merchant's expertise, and can avoid being deceived (Gefen, Karahanna, & Straub, 2003).

Interaction with online services requires the disclosure of personal information (Choi et al., 2018). When individuals interact with an unfamiliar company, they are not able to ensure how the company will use their personal information, which increases their uncertainty and vulnerability (Leeraphong & Mardjo, 2013). To view trust as the acceptance of and exposure to vulnerability is to confirm that when trust exists in a situation, people can

accept uncertainties (Beldad et al., 2010), which also explains why consumers often assume that trusted companies use their details in correct and safe ways (Brown & Muchira, 2004). Therefore, trust is essential in online activities (Wu et al., 2012). To reduce the uncertainties and ambiguities which abound in online interactions, building more trust is especially necessary in the online environment (Beldad et al., 2010; Lynch, Robert, & Srinivasan, 2001).

Bleier and Eisenbeiss (2015) showed that more and more firms choose to advertise on the Internet to attract more consumers, and the researchers further assert that trust affects consumer response to the advertiser's efforts; specifically, consumers are more willing to respond to advertisements from trusted advertisers (Bleier & Eisenbeiss, 2015). To increase advertising effectiveness and trustworthiness, online advertisers developed various trust-building strategies, such as taking advantage of a trustworthy website by using it as the advertising website (Aguirre et al., 2015). Online advertisers can gain consumer trust in advertising by placing advertisements on more trustworthy websites (Aguirre et al., 2015). A study on e-commerce advertising in social networking sites by Zhang and Ip (2015) found that trust in the advertising platform positively influences advertising effectiveness. Research by Aguirre et al. (2015) confirmed that advertisements increase the consumer's intention to respond to advertisements if the advertisements appear on a trustworthy website, while as the consumer's intention to respond to advertisements is low when advertisements appear on an untrustworthy website.

Existing research also indicated that trust has an impact on perceived privacy concerns (Brown & Muchira, 2004). Online users are often required to share their personal data with online companies in order to use their services (Wu et al., 2012) and users' information might be misused by online services for commercial purposes (Smith et al., 1996). The possibility of privacy violations raises the perceive privacy concerns of users (Wu et al., 2012). Milne and Culnan (2004) suggested that building trust can reduce the privacy concerns of consumers and this idea is consistent with research by Brown and Muchira (2014) who investigated the relationship between online privacy concerns and online purchasing behavior. Their results indicate that, compared with untrusted companies, trusted companies are more likely to reduce consumers perceived privacy concerns (Brown & Muchira, 2014).

Trust also has an impact on advertising effectiveness (Aguirre et al., 2015). If an advertisement appears on a more trustworthy website, online users tend to expect that the process of advertising follow the norms of the website, which in turn, reduces the perceived privacy concerns of consumers (Aguirre et al., 2015). Thus, it can be predicted that the trustworthiness of the advertising website moderates consumer responses to personalized advertising, which leads to the following hypothesis:

H5: The use of a high level of personalization leads to lower perceived privacy concerns, but only in combination with a trustworthy website for the placement of the advertisement.

Privacy fatigue

The practice of personalized advertising requires the collection of personal data collection and this process can makes consumers feel that their privacy has been violated (Boerman et al., 2017; Walrave et al., 2018). However, studies suggest that, although some individuals are concerned about their privacy, they still choose to disclose their personal information on the Internet (Debatin, Lovejoy, Ann-Kathrin Horn, & Hughes, 2009; Tufekci, 2008); that is to say, the attitudes of individuals toward online privacy do not always predict their actual behavior in disclosing personal information (Nordberg et al., 2007). The inconsistency in Internet user attitudes toward privacy and user online behavior is also known as "the privacy paradox" (Barne, 2006). The cause of the privacy paradox has long been the core of privacy studies (Hoffmann, Ranzini, & Lutz, 2016).

Research by Choi et al. (2018) used the concept of privacy fatigue to explain "the privacy paradox". Privacy fatigue can be described as "a sense of futility, ultimately making them weary of having to think about online privacy" (Choi et al., 2018). Fatigue is often based on high demands on people's inability to achieve goals (Hardy, Shapiro, & Borrill, 1997). In the process of using the Internet, the privacy agreement sometimes becomes very complicated due to factors such as government regulations, and the complicated privacy agreement requires users to spend time and effort on it (Choi et al., 2018). Eventually, users accept the privacy agreement in order to take advantages of services or websites (Schermer, Custers, & van der Hof, 2014). For users who often have to disclose personal information to online services, the frequency of online disclosure leads them to feel concerned about the privacy of their information (Walrave, Vanwesenbeeck, & Heirman, 2012). The feeling of

fatigue may occur when users feel incapable of protecting their online privacy (Choi et al., 2018). Choi et al. (2018) examined the role of privacy fatigue in online privacy behavior and the results showed that privacy fatigue significantly affects the relationship between perceived privacy concerns and consumers' online privacy behavior. In other words, privacy concerns negatively influence users' online privacy behaviors only when consumers have a lower sense of privacy fatigue (Choi et al., 2018).

Privacy cynicism and emotional exhaustion are seen as two core components of privacy fatigue (Choi et al., 2018). Halbesleben, Rathert, and Williams (2013) defined emotional exhaustion as "a feeling that one's emotional resources have been drained". The exhaustion signifies the depletion of emotional reserves (Maslach, Schaufeli, & Leiter, 2001). Exhaustion prompts consumers to keep an emotionally and cognitive distance from certain situations which they have experienced (Maslach et al., 2001). Choi et al. (2018) used emotional exhaustion to examine consumers online privacy behavior and found that managing information privacy in an online environment might makes consumers feel emotionally tired.

Another core component of privacy fatigue is privacy cynicism (Choi et al., 2018). Choi et al. (2018) defined cynicism as "an attitude toward an object accompanied by frustration, hopelessness, and disillusionment," with the sense of cynicism mainly generated from unmet expectations. Hoffmann et al. (2016) proposed the concept of privacy cynicism to help researchers to understand why Internet users rarely protect their personal data, even though they claim to be very concerned about their own privacy and the process of collecting, using, and sharing their personal data. Hoffmann et al. (2016) explained that privacy cynicism "represents a cognitive coping mechanism for users, allowing them to overcome or ignore privacy concerns and engage in online transactions (and self-disclosure) without ramping up privacy protection efforts". Moreover, when individuals become aware of privacy threats, privacy cynicism enables them to continue using online services without trusting services providers (Hoffmann et al., 2016). In other words, cynicism contains a certain degree of mistrust (Almada, Zonderman, Shekelle, Dyer, Daviglus, Costa, & Stamler, 1991) which implies that privacy cynicism is more likely to occur when individuals do not trust others. When Hargittai and Marwich (2016) examined young adults' understanding of Internet

privacy issues, they found that some participants notice that their privacy may be misused and that there is not much they can do to protect the privacy of their information. Hargittai and Marwich (2016) further indicated that young adults have a cynical feeling about online privacy, and especially believe that privacy cannot be protected.

Given the description above, it is likely that privacy fatigue moderates the effects of consumers' perceived privacy concerns to their responses to personalized advertising, and can hence explain the privacy paradox. Thus, the following hypothesis is proposed:

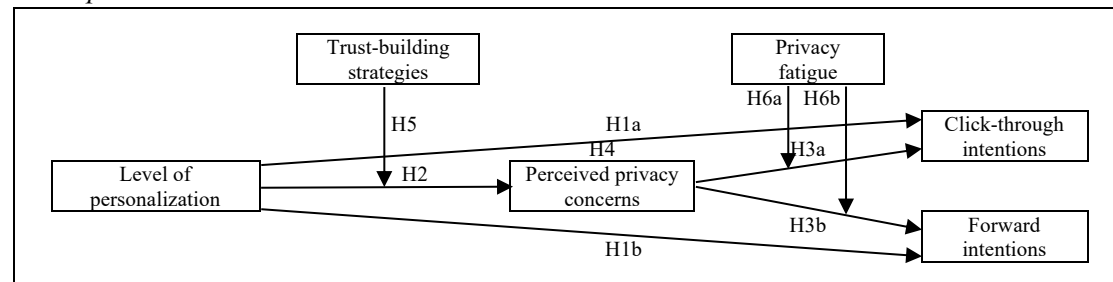
H6: When privacy fatigue is low, perceived privacy concerns have stronger effects on **(a)** click-through intentions and **(b)** forward intentions.

Conceptual Model

To provide an overview of this research, all elaborated hypotheses in the previous sections are plotted in a conceptual model (Figure 1).

Figure 1

Conceptual model



Method

The research model underlying this study is a scenario-based 2x3 between-subjects factorial experimental design to test the proposed hypotheses and answer the research questions.

Before starting the main study, a pre-test was conducted to check whether the manipulations, namely, level of personalization and trustworthiness of the advertising website, were successful. Scenarios and advertisements for the main study were adjusted in response to the pre-test results.

Pre-test

A pre-test was conducted to check the manipulations. To achieve a convincing result, at least 20 people were required for each condition (Perneger, Courviosier, Hudelson, & Gayet-Ageron, 2014). In total, 62 responses were recorded for the pre-test analysis and all pre-test participants were omitted from the main experiment sample. The pre-test survey appears in full in Appendix A.

To check whether the manipulations of personalization levels were successful, the survey included three conditions, and participants were randomly assigned to one of the three conditions. The three conditions contained the same questions but differed in the scenarios and advertisements they showed. The combination of scenarios and advertisements under each condition can be found in Appendix B. After participants had read the scenario that contains an Internet activity and the advertisement, they were asked to evaluate their perceived level of personalization on a seven-point Likert-type scale (1-Strongly negative, 7-Strongly positive). The results of this analysis can be found in Table 1. Pre-test results showed that the means of the non-personalized advertisement, low-personalized advertisement, and high-personalized advertisement indicated an increase in perceived personalization. To control for possible factors which might influence the effects of the manipulation of personalization on the dependent variables, the participants' attitudes to the perceived advertisement, their attitudes to the design of the perceived advertisement, and their attitudes to the advertised brand were measured. In general, participants held a somewhat negative to neutral attitude towards the perceived advertisement ($M = 3.79$) and a somewhat negative to neutral attitude towards the design of the perceived advertisement ($M = 3.87$). Moreover, attitude towards the perceived advertisement ($p = .321$) and attitude towards the

design of the perceived advertisement ($p = .529$) appeared not to be significantly different than the neutral stance of the Likert scale ($M = 4.00$). Therefore, the manipulation was successful.

Table 1 <i>Descriptive statistics of personalization for the different advertisement</i>			
	<u>M</u>	<u>SD</u>	<u>N</u>
No personalization	2.51 ^{bc}	1.42	21
Low personalization	5.00 ^{ac}	1.00	20
High personalization	6.12 ^{ab}	1.03	21
<i>Note</i>			
^a significant difference from the no personalization condition			
^b significant difference from the low personalization condition			
^c significant difference from the high personalization condition			

In order to select the manipulated websites which were used to place the advertisement in the actual experiment, the pre-test provided a list of ten websites that could place advertisements and asked participants to describe the trustworthiness of each website on a seven-point Likert-type scale (1-Strongly negative, 7-Strongly positive). From the results, CNN ($M = 4.81$) was selected as the most trustworthy website and Facebook ($M = 2.82$) as the least trustworthy website. The pre-test result showed that the trustworthiness of CNN was significantly higher than the trustworthiness of Facebook, with the mean difference between CNN and Facebook being 1.984 ($p = .000$). Moreover, to avoid the influence of participants' attitudes toward websites on the manipulation of trustworthiness of the advertising site, participants were also asked to measure their attitudes toward each of the ten websites. Results showed that participants held neutral to somewhat positive attitudes toward both CNN ($M = 4.66$) and Facebook ($M = 4.10$).

To ensure that the trustworthiness of Samsung and consumers' attitudes toward Samsung were not perceived as strongly positive or strongly negative, participants were asked to describe the trustworthiness of Samsung and their attitude to Samsung. A seven-point Likert-type scale (1-Strongly negative, 7-Strongly positive) was used to measure their responses. The results showed that consumer attitudes towards Samsung ($M = 4.87$) were neutral to somewhat positive, and consumers described Samsung ($M = 5.10$) as a somewhat trustworthy brand. Thus, Samsung was selected for the actual experiment.

In response to the pre-test results, scenarios and advertisements were improved to fit the manipulation better.

Participants

Participants for the main study were reached through the personal network of the researcher. All the participants participated voluntarily in this research and were not compensated for their participation.

To obtain reliable results, at least 30 participants were required for each experimental condition. Since this is a between-subjects experiment, a total number of at least 180 respondents was required. Finally, a total of 291 responses were collected. Of these participants, 86 had never browsed either CNN or Facebook (depending on the condition group), which was a necessary pre-condition for the manipulation to succeed. These participants were not taken into account, leaving a total of 205 participants, of whom 83 were males (40.49%) and 115 females (56.10%), aged between 17 and 59 years. Most of the participants were born between 1990 and 1999, and most were highly educated (less than Bachelor = 7.80%, Bachelor = 44.39%, Master = 41.95%, higher than Master = 5.85%). Further demographic information is presented in Table 2.

Table 2 <i>Demographics and distribution of the respondents per condition</i>								
	Condition						Total	Percentage
	1	2	3	4	5	6		
Gender								
Male	17	10	14	14	14	14	83	40.49%
Female	17	22	21	16	22	17	115	56.10%
Prefer not to say	1	0	0	3	1	0	5	2.44%
Other	0	2	0	0	0	0	2	0.98%
Total	35	34	35	33	37	31	205	100%
Year of birth								
≥ 2000	2	0	0	2	1	1	6	2.93%
1990 - 1999	27	28	28	26	29	23	161	78.54%
1980 - 1989	3	4	4	2	4	4	21	10.24%
1970 - 1979	2	0	2	1	0	1	6	2.93%
1960 - 1969	1	0	0	1	0	0	2	0.98%
Unknown	0	2	1	1	3	2	9	4.39%
Total	35	34	35	33	37	31	205	100%
Education								
Less than bachelor	2	3	2	2	5	2	16	7.80%
Bachelor	17	11	18	18	12	15	91	44.39%
Master	13	18	12	10	20	13	86	41.95%
Higher than master	3	2	3	3	0	1	12	5.85%
Total	35	34	35	33	37	31	205	100%
Nationality								
American	5	3	5	3	4	7	27	13.17%
Belgian	0	0	1	1	0	2	4	1.95%
British	3	1	2	4	4	2	16	7.80%
Chinese	5	11	6	7	6	8	43	20.98%
Dutch	11	5	11	3	7	5	42	20.49%
German	2	4	1	1	3	4	15	7.32%
Indonesian	1	1	0	0	2	0	4	1.95%
Malaysian	0	1	1	1	1	0	4	1.95%
Swedish	1	0	1	2	0	0	4	1.95%
Other	7	8	7	11	10	3	25	22.44%
Total	35	34	35	33	37	31	205	100%

Design Main Study

To test proposed hypotheses and answer the research questions, a 2 x 3 between-subjects factorial experimental design was performed online in which level of personalization (i.e., no personalization vs. low personalization vs. high personalization) and trustworthiness of the advertising website (i.e., less trustworthy advertising website vs. more trustworthy advertising website) were manipulated. Based on these combinations, six experimental conditions (Table 3) were generated. To test proposed hypotheses, the experiment measured advertising effectiveness (i.e., click-through intentions and forward intentions), trustworthiness of the advertising website, perceived privacy concerns, and privacy fatigue. Besides, for this study, Samsung was selected as the advertising brand. Because the pre-test results showed that Facebook was considered as the less trustworthy website, CNN was selected as the more trustworthy website.

All research participants were invited to participate in the online survey in Qualtrics, and participants were randomly assigned to one of the six experimental conditions by using the randomizer function. The data collection took place from 25 June 2019 until 10 July 2019. The survey can be found in Appendix C.

Table 3 <i>Experimental conditions</i>		
<u>Experimental condition</u>	<u>Level of personalization</u>	<u>Trustworthiness of the advertising website</u>
1	No personalization	Less trustworthy
2	No personalization	More trustworthy
3	Low personalization	Less trustworthy
4	Low personalization	More trustworthy
5	High personalization	Less trustworthy
6	High personalization	More trustworthy

Procedures

The experiment started with a general information about the purpose and the procedure of the study. All participants were informed that the experiment was anonymous, and that all the information provided would be treated as confidential and used only to collect data for this study.

Next, participants were provided with a scenario which contained an imaginary Internet activity. All participants were asked to read the scenario carefully and to imagine that

the situation described had actually happened to them. The next screen of the experimental task presented the fictitious websites of Facebook (for less trustworthy conditions) or CNN (for more trustworthy conditions) website, with an advertisement that reflected one of the six conditions. Since this was a between-subject design, scenarios and advertisements varied in each condition. For the no personalization condition, participants were required to read a scenario which contained an imaginary Internet activity about searching earrings on the Pandora website for mother's birthday. The low and high levels of personalization contained the same presented scenario which included an imaginary Internet activity about searching dual-sim phones on the Internet. The combination of scenarios and advertisements under each condition can be found in Appendix D.

After viewing the advertisement, participants were asked to answer questions about perceived privacy concerns, click-through intentions, forward intentions, privacy cynicism, personal information, and a manipulation check for personalization and trustworthiness of the advertising website. To ensure respondents read the scenario and the advertisement thoroughly and carefully, two questions about the content of the scenario and the advertisement were included. Moreover, to avoid participants who had no prior experience with the advertising website, all participants were asked whether they had experience with the advertising websites (Facebook/CNN). Individuals without prior experience with the advertising website were counted as invalid responses.

Measures

The constructs used to measure the variables of perceived privacy concerns and privacy fatigue, as well as click-through intentions and forward intentions are presented below, together with the reliability of each construct. Constructs and their sources of scales are listed in Appendix E and all items were measured on a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree).

Perceived privacy concerns. The items for measuring perceived privacy concerns were adapted from earlier work by Smith, Milberg, and Burke (1996), and included statements: 1. "I feel bothered when online services try to collect my personal information for commercial purposes." 2. "I am concerned that online services collected too much information about me for commercial purposes." 3. "I feel bothered when online services are

able to track my personal information.” 4. “I am concerned that my personal information could be misused by online services.” The construct proved to be reliable ($\alpha = .916$).

Privacy fatigue. The variable of privacy fatigue was measured by emotional exhaustion and privacy cynicism. The construct for emotional exhaustion comprised three items adapted and modified from existing research by Schaufeli, Leiter, Maslach, and Jackson (1996). The statements used were: 1. “Managing online information privacy makes me emotionally drained.” 2. “Online privacy issues make me tired.” 3. “I feel bothered when I have to care about online privacy.” The construct was found to be reliable ($\alpha = .864$).

Privacy cynicism was measured by four items, adapted from research by Schaufeli et al. (1996): 1. “Frequent online privacy issues made me become less interested in online privacy.” 2. “Frequent online privacy issues made me become less enthusiastic about protecting my personal information.” 3. “Frequent online privacy issues made me become more frequently doubtful about the importance of online privacy.” 4. “I prefer using online services than being bothered by online privacy issues.” The reliability analysis showed a reliable alpha value ($\alpha = .823$).

Click-through intentions. The construct for click-through intentions contained three items. The first item was adapted from earlier work by Aguirre et al. (2015), and states: 1. “I am inclined to click on this advertisement.” The other two items were rephrased according to the first item: 2. “The probability of me clicking on this advertisement is high.” 3. “I have no problem clicking on this advertisement.” This construct as well proved to be reliable ($\alpha = .830$).

Forward intentions. The intention to forward the advertisement was measured by three items. The first item was adapted from existing research by Huang, Chen and Wang (2012) 1. “I am inclined to forward this advertisement.” The other two items again were created based on the first item: 2. “The probability of me forwarding this advertisement is high.” 3. “I have no problem forwarding this advertisement” The constructs were found to be reliable ($\alpha = .834$).

A factor analysis was conducted to measure the validity of the items (Appendix F). The outcomes of the validity analysis provided confidence in the factorability of the constructs ($KMO = .803$, $\chi^2(325) = 3469.25$, $p = .000$).

Manipulation check

A manipulation check was contained in this study in order to make sure that respondents understood the manipulations as expected.

To check whether the personalization manipulation was successful, participants were asked to evaluate their perceived level of personalization on a seven-point Likert-type scale (1-Strongly disagree, 7-Strongly agree). The construct for personalization is comprised of four items, adapted from existing research by Dijkstra (2005). The statements used were: 1. “This advertisement is tailored for me.” 2. “I see my own situation in this advertisement.” 3. “This advertisement contains the problem I recently faced.” 4. “This advertisement contains my personal situation.” The reliability analysis showed a reliable alpha value ($\alpha = .931$). Manipulation check results (Table 4) showed a significant mean difference between each condition.

Table 4 <i>Descriptive statistics of personalization for the different advertisement</i>			
	<u>M</u>	<u>SD</u>	<u>N</u>
No personalization	2.90 ^{bc}	1.55	69
Low personalization	4.33 ^{ac}	1.21	68
High personalization	5.34 ^{ab}	1.27	68
<i>Note</i>			
^a significant difference from the no personalization condition			
^b significant difference from the low personalization condition			
^c significant difference from the high personalization condition			

To check whether the manipulation of trustworthiness of the advertising website was successful, participants were asked to describe the trustworthiness of the advertising website on a seven-point Likert-type scale (1-Strongly disagree, 7-Strongly agree). The items to measure the trustworthiness of the advertising website were adapted from earlier work by Chaudhuri and Holbrook (2001), stating 1. “I trust Facebook (or CNN) and its services.” 2. “I trust the information on Facebook (or CNN).” 3. “I think Facebook (or CNN) is an honest website.” 4. “I think Facebook (or CNN) is safe.” The construct for both Facebook ($\alpha = .912$) and CNN conditions were found to be reliable ($\alpha = .951$). Results from One-Way ANOVA Test indicated that there was a significant mean difference between the trustworthiness of Facebook ($M = 3.02$, $SD = 1.27$, $n = 107$) and CNN ($M = 4.72$, $SD = 1.44$, $n = 98$).

To avoid other possible factors which might influence the manipulation of personalization, participants' attitudes to the perceived advertisement, their attitudes to the design of the perceived advertisement, and their attitudes to Samsung were measured. The ideal results of these measurements were neither strongly positive nor strongly negative. The results (Table 5) were in line with expectations. In addition, to ensure that participants held similar attitudes toward Facebook and Samsung, participants' attitudes toward Facebook and CNN were measured. The results showed that there is no significant difference between participants' attitudes toward Facebook and CNN. Therefore, the manipulations of this study were successful.

Table 5

Descriptive statistics of possible factors which might influence the manipulations

	<u>M</u>	<u>SD</u>	<u>N</u>
Attitude towards the advertisement	3.42	1.52	205
Attitude towards the design of the advertisement	3.69	1.55	205
Trustworthiness of Samsung	4.24	1.39	205
Attitude towards Samsung	4.82	1.26	205
Attitude towards Facebook	4.47	1.15	107
Attitude towards CNN	4.71	1.43	98

Results

To test the proposed hypotheses (Figure 1), data analyzed by using Hayes' (2018) PROCESS model 21. Since this research contained click-through intentions and forward intentions as dependent variables, two separate analyses involved. Moreover, level of personalization was entered as independent variable, trustworthiness of the advertising website and privacy fatigue as moderators, and perceived privacy concerns as a mediator.

Personalization main effect

Hypothesis 1a predicted that participants who were exposed to higher personalized advertisements would have a more positive intention to click-through the advertisements than those who were exposed to less personalized advertisements. PROCESS results showed that there was a significant difference in click-through intentions between non-personalized advertisements and low personalized advertisements ($B = 1.03, se = 0.24, p = .000$). Results also indicated that click-through intentions were significantly more negative for non-personalized advertisement as compared to high personalized advertisements ($B = 1.17, se = 0.24, p = .000$). Moreover, the results showed that there was no significant mean difference in click-through intentions between low personalized advertisements and high personalized advertisements ($B = 0.14, se = 0.24, p = .555$). Therefore, partially support for Hypothesis 1a has been found.

Hypothesis 1b predicted that level of personalization has a positive effect on forward intentions. Results indicated that forward intentions were only significantly positive for non-personalized advertisements as compared to low personalized advertisements ($B = 0.48, se = 0.23, p = .035$) and high personalized advertisements ($B = 0.77, se = 0.23, p = .001$). In other words, there was no significant difference in forward intentions for low personalized advertisements as compared to high personalized advertisements ($B = 0.29, se = 0.23, p = .199$). Consequently, hypothesis H1b is partially supported. The descriptive statistics is presented in Table 6.

Table 6 <i>Descriptive statistics of click-through intentions and forward intentions for the different advertisement</i>		
	Mean (SD)	
	<u>Click-through Intentions</u>	<u>Forward Intentions</u>
Non-personalized	2.55 (1.27) ^{bc}	2.05 (1.24) ^{bc}
Low personalized	3.57 (1.45) ^a	2.52 (1.33) ^a
High personalized	3.55 (1.74) ^a	2.71 (1.56) ^a
<i>Note</i>		
^a significant difference from the no personalization condition		
^b significant difference from the low personalization condition		
^c significant difference from the high personalization condition		

Tests of Mediation

The results showed that non-personalized advertisements did not significantly had a direct effect on perceived privacy concerns as compared to low personalized advertisements ($B = -0.09$, $se = 0.33$, $p = .775$) and high personalized advertisements ($B = 0.20$, $se = 0.32$, $p = .541$). Thus, the second hypothesis is not supported.

Furthermore, the results showed significant direct effects of perceived privacy concerns on click-through intentions ($B = -0.61$, $se = 0.29$, $p = .038$). and forward intentions ($B = -0.64$, $se = 0.27$, $p = .001$). Therefore, Hypotheses 3a and 3b are supported.

In addition, since there is no relationship between personalization and perceived privacy concerns, perceived privacy concerns did not mediate the effects of personalization on click-through intentions and forward intentions. These results did not provide support for Hypothesis 4a and 4b. Table 7 presents an overview of the results of the analyses with perceived privacy concerns as a mediator.

Table 7 <i>Regression results for mediation</i>			
	B (se)		
	<u>Perceived Privacy Concerns</u>	<u>Click-through Intentions</u>	<u>Forward Intentions</u>
Low vs. None	-0.09 (0.33)	1.03 (0.24) ^{***}	0.48 (0.23) [*]
High vs. None	0.20 (0.32)	1.17 (0.24) ^{***}	0.77 (0.23) ^{**}
Perceived Privacy Concerns		-0.61 (0.29) [*]	-0.64 (0.27) [*]
<i>Note</i>			
[*] $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$			

Tests of Moderation

In Hypothesis 5, it was proposed that trustworthiness of the advertising website moderates the effects of level of personalization on perceived privacy concerns. The interaction term of personalization (i.e., low personalization vs. no personalization) and trustworthiness of the advertising website was statistically not significant for perceived privacy concerns ($B = -0.09$, $se = 0.33$, $p = .775$). The results also showed that high personalized advertisements did not significantly had interaction effects with trustworthiness of the advertising website on perceived privacy concerns as compared to non-personalized advertisements ($B = 0.20$, $se = 0.32$, $p = .541$). Therefore, the fifth hypothesis is rejected.

Moreover, Hypothesis 6a and 6b predicted that privacy fatigue moderates the effects of perceived privacy concerns on click-through intentions and forward intentions. Results indicated that perceived privacy fatigue did not moderate the effects of perceived privacy fatigue on click-through intentions ($b = 0.05$, $se = 0.07$, $p = .419$) and forward intentions ($b = 0.10$, $se = 0.06$, $p = .106$). Thus, Hypothesis 6a and 6b are rejected.

The outcomes of hypotheses testing are summarized in Table 8.

Table 8

Outcomes hypotheses testing

	<u>Hypothesis</u>	<u>Outcome</u>
H1a	Highly personalized advertisements lead to higher click-through intentions than less personalized advertisements.	Partially supported
H1b	Highly personalized advertisements lead to higher forward intentions than less personalized advertisements.	Partially supported
H2	Highly personalized advertisements lead to higher perceived privacy concerns than less personalized advertisements do.	Not supported
H3a	Higher perceived privacy concerns lead to low click-through intentions than lower perceived privacy concerns do.	Supported
H3b	Higher perceived privacy concerns lead to lower forward intentions than lower perceived privacy concerns do.	Supported
H4a	The effects of level of personalization on click-through intentions are mediated by perceived privacy concerns.	Not supported
H4b	The effects of level of personalization on forward intentions are mediated by perceived privacy concerns.	Not supported
H5	The use of a high level of personalization leads to lower perceived privacy concerns, but only in combination with a trustworthy website for the placement of the advertisement.	Not supported
H6a	When privacy fatigue is low, perceived privacy concerns have stronger effects on click-through intentions	Not supported
H6b	When privacy fatigue is low, perceived privacy concerns have stronger effects on forward intentions.	Not supported

Discussion

General discussion

This study aims to experimentally investigate the effects of various levels of personalization, trustworthiness of advertising websites, perceived privacy concerns, and privacy fatigue on click-through intentions and forward intentions. The following section discusses the findings and identifies the possible implications.

Based on previous studies on personalization (Aguirre et al., 2015; Bleier and Eisenbeiss 2015; Li et al., 2018; Tucker 2014; van Doorn and Hoekstra 2013; Walrave et al., 2018; Wessel & Thies, 2015), the researcher expected that highly personalized advertisements lead to higher click-through intentions and higher forward intentions, in comparison with less personalized advertisements. However, this expectation was not fully supported by the results. The findings indicated that compared with non-personalized advertisements, low-personalized and high-personalized advertisements require significantly greater number and frequency of click-through intentions. This result affirms that consumers have greater intentions to click an advertisement when the advertisement is personalized. This result is in line with those of other studies conducted by Aguirre et al. (2015) and de Keyzer et al. (2015).

In addition, although personalized advertisements have higher click-through intentions than non-personalized advertisements, personalization does not affect click-through intentions relating to low personalization and high personalization conditions. In other words, personalization only has a partial positive impact on click-through intentions. One possible reason for this result is that highly personalized advertisements can trigger the persuasion knowledge of the respondents. According to the theory of the persuasion knowledge mode (Friestad & Wright, 1994), individuals' persuasion knowledge develops throughout their life span. Most of the participants (97.07%) in this study are above 20 years old, and 92.2% of them have obtained or will obtain at least a bachelor's degree. The participants might, therefore, interpret persuasive contents in the highly personalized condition. This finding is supported by White et al.'s (2008) research. White et al. (2008) studied the effects of personalization in e-mail marketing, and confirmed that consumers' persuasion knowledge negatively affects persuasion effectiveness, thereby decreasing click-through intentions. Such

inconsistent conclusion could be attributed to the fact that the questions about perceived privacy concerns were placed before the questions about advertising effectiveness during the experiment. Participants may thusly be concerned about their online privacy when they were trying to answer questions about click-through intentions. This explanation also applies to forward intentions.

Notably, results show that forward intentions are significantly positive for personalized advertisements, compared to non-personalized advertisements. However, there was no significant difference in forward intentions for low personalized advertisements as compared to high personalized advertisements. In addition to question sorting, another possible reason for this finding is that perceived self-relevance is an antecedent of forward intentions. Phelps, Lewis, Mobilio, Perry, and Raman's (2014) research indicated that consumers show greater forward intentions when the information presented is closer to their own situations. In this study, low-personalized advertisements might not trigger perceived self-relevance of participants. More specifically, in low-personalized conditions, part of participants might perceive self-relevance from the advertisements while another part of participants might not perceive self-relevance from the advertisements.

This study found no significant mediating effects of perceived privacy concerns on the relationship between various levels of personalization and advertising effectiveness (i.e. click-through intentions and forward intentions). The results affirm that perceived privacy concerns negatively affect click-through intentions and forward intentions, yet the various levels of personalization cannot predict perceived privacy concerns. The absence of the expected effects of personalization on perceived privacy concerns could be attributed to the less diversified nationality of the enrolled respondents. Rho, Ha, Kobsa, and Nguyen (2018) measured online privacy and security attitudes of individuals across 24 countries and found that participants from different countries have shown disparate attitudes. The current study enrolled respondents from more than 20 countries, of which 20.98% are from China and 20.49% are from the Netherlands. It is possible that the respondents from different cultural background perceive different degrees of privacy concerns after they read the same advertisement. Another possible explanation for this inconsistent result is that the respondents' own perceptions of online privacy concerns are confused with situational

privacy concerns perceived from advertisements. This study found no significant mean difference among each condition in regard to perceived privacy concerns ($M_{\text{non-personalized}} = 5.26$, $M_{\text{low-personalized}} = 5.30$, $M_{\text{high-personalized}} = 5.70$). In other words, the measured perceived privacy concerns in this research may represent the respondents' own perceptions of online privacy concerns, rather than privacy concerns perceived from the scenario and the advertisement.

No interaction effects of personalization and trustworthiness of the advertising can be determined on perceived privacy concerns, click-through intentions, and forward intentions. An explanation for the different outcomes in comparison with previous studies is that this research did not find any significant effects of personalization on perceived privacy concerns. In other words, trustworthiness of the advertising website alone cannot moderate the relationship between personalization and perceived privacy concerns.

No supporting results were found for the moderation effects of privacy fatigue in the relationship between perceived privacy concerns and advertising effectiveness (i.e., click-through intentions and forward intentions). A possible explanation for this outcome is the less diversified cultural background of the enrolled respondents. As previously mentioned, individuals' online privacy and security attitudes differ from one country to another (Rho et al., 2018). Choi et al. (2018) explained that the feeling of fatigue and emotional exhaustion can occur when users feel that they are incapable of protecting their online privacy. It is highly possible that participants from some countries might not even perceive privacy concerns from these advertisements. Moreover, no research has examined the antecedents of privacy fatigue; the concept of privacy fatigue might not even apply to participants from certain countries and cultural background.

Theoretical and practical implications

The findings of this study provide a theoretical basis for the implementation of personalized advertisement. To a certain extent, this study bridges the knowledge gap concerning personalized advertising in the online advertising context. Similar to other related studies (e.g. Aguirre et al., 2015; Li et al., 2018), this study compares different degrees of personalization in online advertising and their effect. In addition, this research finds that the amount of data used in personalization does not significantly influence click-through intentions and forward

intentions. Suffice it to say that individuals' forward intentions and click-through intentions outweigh the effects of personalized advertisement (e.g. Tran, 2017; Van Noort, Antheunis, & Verlegh, 2014).

Researchers brought in the concept of "the privacy paradox" to explain the reason why individuals are concerned about theory privacy yet simultaneously they still disclose their personal information on the Internet (Barne, 2006). However, on concrete evidence in favor of "the privacy paradox" can be found. The current study indicates that perceived privacy concerns tend to exert negative effects on click-through intentions and forward intentions. Therefore, advertisers and firms should notice that consumers' interest in online privacy has not been undermined even though online privacy issues occur frequently.

Furthermore, this research contributes to the existing studies by measuring the interaction effects of perceived privacy concerns and privacy fatigue on click-through intentions and forward intentions. Scholars introduced the concept of privacy fatigue to explain "the privacy paradox" (Choi et al., 2018). No previous study has investigated the effects of privacy fatigue in the context of personalized advertising. This study, therefore, is the first that applies the concept of privacy fatigue in personalized advertising. This research found no solid proof to establish the interaction effects of perceived privacy concerns and privacy fatigue on click-through intentions and forward intentions in personalized advertising. This pilot study analyzes the effects of privacy fatigue on personalized advertising, further researches are needed to clarify the underlying mechanism in the future.

This study also provides practical implications. The booming of the Internet provides countless opportunities for companies and marketers to create inspiring and productive advertisements on the Internet. It was found in this study that participants preferred personalized content rather than non-personalized content. Therefore, in the era of online advertising, advertisers should create more accurate advertisements to appeal to the target customer based on personalized the advertising content.

Moreover, the practice of personalization requires the collection and accumulation of a variety of personal data, but such process of personal data collection and sharing could make consumers feel that their privacy has been infringed (Boerman et al., 2017; Walrave et al., 2018). This study found that personalization is not the primary reason for individuals to

notice that their online privacy has been breached. However, advertisers are expected to carefully watch over the type and amount of data used in personalization when practicing personalized advertising.

Limitations and future research

Despite the contributions that have been made to the development of personalized advertising, this study is subject to several limitations that need to be improved in the future. First, studies found that culture has effects on different concepts, such as developing trust (Doney, Cannon, & Mullen, 1998; Muethel & Bond, 2013) and online privacy attitudes (Rho et al., 2018). Therefore, in future research, participants with the same cultural background should be pooled for analysis.

Second, the personalization element contains some manipulative advertisements. In this study, low-personalized advertisements include the information about participant's previous searches, whereas the content of high-personalized advertisements is based on an organic combination of the recipient's personal information and previous searches. Aguirre et al. (2015) contended that personalized advertisements can use a variety of personal data to give rise to various advertising effectiveness. Therefore, different personalization elements should be used in future studies to measure advertising effectiveness.

Thirdly, given that this research was conducted via the Internet, it can be assumed that some participants completed the survey without paying full attention. Eye tracking technology allows researchers to record participants' eye positions and movements (Ashraf, Sodergren, Merali, Mylonas, Singh, & Darzi, 2018). Visual attention can be measured and correlated by the same technology (Ashraf et al., 2018). To ensure the attention of respondents has been adequate, it is suggested that future research apply eye tracking technology during the experiment.

Finally, the present research does not touch on, but future research could explore, the antecedents of privacy fatigue. Privacy fatigue is a new concept in the field of online privacy. Not many previous studies have been conducted to investigate the impact of privacy fatigue on personalized advertising. This research investigates the interaction effects of privacy fatigue and perceived privacy concerns on click-through intentions and forward

intentions, yet no solid evidence can be found to substantiate the effects of privacy fatigue. Therefore, in-depth analysis about privacy fatigue could be conducted in future researches.

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Pre-test Survey

Thank you for taking the time to complete this survey. This survey is the pre-test of a study about Personalized Advertising as a part of my master's research at the University of Twente, Enschede.

This is an anonymous survey; all the information you provide is confidential and will only be used for this research.

Thank you for your participation!

Do you agree to participate in this survey?

- In the next page, a scenario which contained an imaginary Internet activities process is provided.

[Advertisement]

Q2: Please answer to what extent you disagree or agree with the statements below.

[illegible]

I see my own situation in this advertisement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This advertisement contains the problem I recently faced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This advertisement contains my personal situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Remember the scenario that you read before and answer the questions as if they apply to this specific situation.

Q3: Please answer to what extent you disagree or agree with the statements below.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I like this advertisement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like the design of this advertisement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the remaining questions from your own perspective, NOT taking the scenario into account.

Q4: How trustworthy do the following websites seem to you?

	Strongly untrustworthy	Untrustworthy	Somewhat untrustworthy	Neither trustworthy nor untrustworthy	Somewhat trustworthy	Trustworthy	Strongly trustworthy
Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BBC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CNN	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pinterest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Guardian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tweakers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the remaining questions from your own perspective, NOT taking the scenario into account.

Q5: How would you describe your attitude towards the following websites?

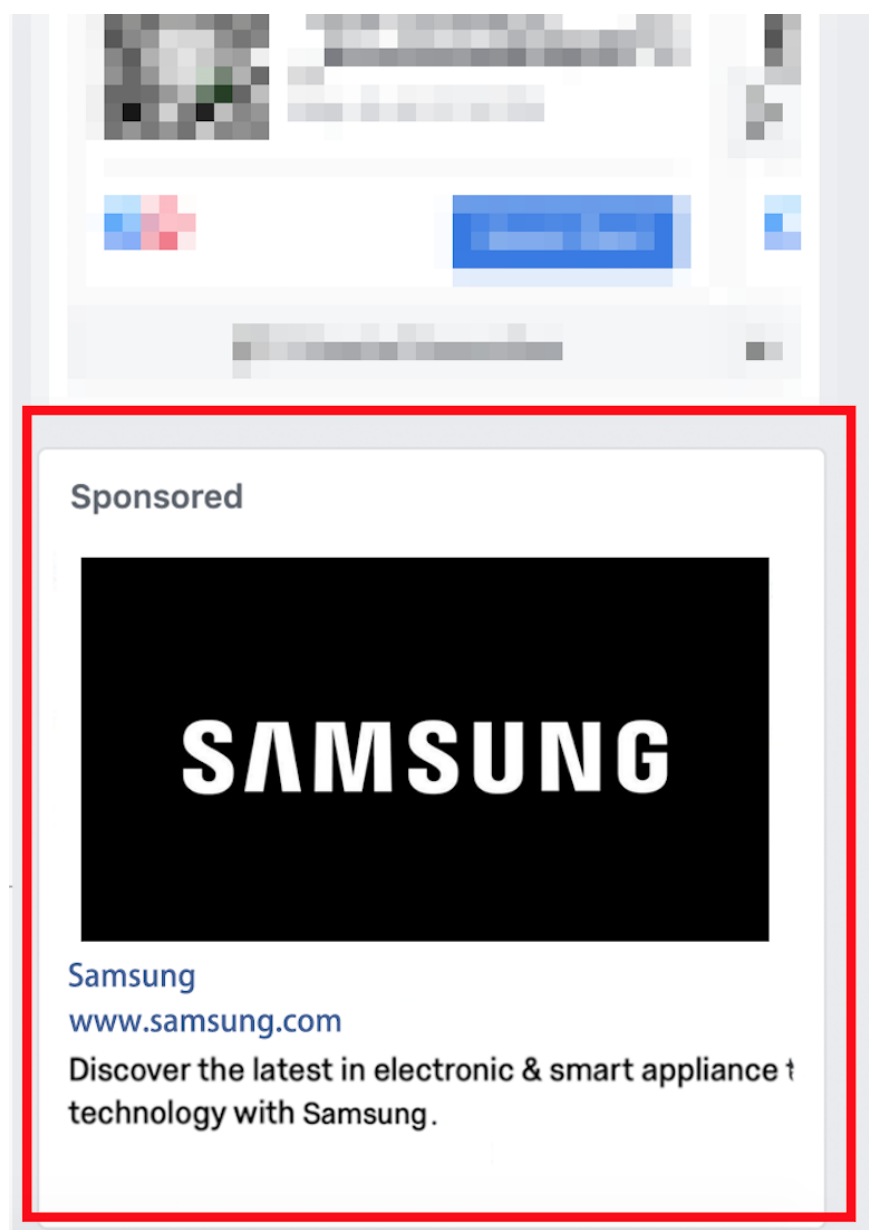
Appendix B

Stimulus Material for the Pre-test

Condition 1: No personalization

Imagine, the coming Saturday is your mother's birthday and you still need to buy a birthday gift for her. You remembered that your mother is collecting charms for her Pandora bracelet. Therefore, you turn on your laptops and start checking all available charms on the Pandora website. After a while, you pick a few charms that you like and send their pictures to one of your best female friends on Facebook to ask for her advice. However, your friend suggests you go to the Pandora store in your city and check the products.

On the same night, you browse the internet and you see the following advertisement:

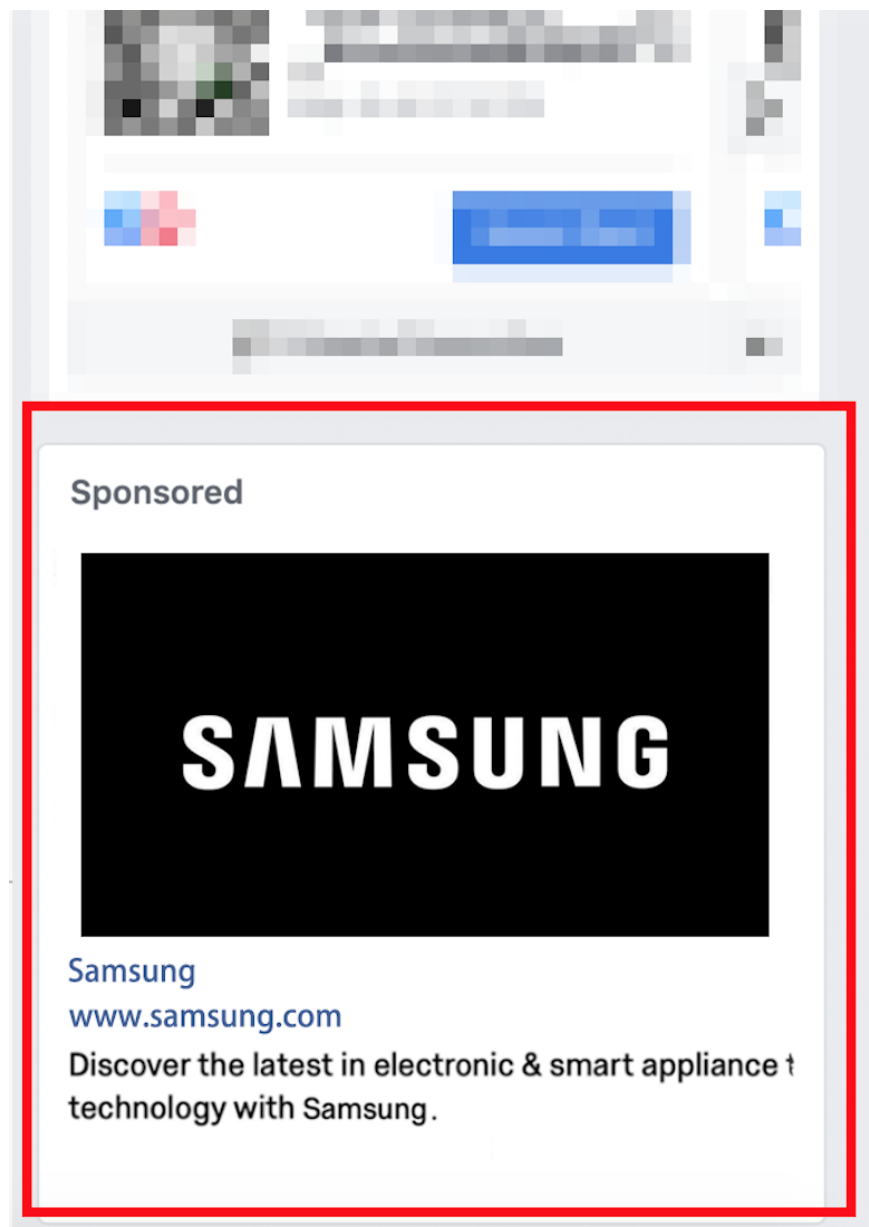


Condition 2: Low personalization

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.

Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 on your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement:

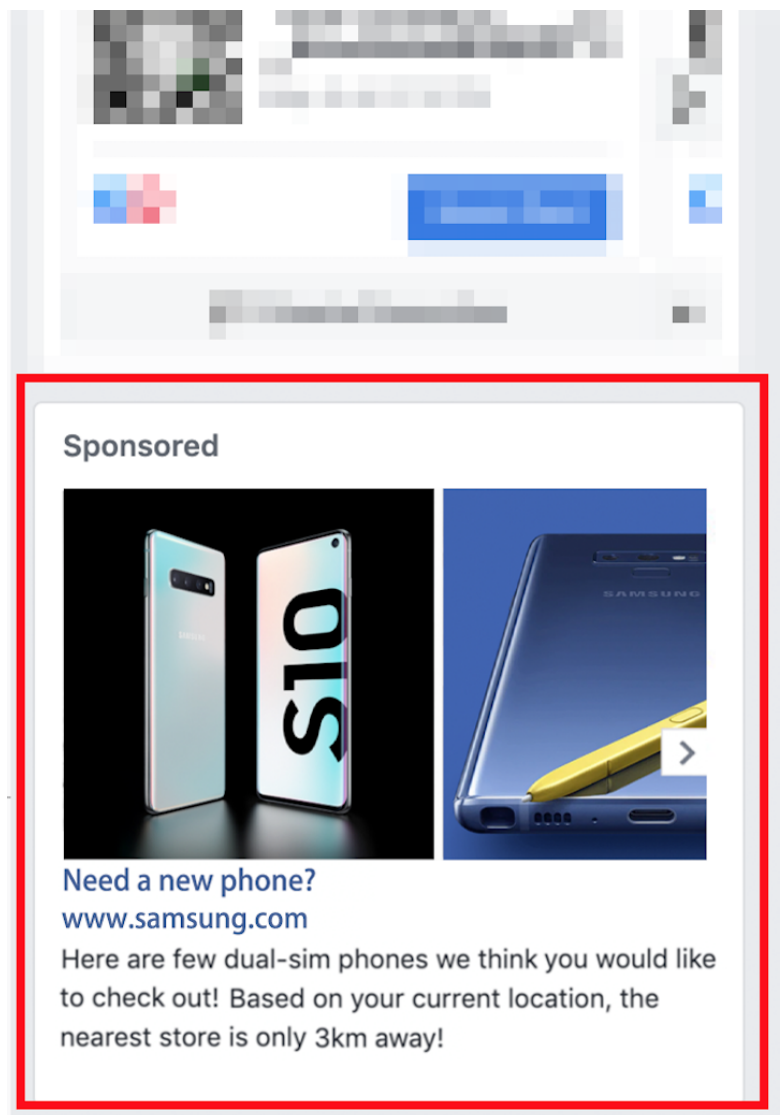


Condition 3: High personalization

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.


Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 on your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement:



The image shows a social media interface with a blurred background of posts. In the foreground, a sponsored advertisement is highlighted with a red border. The ad features two images of Samsung smartphones: one showing the back of a Galaxy S10 with its camera and the front of a phone displaying '\$10', and another showing the back of a Samsung Note 9 with a yellow S Pen. Below the images, the text reads: 'Need a new phone? www.samsung.com Here are few dual-sim phones we think you would like to check out! Based on your current location, the nearest store is only 3km away!'

Sponsored



Need a new phone?
www.samsung.com

Here are few dual-sim phones we think you would like to check out! Based on your current location, the nearest store is only 3km away!

Appendix C

Main Study Survey

Dear respondent,

Thank you for taking the time to complete this survey. This survey is for a research about Personalized Advertising as a part of my master's research.

This is an anonymous survey; all the information you provide is confidential and will only be used for this research.

This survey will last 6 to 10 minutes to complete. It is advised to conduct the survey over laptops or computers. Please answer the questions carefully.

If you have any questions or wish to receive more information about this research, please feel free to contact me.

Thank you for your participation!

Yuwei Zhao
MSc. Communication Studies, University of Twente
y.zhao-8@student.utwente.nl

I understand the text above and agree to participate in this survey.

- ☐ Yes
☐ No

In the next page, a scenario that contains an Internet activity is provided.

Please imagine the scenario that is described on the next page. It is important that you feel as if the situation would really apply to you!

[Scenario]

[Advertisement]

Remember the scenario and the advertisement that you read before and answer the questions as if they apply to this specific situation.

Q2: Please answer to what extent you disagree or agree with the statements below.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
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Q3: Please answer to what extent you disagree or agree with the statements below.

[illegible]

Q4: Please answer to what extent you disagree or agree with the statements below.

[illegible]

- ☐ Searching information about mobile phones
- ☐ Searching information about earrings
- ☐ Both mentioned above
- ☐ I do not remember anymore

- ☐ Samsung
- ☐ Pandora
- ☐ Both mentioned above
- ☐ I do not remember anymore

Q10: Please answer to what extent you disagree or agree with the statements below.

[illegible]

Q11: Please answer to what extent you disagree or agree with the statements below.

[illegible]

I like the design of this advertisement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the remaining questions from your own perspective, NOT taking the scenario and the advertisement into account.

Q12: Please answer to what extent you disagree or agree with the statements below.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I trust Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I can rely on Samsung and its products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think Samsung is an honest brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Samsung brand gives me a safe feeling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13: Please answer to what extent you disagree or agree with the statements below.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I regard Samsung as a good brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regard Samsung as a positive brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regard Samsung as a satisfying brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14: Based on questions you just answered, what do you think the purpose of this study is?

Q15: Do you feel any strange with the scenario and the advertisement?

Q16-1: Have you ever browsed CNN (an American news website)?

- ☐ Yes
☐ No

Q17-1: Please answer to what extent you disagree or agree with the statements below.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

[illegible]

☐ Yes

☐ No

[illegible][illegible]

I would like to use Facebook again in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the information provided by Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable in using Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think Facebook is a good website for me to spend my time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In this section, all the personal information you provide is confidential and will only be used for this research.

Q19: What gender do you identify with?

- ☐ Male
- ☐ Female
- ☐ Prefer not to say
- ☐ Other

Q20: What year were you born? (e.g. 1995)

Q21: What is your nationality?

Q22: What is your current/highest level of education

- ☐ Less than Bachelor
- ☐ Bachelor
- ☐ Master
- ☐ Higher than Master

Q23: How often do you search information about products on the Internet?

- ☐ Never
- ☐ Monthly
- ☐ Weekly
- ☐ Once in 2 -3 days
- ☐ Daily

Appendix D

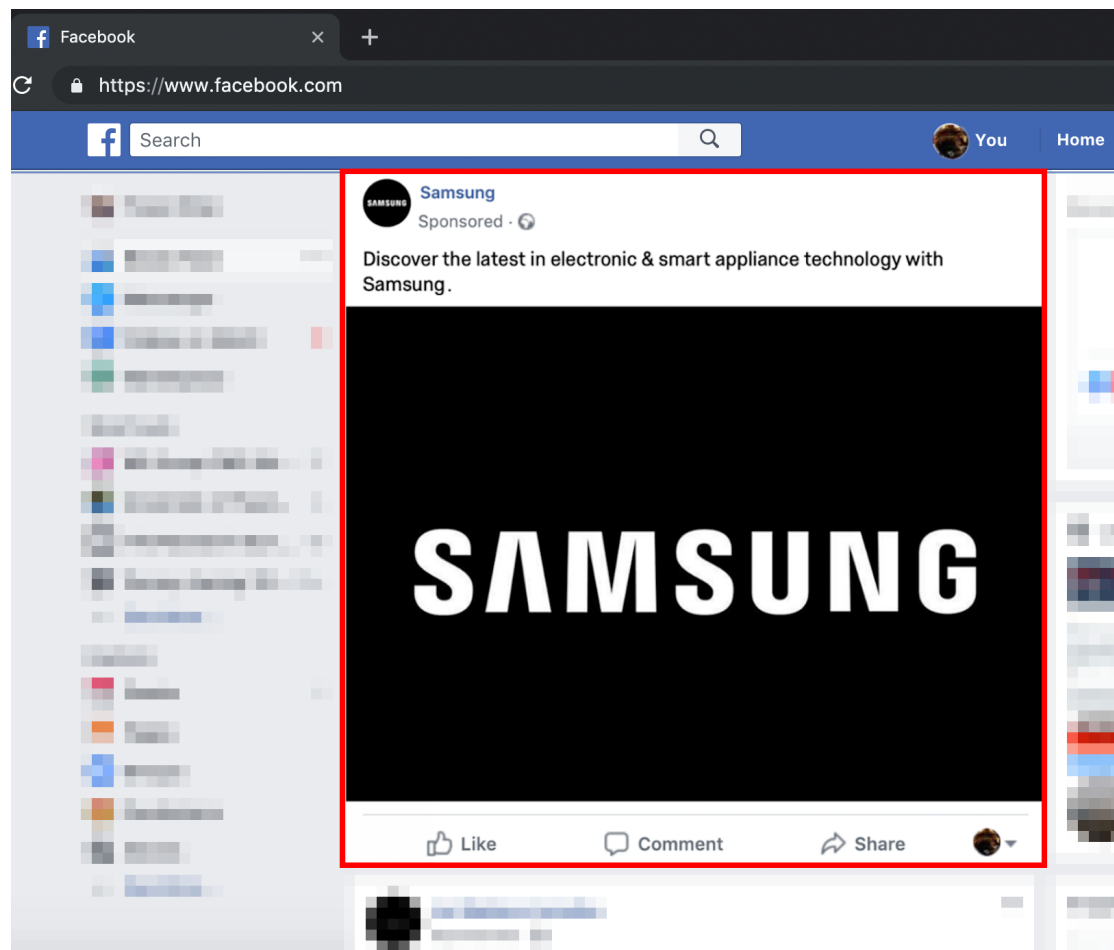
Stimulus Material for Main Study

Condition 1: No personalization x Facebook

Imagine, the coming Saturday is your mother's birthday and you still need to buy a birthday gift for her.

You remembered that your mother wants new earrings. Therefore, you turn on your laptop and start checking all available earrings on the Pandora website. After a while, you pick few pairs of earrings that you like and send their pictures to one of your best female friends on Facebook to ask for her advice. However, your friend suggests you go to the Pandora store in your city and check the products.

On the same night, you browse the internet and you see the following advertisement on your Facebook page:

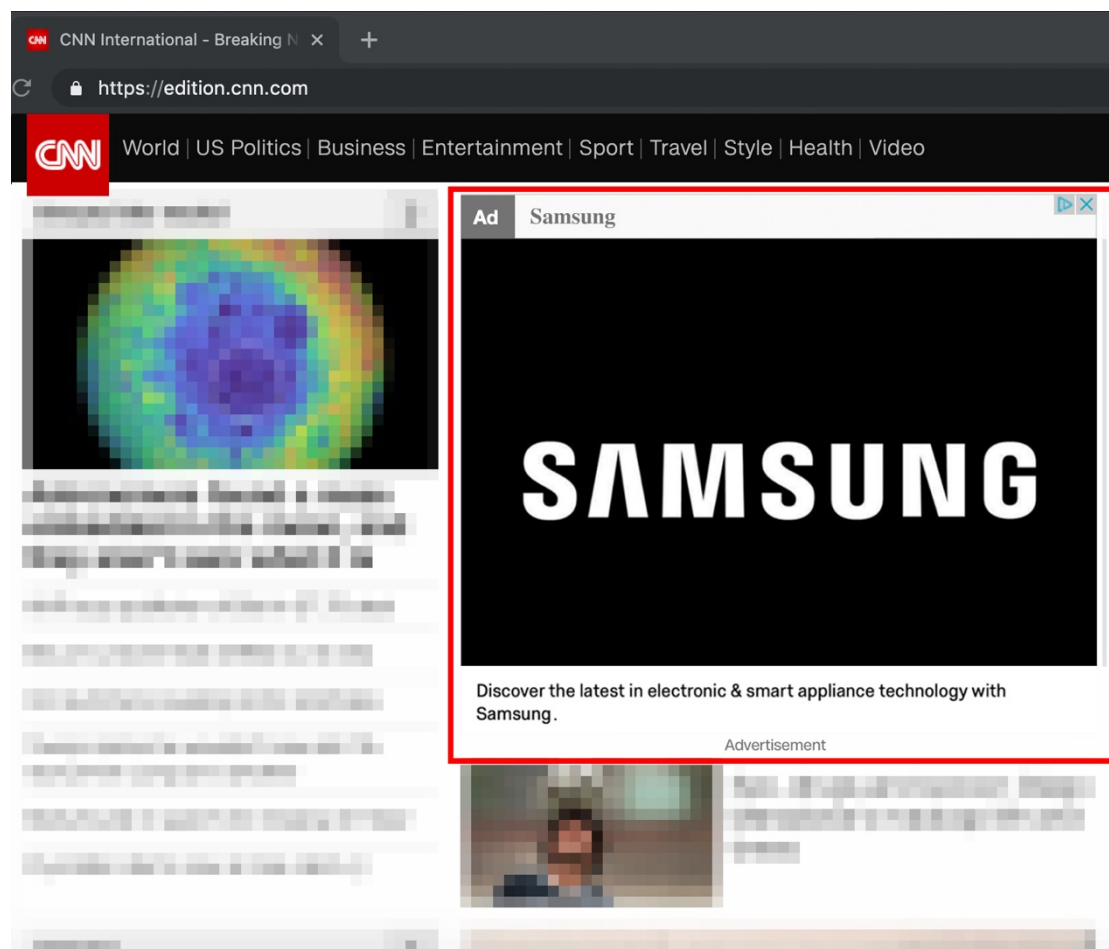


Condition 2: No personalization x CNN

Imagine, the coming Saturday is your mother's birthday and you still need to buy a birthday gift for her.

You remembered that your mother wants new earrings. Therefore, you turn on your laptop and start checking all available earrings on the Pandora website. After a while, you pick few pairs of earrings that you like and send their pictures to one of your best female friends on Facebook to ask for her advice. However, your friend suggests you go to the Pandora store in your city and check the products.

On the same night, you browse the internet and you see the following advertisement on the CNN website:

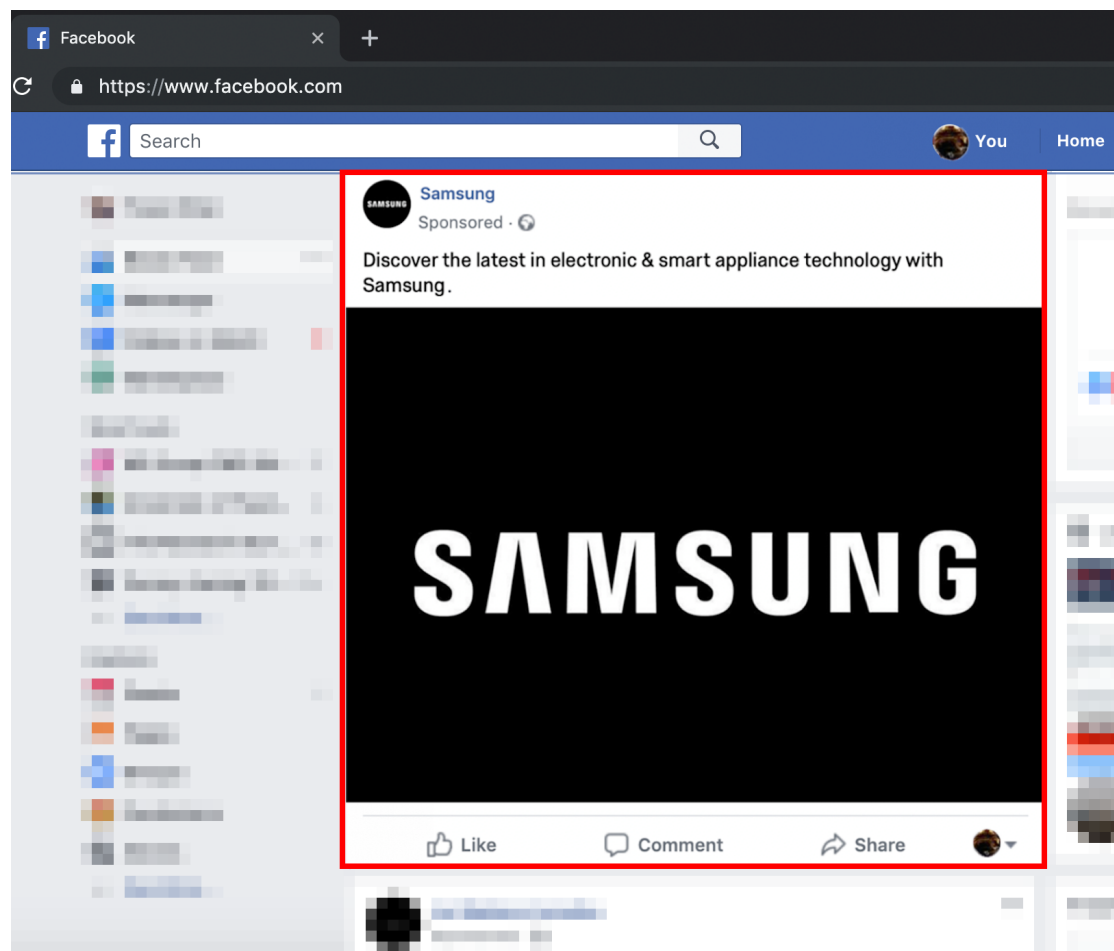


Condition 3: Low personalization x Facebook

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.

Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 in your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement on your Facebook page:

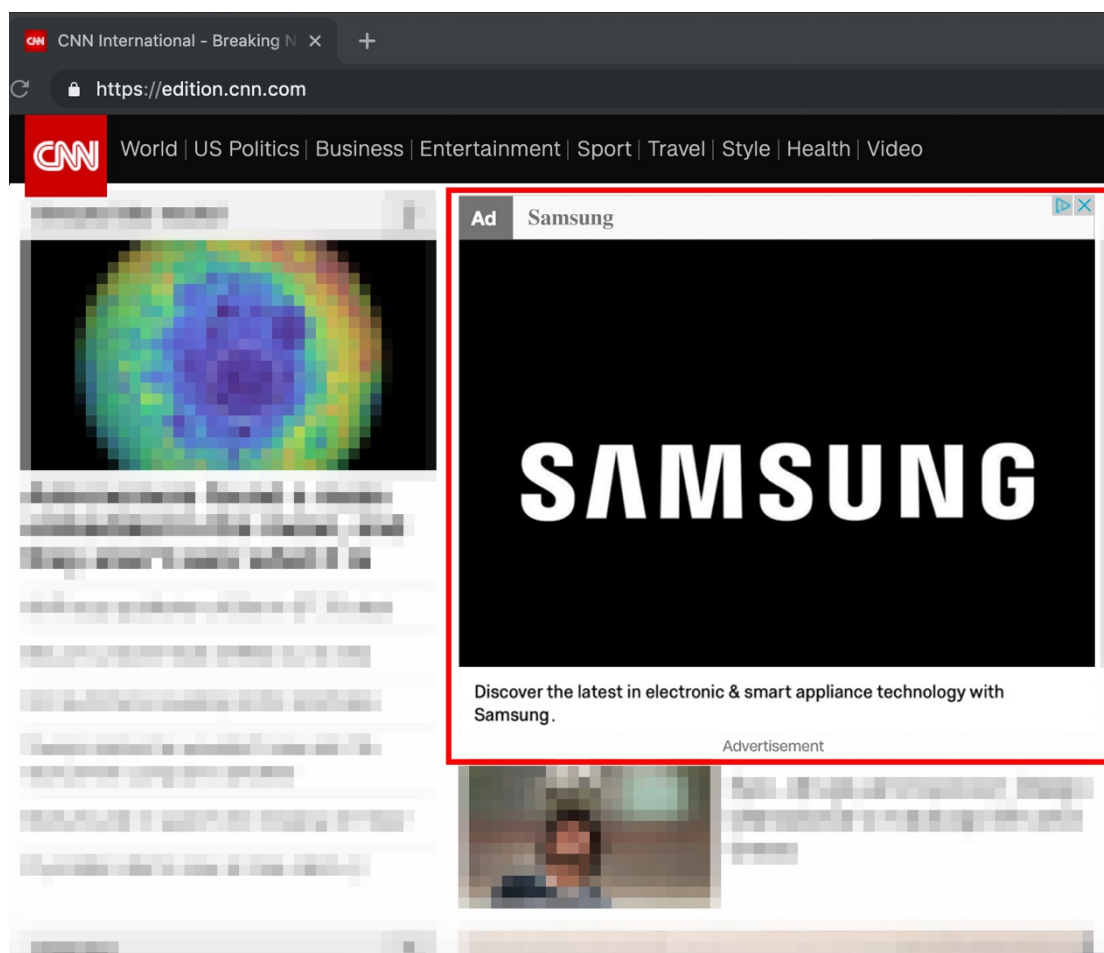


Condition 4: Low personalization x CNN

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.

Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 in your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement on the CNN website:



The image is a screenshot of a web browser displaying the CNN International website. The browser's address bar shows the URL <https://edition.cnn.com>. The CNN logo is visible in the top left corner, and a navigation menu includes links for World, US Politics, Business, Entertainment, Sport, Travel, Style, Health, and Video. On the left side of the page, there is a large, colorful, abstract image. To the right of this image, a Samsung advertisement is displayed, enclosed in a red rectangular border. The advertisement features the word "SAMSUNG" in large, white, bold letters on a black background. Below the logo, the text reads: "Discover the latest in electronic & smart appliance technology with Samsung." At the bottom of the advertisement, the word "Advertisement" is written in small text. Below the advertisement, there is a small, blurry image of a person's face.

Condition 5: High personalization x Facebook

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.

Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 in your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement on your Facebook page:

The image is a screenshot of a Facebook web interface. At the top, the browser address bar shows 'https://www.facebook.com'. The Facebook navigation bar includes a search bar, a profile picture placeholder, and the text 'You Home'. The main content area features a sponsored advertisement from Samsung. The ad text reads: 'Need a new phone? Here are few dual-sim phones we think you would like to check out! Based on your current location, the nearest store is only 3km away!'. Below the text are two images: the Samsung Galaxy S10 on the left and the Samsung Note 9 on the right. The S10 image shows the back and front of the phone, with 'S10' written on the screen. The Note 9 image shows the back of the phone with a yellow S Pen. Below the images are the labels 'Samsung Galaxy S10' and 'Samsung Note 9'. At the bottom of the ad are icons for 'Like', 'Comment', and 'Share'. The background of the Facebook page is blurred, showing a list of friends or posts on the left.

Condition 6: High personalization x CNN

Imagine, your mobile phone almost dies so you plan to buy a new mobile phone in the coming months. Therefore, you turn on your laptop and start looking on the Internet and searching information about mobile phones. You read several articles and news about recent published mobile phones and you found that the use of the dual-sim mobile phone is a trend.

Thus, you start looking for dual-sim mobile phones on the Internet. After a while, there are several mobile phones from Samsung that grabbed your attention. You check the features and specifications of each mobile phone and Samsung Galaxy S10 and Samsung Note 9 are top 2 in your mind. However, you decide to check these phones in the store before you make the decision.

On the same night, you browse the internet and you see the following advertisement on the CNN website:

The screenshot shows a web browser window with the address bar displaying 'https://edition.cnn.com'. The CNN logo is visible in the top left corner. The main content area features a large, colorful, abstract image on the left and a Samsung advertisement on the right. The advertisement is titled 'Ad Samsung' and displays two Samsung phones: the Samsung Galaxy S10 and the Samsung Note 9. Below the phone images, the text reads: 'Need a new phone? Here are few dual-sim phones we think you would like to check out! Based on your current location, the nearest store is only 3km away! Advertisement'.

Appendix E.

Overview of items to measure constructs

Construct	Item	Source
Perceived privacy concerns	I feel bothered when online services try to collect my personal information for commercial purposes	Smith et al. (1996)
	I am concerned that online services collected too much information about me for commercial purposes	
	I feel bothered when online services are able to track my personal information	
	I am concerned that my personal information could be misused by online services	
Click-Through Intentions	I am inclined to click on this advertisement	Aguirre et al. (2015)
	The probability of me clicking on this advertisement is high	
	I have no problem clicking on this advertisement	
Forward Intentions	I am inclined to forward this advertisement	Huang et al. (2012)
	The probability of me forwarding this advertisement is high	
	I have no problem forwarding this advertisement	
Emotional exhaustion	Managing online information privacy makes me emotionally drained	Schaufeli et al. (1996)
	Online privacy issues make me tired	
	I feel bothered when I have to care about online privacy	
Privacy cynicism	Frequent online privacy issues made me become less interested in online privacy	Schaufeli et al. (1996)
	Frequent online privacy issues made me become less enthusiastic about protecting my personal information	
	Frequent online privacy issues made me become more frequently doubtful about the importance of online privacy	
	I prefer using online services than being bothered by online privacy issues	
Perceived personalization	This advertisement is tailored for me	Dijkstra (2005)
	I see my own situation in this advertisement	
	This advertisement contains the problem I recently faced	
	This advertisement contains my personal situation	
Attitudes toward Samsung	I regard Samsung as a good brand	de Keyzer et al. (2015)
	I regard Samsung as a positive brand	
	I regard Samsung as a satisfying brand	
Attitudes toward the advertising website	Facebook/CNN makes it easy for me to gather information	Chen & Wells (1999)
	I would like to use Facebook/CNN again in the future	

	I am satisfied with the information provided by Facebook/CNN	
	I feel comfortable in using Facebook/CNN	
	I think Facebook/CNN is a good website for me to spend my time	
Trustworthiness of Samsung	I trust Samsung	Chaudhuri & Holbrook (2001)
	I think I can rely on Samsung and its products	
	I think Samsung is an honest brand	
	The Samsung brand gives me a safe feeling	
Trustworthiness of the advertising website	I trust Facebook/CNN and its services	Chaudhuri & Holbrook (2001)
	I trust the information on Facebook/CNN	
	I think Facebook/CNN is an honest website	
	I think Facebook/CNN is safe	

Appendix F.

The outcomes of the validity analysis

Table 4					
<i>The outcomes of the validity analysis</i>					
<u>Item</u>	<u>Perceived</u> <u>privacy</u> <u>concerns</u>	<u>Click-</u> <u>through</u> <u>intentions</u>	<u>Forward</u> <u>intentions</u>	<u>Emotional</u> <u>exhaustion</u>	<u>Privacy</u> <u>cynicism</u>
I feel bothered when online services try to collect my personal information for commercial purposes	.802				
I am concerned that online services collected too much information about me for commercial purposes	.831				
I feel bothered when online services are able to track my personal information	.852				
I am concerned that my personal information could be misused by online services	.739				
I am inclined to click on this advertisement		.693			
The probability of me clicking on this advertisement is high		.788			
I have no problem clicking on this advertisement		.551			
I am inclined to forward this advertisement			.761		
The probability of me forwarding this advertisement is high			.712		
I have no problem forwarding this advertisement			.788		
Managing online information privacy makes me emotionally drained				.812	
Online privacy issues make me tired				.887	
I feel bothered when I have to care about online privacy				.686	
Frequent online privacy issues made me become less interested in online privacy					.783
Frequent online privacy issues made me become less enthusiastic about protecting my personal information					.746
Frequent online privacy issues made me become more frequently doubtful about the importance of online privacy					.666
I prefer using online services than being bothered by online privacy issues					.506