Master Thesis

MSc Business Administration:

Strategic Marketing Management

Consumer perceptions on Targeted Advertising:

A study on Facebook personalization practices

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ABSTRACT

This research investigates what the consumers of Facebook think of Facebook's targeted advertising. It also seeks to explain which variables influence the consumer perceptions. Data was collected through an online questionnaire in which 167 participants had to respond to various statement on a Likert scale. Based on our results, we found that the consumers' perception of infotainment, ad irritation and credibility and privacy concerns exert influence on the perceived value of targeted advertising. Moreover, we found a positive relationship between the perceived value of targeted advertising and ad avoidance. We also found that the attitude towards targeted advertising is positively influenced by the perceived value of targeted advertising. The study contributes theoretical knowledge on the variables which influence the perception of consumers on targeted advertising. The practical contribution of this research is that it offers advertisers and marketers a better understanding of what makes consumers avoid targeted advertisements, something that can help them implement measures to counter ad avoidance.

Keywords: Targeted advertising, privacy concerns, behavioural advertising, ad avoidance, consumer perception, Facebook advertising, advertising value

INTRODUCTION

Over the course of the years, advertising has changed drastically. Until recently, the biggest advertising platforms were television, radio and the newspaper. With the introduction of the internet, these platforms have slowly started to decline while paving the way for online advertising. Spending on display advertising, such as banner ads, amount to approximately $63 billion dollars in 2020[1]. In the past few years, online advertising has evolved dramatically due to developments in social media (Dahl, 2018).

Moreover, online advertising is growing each year and according to Chen and Stallaert (2014), behavioural targeted advertising is going to make up a large part of this growth. Moreover, Martin, Borah and Palmatier (2017), state that companies which use targeted advertising are experiencing as much as a 5% higher profit as opposed to the companies that do not use targeted advertising. In fact, around 98% of Facebook's revenue comes from advertising (Fortune, 2017).

According to a study conducted by IHS Markit (2017), they stated that in 2016 *''90% of the digital display advertising market growth came from formats and processes that use behavioural data''*. Furthermore, it is said that behavioural targeting in digital advertising will see a growth of 106% by the end of 2020, while digital advertising which does not use behavioural advertising will decline by 63.6% [2].

Facebook is currently the largest social media website with over 2.6 billion monthly active users (Clement, 2020). Facebook advertisements can be targeted by collecting data about the consumer's location, demographics, behaviour, interests and connections (Facebook, 2020). Facebook is an online community where users can create profiles, share information and interact with other users as well as companies. In addition, due to the many communication options available and different ways to target specific audiences, Facebook is considered to be a very attractive platform for marketers (Baglione and Tucci, 2018).

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[1] https://www.statista.com/outlook/217/100/banner-advertising/worldwide
[2] https://datadrivenadvertising.eu/wp-content/uploads/2017/09/BehaviouralTargeting_FINAL.pdf

Although there have been various studies conducted on the consumer perception of targeted advertising (McDonald and Cranor, 2010; Smit, Noort and Voorveld, 2014 and Ham and Nelson, 2016), there has been limited research in the past few years on targeted advertisements on social media websites such as Facebook.

This study will contribute knowledge on the variables which influence the perception of consumers on targeted advertising. Furthermore, understanding what people dislike about targeted avoidance can help companies to fine-tune their marketing strategies in order to decrease the high consumer avoidance of targeted advertising.

This research will be focusing on how targeted advertising is perceived by the consumers as well as find out what the relationship is between the variables which influence this perception. The main research question of this study is:

What is the perception of consumers towards targeted advertising?

BACKGROUND

Uses and Gratifications Theory

The Uses and Gratifications theory, also known as the U&G theory, was firstly discussed by Katz, Blumler and Gurevitch (1974, p. 20) and they defined the theory as "*the social and psychological origins of needs, which generate expectation of the mass media or other sources, which lead to different patterns of media exposure resulting in need gratifications and other consequences*".

Eighmey and McCord (1998) found that the Uses and Gratifications theory, is beneficial in understanding the motivations of consumers' and their concerns about traditional media. Moreover, studies have been conducted to explain the motives and values of consumers using mass media, such as television and the internet (Luo, 2002; Okazaki, 2004).

However, as social media websites, such as Facebook, are continuing to increase in popularity, so does the popularity of using these social media websites for satisfying the cognitive and affective needs (Rubin, 2002). We can use the U&G theory to understand the people's motives for using social media websites and more specifically, what affects their perception of the

advertisements on social media websites, because according to Liu et al. (2012), a consumer's perceived value of advertising can be viewed as an extension of the U&G theory.

A basic assumption of the U&G theory is that users are actively involved and interact with the communication media. This applies well to social media platforms, due to the fact social media is a place of high consumer involvement and interaction. Hence the U&G theory can be successfully applied in this study.

The U&G theory has multiple constructs, however, in the literature it is agreed upon that one of the most important dimensions of U&G are entertainment, irritation and informativeness (Eighmey and McCord, 1998; Luo, 2002; Okazaki, 2004; Liu et al., 2012).

We argue that targeted advertisements should have certain characteristics in order to create a positive perception for consumers. Thus, in this study we will use the dimensions discussed in the Uses & Gratifications theory (among others), which are ''entertainment, irritation and informativeness'', in order to find out how these factors, influence the consumer's perception towards targeted advertising.

Although the Uses & Gratifications theory is going to be the main theory discussed in this research, due to it being useful in understanding which factors affect the attitude towards targeted advertising, other relevant theories can be found in table 1.

Table 1. Relevant theories	Explanation
Social presence theory (Phelan, Lampe and Resnick, 2016)	This theory describes the feeling of being with someone in mediated communication. According to this theory, when a company is collecting your personal data, it creates the same negative feeling as when a person looks over your screen while you are browsing.
Persuasion knowledge model (PKM) (Baek and Morimoto, 2012; Van Noort, Smit and Voorveld, 2013)	PKM assumes that when consumers realize the persuasive tactics used by advertisers they tend to be wary and defensive against those tactics. This means that when people realize that their information is being collected for targeted advertising, they might try to change their online behaviour.

*Social contract theory (*Jai, Burns and King, 2013; Miyazaki, 2008)	The social contract theory explains that companies form an implied social contract with the consumers where the consumer expects that the company does not collect or disclose their personal information in an irresponsible manner.
Psychological reactance theory (Brehm, 1966)	This theory states that people often experience an unpleasant feeling when their free will is being threatened. Consumers who feel like they do not have full control over their personal information are more likely to perceive targeted advertisements negatively.

Variable conceptualization

The main objective of this research is to find the consumer attitude towards targeted advertising. Given the fact that the attitude towards advertising differs based on the advertising medium (Elliott and Speck, 1998), it would be useful to study the factors that affect the consumer's attitude towards targeted advertising.

MacKenzie and Lutz (1989), define attitude as a *''predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion''*. There have been many past studies looking at the attitudes towards different kinds of advertising, because attitudes are considered to be a predictor for consumer behaviour. (MacKenzie and Lutz, 1989). Furthermore, Mehta (2000) found that the attitude towards advertising is also a predictor for advertising effectiveness.

Moreover, advertising value is also an important concept in this study because it is a determinant of the consumer's response towards advertising (Ducoffe, 1995). Ducoffe (1995, p. 1) defines advertising value as *''a subjective evaluation of the relative worth or utility of advertising to consumers''.* Perceived advertising value is considered to be a much narrower construct than the attitude towards advertising. This is because perceived advertising value is a cognitive reaction about whether the advertising gives the consumers what they want (Ducoffe, 1996; Liu et al., 2012).

Our study aims to identify which factors influence perceive advertising value and, as a result, the attitude towards targeted advertising, so that we can gain a bigger understanding of how consumers perceive targeted advertising and which factors play a major role in this perception.

As discussed previously, the U&G theory identified that entertainment, irritation and informativeness are one the most important dimensions in understanding consumer's motivations in the context of traditional media (Eighmey and McCord,

1998). Based on past research, informativeness and entertainment will be merged together into a single construct called ''infotainment'' (Okazaki, 2004; Wang and Sun, 2010; Liu et al., 2012). This is because in online advertising, information and entertainment values are usually mixed together (Wang and Sun, 2010).

Furthermore, the credibility of online advertising is also an important factor when talking about advertising value (Tsang et al., 2004; Saadeghvaziri and Hosseini, 2011). Ducoffe (1996) found that high credibility can positively influence the attitude towards advertising.

According to Tucker (2014) and Turrow et al. (2009), consumers that are aware of personalization techniques may consider this kind of advertising as a violation of their privacy. Targeted advertising has the possibility of making consumers feel that their privacy is being intruded and as a result, these consumers are more likely to object targeted advertising and the collection of their personal data (Simonson, 2005).

Past studies have shown that privacy concerns can lead to a negative perceived advertising value (Dhar and Varshney, 2010; Bautista and Lin, 2014). Considering the fact that in order for Facebook to provide consumers with targeted advertisement, it first needs to collect some data about them. Not all consumers might be happy with Facebook collecting their personal data and as such can have a lower perceived value of targeted advertising.

Speck and Elliott (1997), found that consumer's negative attitudes towards advertising can result in advertising avoidance. On the contrary, research has found that personalized advertisements in social media have a positive effect on advertising effectiveness, such as an increased attention span towards advertisements as well as a decreased ad avoidance (Jung, 2017). Thus, the perceived value of targeted advertising has an effect on whether a consumer is more likely to avoid advertisements or not.

Table 2 Variable definitions	Definition	Reference
Infotainment	A portmanteau word made up from the words ''information'' and ''entertainment'' which emerged initially in the broadcasting industry that is used to both inform and entertain in order to increase popularity with the targeted audience.	Stockwell (2004), Okazaki (2004), Wang and Sun (2010) and Liu et al. (2012)
Ad irritation	An advertisement which is provoking, causing displeasure and momentary impatience.	Aaker and Bruzzone (1985)
Ad credibility	The extent to which the consumer perceives claims made about the brand in the ad to be truthful and believable.	MacKenzie and Lutz (1989)
Privacy concerns	The degree to which a consumer is worried about the potential invasion of the right to prevent the disclosure of personal information to others.	Baek and Morimoto (2012)
Ad avoidance	All actions by media users that reduce their exposure to ad content.	Speck and Elliott (1997)
Perceived value of targeted advertising	A subjective evaluation of the relative worth or utility of (targeted) advertising to consumers.	Ducoffe (1995) and Liu et al. (2012)
Attitude towards targeted advertising	Learned predisposition to respond in a consistently favorable or unfavorable manner towards advertising in general.	(MacKenzie and Lutz, 1989)

LITERATURE REVIEW

Advertising value

To find out what the perception of consumers is towards targeted advertising, we must first delve into the concept of ''advertising value''. A value can be defined as a '*belief about some desirable end-state that transcends specific situations and guides selection of behaviour''* (Schwartz and Bilsky, 1987). According to Ducoffe (1995) and Liu et al. (2012), advertising value is an important variable in determining the consumers' perception towards advertising. Ducoffe (1995) defines advertising value as *''a subjective evaluation of the relative worth or utility of advertising to consumers''*. Advertising value is a crucial factor in measuring advertisement effectiveness in terms of responses from consumers (Ducoffe, 1995). Moreover, Liu et al. (2012) saw the perceived value of advertising as an extension of the U&G theory. The uses and gratifications theory was previously used to understand and explain the psychological motives consumers associate with mass media (Katz, Blumler and Gurevitch, 1974). When advertising value meets consumer's expectations, then they tend to take favorable actions such as purchasing the product shown in the advertisement (Ducoffe and Curlo, 2000). On the contrary, when the perceived advertising value is low, then the consumers are more likely to ignore the advertisement.

Infotainment

Because previous research (Okazaki, 2004; Wang and Sun, 2010; Liu et al., 2012) combined information and entertainment into a single construct, infotainment, this construct will also be used in our study. According to Aitken, Gray and Lawson (2008), information is a valuable incentive in marketing because it results in a positive reaction to its recipients. Moreover, information accounts for the ''uses'' part of the U&G theory, and is defined as the extent to which the advertisements provide its users with helpful and useful information (Ducoffe, 1996). Furthermore, informative advertisements are crucial in engaging consumers with social media advertisements (Wright, Gaber, Robin and Cai, 2017).

On the other hand, the ''gratifications'' part of the U&G theory accounts for entertainment in this case, because gratification is defined as the notion to fulfill consumers' needs for *''escapism, diversion, esthetic enjoyment or emotional release''* (McQuail, 1983). This tactic can in turn lead to making customers more familiar with the advertised product (Lehmkuhl, 2003). Researchers

have found that consumers' overall enjoyment of an advertisement influences their overall attitude towards it (Shavitt, Lowrey and Haefner, 1998; Heng, Lih-Bin and Hock-Hai, 2009). Furthermore, the entertainment value in an advertisement is found to be positively related to the perceived value of traditional advertising (Chowdhury et al. 2006; Ducoffe, 1995). Based on the previous paragraphs, we came up with the following hypothesis.

Hypothesis 1: Consumers' perception of infotainment of Facebook advertisements has a positive relationship with the perceived value of targeted advertising.

Ad irritation

There have been several researchers which discussed ad irritation (Bauer and Greyser, 1968; Aaker and Bruzzone, 1985). According to Aaker and Bruzzone (1985), ad irritation can occur when the ad is *''provoking, causing displeasure and momentary impatience''*. Moreover, they state that consumers are more likely to be irritated when an ad is considered to be provoking, causing momentary impatience and displeasure. Ad irritation has been defined as being more negative than ''dislike'' (Aaker and Bruzzone, 1985) yet less negative than ''offensive'' (Bauer and Greyser, 1968).

According to the psychological reactance theory, people often experience an unpleasant motivational arousal when they are experiencing a threat to their free will (Brehm, 1966). Due to this, it can be said that people who feel that they don't have full control over their personal information, are more likely to perceive advertisements as irritating.

Moreover, Kornias and Halalau (2012), found that Facebook users see advertising as interfering with the reason they are on Facebook and as such are often being perceived as annoying.

Past studies have reported a negative relationship between perceived ad irritation and the consumer's attitude towards advertising (Tsang et al., 2004; Saadeghvaziri and Hosseini, 2011; Aktan et al., 2016), as such we have proposed the following hypothesis.

Hypothesis 2: Consumers' perception of ad irritation of Facebook advertisements has a negative relationship with the perceived value of targeted advertising.

Ad credibility

Advertising credibility is defined by MacKenzie and Lutz (1989) as '*the extent to which the consumer perceives claims made about the brand in the ad to be truthful and believable.''* Advertising credibility is especially important when consumers must make a decision in a situation where there is uncertain or incomplete information (Okazaki, Katsukura and Nishiyama, 2007). Credibility of advertisements is considered to be one of the most important elements when discussing advertising value (Tsang et al., 2004; Saadeghvaziri and Hosseini, 2011).

Advertisement credibility can be influenced by a variety of factors, but one of the biggest factors is the company's credibility as well as the message of the ad (Goldsmith, Lafferty and Newell, 2000). Due to the fact that the internet is a predominantly unregulated environment, consumers often perceive online advertising as less credible compared to other traditional media (Prendergast, Liu and Poon, 2009). Moreover, one of the first researchers to delve into advertising credibility, Ducoffe (1996), found that credibility of advertisements can positively influence consumer's attitudes.

Lastly, Van-Tien Dao et al. (2014), found that ad credibility has a positive effect on the consumer's perceived value of social media advertising. Based on the discussed literature, we propose the following hypothesis:

Hypothesis 3: Consumers' perception of ad credibility of Facebook advertisements has a positive relationship with the perceived value of targeted advertising.

Privacy concerns

One of the biggest problem's consumers have with targeted advertising are privacy concerns (Nowak and Phelps, 1992; Gurau, Ranchhod and Gauzente, 2003). The reason for this can be found in the fact that many internet users have no clue about what kind of information is being collected from them, how it is being collected as well as when exactly their information is being collected. Ham and Nelson (2016) state that the collection of behavioural data happens quite covertly. Baek and Morimoto (2012, p. 63) define privacy as *''the degree to which a consumer is worried about the potential invasion of the right to prevent the disclosure of personal information to others''*

Privacy is very valued and according to Martin, Borah and Palmatier (2017), the lack of control over your own privacy may lead to feeling vulnerable. Pew Internet and American Life Project (2008) have found that 95% of American consumers find it important to be able to control who has access to their personal data.

Talking about the previously discussed psychological reactance theory, it can be said that resistance to advertisements can occur when a consumer has the feeling that the advertisements is trying to control its choices. Because targeted advertising can make the consumers believe that their privacy is being intruded, they are more likely to object to advertising practices that collect and use their personal data (Simonson, 2005).

There have been various studies on the effect of a consumer's privacy concerns. Milne and Boza (1999) have found that privacy concerns are negatively related to trust, perceived information control and purchase behaviour. Moreover, consumers that have privacy concerns are more likely to exhibit negative behaviour to advertising such as providing wrong or incomplete information on websites and unsubscribing from email lists (Sheehan and Hoy, 1999). We formulate the following hypothesis:

Hypothesis 4: Consumers' perception of privacy concerns because of Facebook advertisements has a negative relationship with the perceived value of targeted advertising.

Ad avoidance
Many researchers as well as advertising companies have for a long time been interested in understanding why consumers avoid advertising (Speck and Elliott, 1997; Cho and Cheon, 2004; Simonson, 2005; Jung, 2017). Speck and Elliott (1997) define ad avoidance *as ''all actions by media users that differentially reduce their exposure to ad content.''* Many past researchers have studied ad avoidance on traditional media such as televisions, newspapers and radios. On these platforms one could easily avoid ads by switching channels, turning a page or changing the radio station (Heeter and Greenberg, 1985; Bellamy and Walker, 1996).

With the decline of traditional media over the past decades, research is now more interested in ad avoidance on the internet. According to Cho and Cheon (2004), ad avoidance can happen due to prior negative experiences, perceived goal impediment and ad clutter (high volume of advertisements). Moreover, Cho and Cheon (2004) argue that ad avoidance consists of three

components. These are: cognition, affect and behaviour, also known as the CAB model. The cognitive component refers to a consumers' personal belief about a certain object. The affective component can best be described as a consumers' emotional reaction towards an object. Lastly, the behavioural component refers to the consumers' action to avoid an object.

According to Mangleburg and Bristol, 1998), nearly all advertising claims can be said to have some disbelief in them. This is mainly because consumers know that the main motive for the advertisements are to persuade or sell something to the consumer. Friestad and Wright (1994) explained in their Persuasion Knowledge Model (PKM) that consumers have over time come to understand that the tactics used by advertisers are there to persuade them and thus have become more skeptical of these tactics and will try to defend themselves against them.

Furthermore, according to Simonson (2005), consumers may perceive personalized advertisements as an attempt to manipulate and persuade them. These people will have a negative perceived value of targeted advertising and as a result will have a higher ad avoidance. As such, we come up with the following hypothesis:

Hypothesis 5: Consumers' perceived value of targeted advertising has a negative relationship with ad avoidance.

Attitude towards targeted advertising
Targeted advertising has many definitions such as ''behavioural targeting'', ''online behavioral advertising'' and ''online profiling'' (Bennett, 2011). Moreover, targeted advertising can be defined as *''a technology-driven advertising personalization method that enables advertisers to deliver highly relevant ad messages to individuals''* (Ham and Nelson, 2016).

According to Aaker, Kumar and Day (1995), attitudes are '*'mental states used by individuals to structure the way they perceive their environment and guide the way they respond to it''*. Moreover, attitude towards advertising can be defined as a consumer's '*'learned predisposition to respond in a consistently favorable or unfavorable manner towards advertising in general''* (MacKenzie and Lutz, 1989). Iacobucci and Chuchill (2010) also add that attitude towards advertising has a major impact on their behaviour.

Because of this, it is probable that advertising which lacks value is more likely to result in negative consumer attitude towards advertising (Ducoffe, 1996). The opposite also holds true, which is that if the advertising is perceived to have value, then it is more likely to result in positive consumer attitudes towards advertising.

Moreover, considering Liu et al (2012) found in their study of m-marketing (mobile marketing) that there is a positive relationship between advertising value and attitutde towards advertising, we have come up with the following hypothesis.

Hypothesis 6: Consumers' perceived value of targeted advertising has a positive relationship with the attitude towards targeted advertising.

Figure 1   Conceptual framework of hypothesized relationships
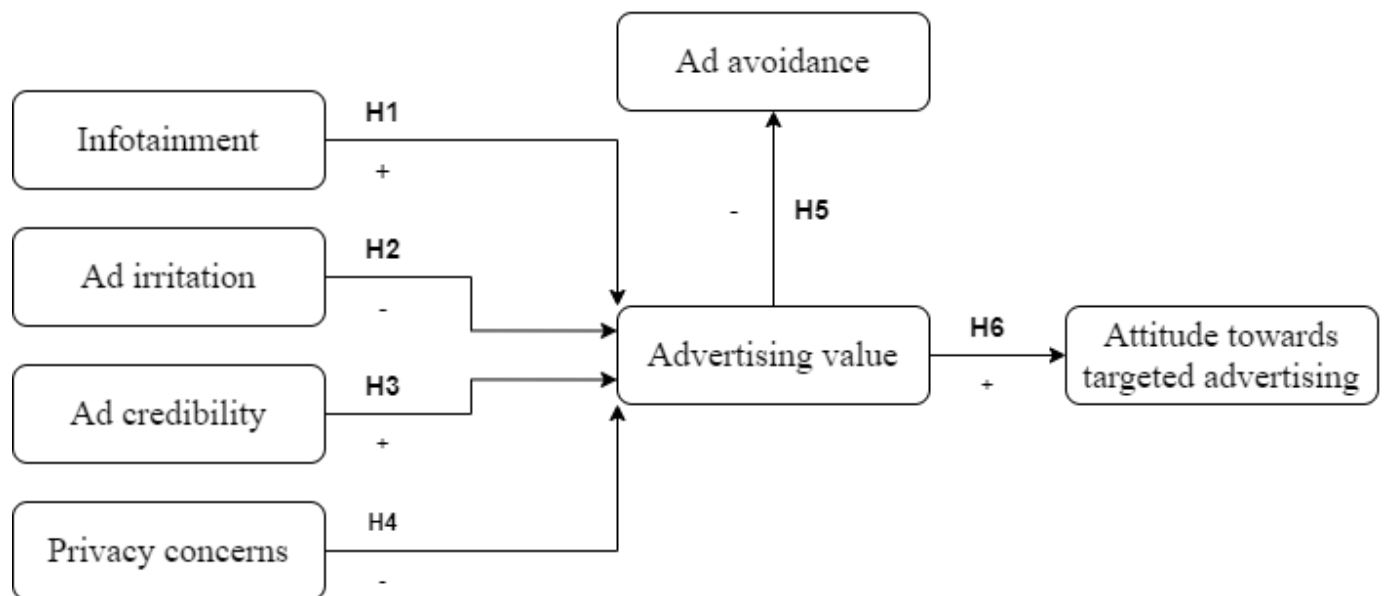
Adapted from Liu et al. (2012)

METHODOLOGY

Procedure

For the purpose of collecting data, an online survey was created on Google Forms. The survey was shared on social media websites like Facebook, LinkedIn and Instagram. Furthermore, the survey was also included in the Test Subject Pool System SONA from the University of Twente. People could participate in the survey from May to June.

The main requirements for respondents in order to take the survey are that they are over the age of 18 and that they have a Facebook account. However, the audience that was being targeted consisted predominantly of students.

Most users of Facebook are receiving only targeted advertisements. These targeted advertisements can be based on gender, interests or location, but can also be based on past search queries or visited websites. The participants of the survey had to answer the survey statements based on their own perception of these Facebook advertisements. There were no specific advertisements shown in advance, but the participants had to answer the survey questions based on the advertisements they noticed while using Facebook.

Measures

In this study we have looked at six different constructs, these are: Infotainment, ad irritation, ad credibility. privacy concerns, perceived value of targeted advertising, ad avoidance and attitude towards targeted advertising. Respondents were asked to rate each of the given statements using a seven-point Likert scale (1 = strongly disagree and 7 = strongly agree).

Firstly, infotainment was measured using a five-item scale derived from Ducoffe (1996). Secondly, ad irritation was measured using a two-item scale derived from Ducoffe (1996). Ad credibility was measured using a three-point scale derived from MacKenzie and Lutz (1989), Ducoffe (1996) and Alwitt and Prabhacker (1994). Furthermore, privacy concerns were measured using five-point scale derived from Dolnicar and Jordaan (2007). Moreover, advertising value was measured using a three-point scale derived from Ducoffe (1996). Ad avoidance was measured using a three-point scale derived from Cho and Cheon (2004) and Elliott and Speck (1998). Lastly, attitude towards targeted advertising was measured using a three-point scale derived from Alwitt and Prabhacker (1994).

All of the statements used in the survey were slightly adjusted in order to make them fit the context of the research.

Participants

In total we had 167 participants in our survey. 43% of the participants were male while the other 57% were female. Out of all the participants only one was excluded due to her being under the age of 18.

Table 3 ''How often do you use Facebook?''	Frequency	Percent
Never	4	2.4
Occasionally	13	7.8
Sometimes	30	18.1
Often	67	40.4
Always	52	31.3

Furthermore, most of our participants stated that they use Facebook ''often'' or ''always'', 40% and 31%, respectively. Four of the participants were excluded from the survey based on the fact that they stated ''never'' to use Facebook.

Table 4 ''Are you aware that Facebook uses targeted advertisements?''	Frequency	Percent
Yes	160	96.4
No	6	3.6
Total	166	100.0

Our last question was used to screen out the people who did not know that Facebook was using targeted advertising. We found out that most people (96.4%) knew that Facebook used targeted advertising while only six participants stated that they did not know. These six were consequently removed from the study as well, due to the fact that we were only interested in participants who are aware of Facebook's targeted advertising.

TABLE 5

Summary of survey data

Construct	Statements	Mean	SD	Factor loading
Infotainment	1. Facebook advertisements are entertaining	3.09	1.39	0.86
	2. Facebook advertisements are enjoyable	2.90	1.52	0.87
	3. Facebook advertisements are pleasing	2.95	1.55	0.91
	4. Facebook advertisements are a good source of information	3.33	1.70	0.79
	5. Facebook advertisements are a convenient source of product information	3.73	1.74	0.76
Ad irritation	1. Facebook advertisements are annoying	5.54	1.40	0.93
	2. Facebook advertisements are irritating	5.08	1.56	0.93
Ad credibility	1. Facebook advertisements are convincing	3.15	1.36	0.81
	2. Facebook advertisements are believable	3.34	1.36	0.93
	3. Facebook advertisements are credible	3.22	1.33	0.92
Perceived value of targeted advertising	1. Facebook advertisements are useful.	3.61	1.46	0.91
	2. Facebook advertisements are valuable	3.17	1.45	0.95
	3. Facebook advertisements are important	2.85	1.61	0.84
Privacy concerns	1. I am concerned about the misuse of my personal information	5.29	1.72	0.87
	2. I believe that personal information is often misused	5.65	1.44	0.86
	3. I fear that my personal information may not be safely stored	5.48	1.60	0.90
	4. I am uncomfortable when my personal information is shared without my permission	5.90	1.57	0.80
	5. I believe that companies share information without permission	5.94	1.38	0.77
Ad avoidance	1. I ignore all advertisements on Facebook	5.21	1.52	0.72
	2. I hate personalized advertisements on Facebook	4.42	1.78	0.86
	3. I would prefer if there were no personalized advertisements on Facebook	4.81	1.97	0.88
Attitude towards targeted advertising	1. Facebook advertisements help me raise my standard of living	2.01	1.34	0.82
	2. Facebook advertisements help me buy the best brand for a given price	2.62	1.70	0.81
	3. Facebook advertisements help me find products that match my interests	3.80	1.79	0.90

Table 6	Composite reliability	AVE	Cronbach's alpha
Infotainment	0.92	0.71	0.89
Ad irritation	0.93	0.86	0.85
Ad credibility	0.92	0.79	0.86
Perceived value of targeted advertising	0.93	0.81	0.88
Privacy concerns	0.92	0.71	0.90
Ad avoidance	0.86	0.68	0.76
Attitude towards targeted advertising	0.88	0.71	0.79

RESULTS

First, we checked for internal consistency and reliability of the seven variables used in our study. In table 5, the mean, standard deviation and the factor loading of each research item can be found. Almost all of the items used in our study have a good factor loading with reliability that exceeds the required 0,60 threshold for structural equation modelling (Bagozzi and Yi, 1988).

The calculated composite reliability as can be seen in table 6, shows values above 0.70 for all of the constructs, which is an indicator of acceptable reliability (Nunnally, 1978).

Moreover, in table 6, one can see that the average variance extracted for all of the constructs shows values over 0,5 which is, according to Fornell and Larcker (1981), considered to be sufficient for confirming convergent validity.

Furthermore, Cronbach's α values were calculated for all items of each construct. Results showed that all of our constructs were considered to be reliable. All of the values exceeded 0.70, which is the minimum threshold for factor reliability (Fornell and Larcker, 1981).

Table 7 KMO and Bartlett's Test	KMO Sampling Adequacy	Significance
Infotainment	0.78	<0.01
Ad irritation	0.50	<0.01
Ad credibility	0.68	<0.01
Perceived value of targeted advertising	0.68	<0.01
Privacy concerns	0.86	<0.01
Ad avoidance	0.64	<0.01
Attitude towards targeted advertising	0.66	<0.01

As can be seen in table 7, all of the constructs used are above the acceptable threshold of 0.50 (Kaiser and Rice, 1974). Only the construct ''ad irritation'' has a KMO coefficient of 0.50. However, this is due to the fact that ''ad irritation'' only has two variables and according to Favero and Belfiore (2019, p. 390) *''… for only two original variables the KMO statistic will always be equal to 0.50''*, thus the KMO and Bartlett's test will not provide reliable results.

Figure 2   Correlation result

** = significant correlation at 0.01
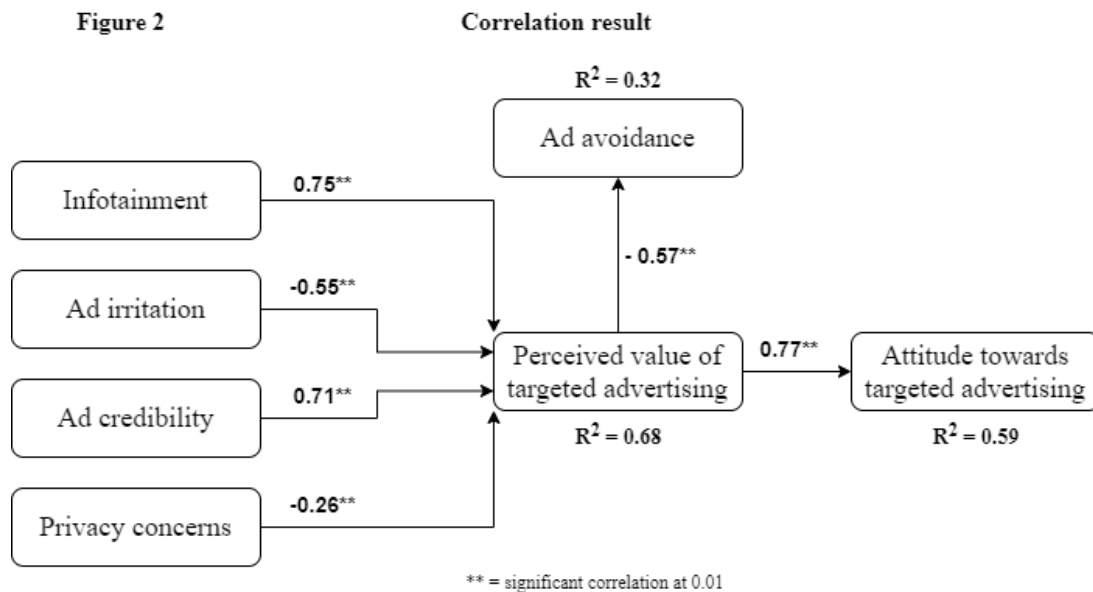
Hypothesis testing

Results from our statistical analysis, as can be seen in figure 2, show us that the constructs *infotainment* (correlation coefficient = 0.75, p<0.01) and ''ad credibility'' (correlation coefficient = 0.71, p<0.01) have a positive relationship with the *perceived value of targeted advertising*, thus supporting H1 and H3.

Furthermore, *ad irritation* (correlation coefficient = -0.55, p<0.01) and ''privacy concerns (correlation coefficient = -0.26, p<0.01) have a negative relationship with the *perceived value of targeted advertising*, thus supporting H2 and H4. Moreover, we found a negative relationship to exist between *perceived value of targeted advertising* and *ad avoidance* (correlation coefficient = -0.57, p<0.01), which supports our H5. In addition, the construct *perceived value of targeted advertising* has a positive relationship with *attitude towards targeted advertising* (correlation coefficient = 0.77, p<0.01), providing support for our H6.

Moreover, according to Henseler, Ringle and Sinkovics (2009), the R^2 values of 0.75, 0.50 and 0.25 can be described as ''substantial'', ''moderate'' and ''weak'', respectively. Looking at figure 2, we can see that two constructs (*value of targeted advertising* and *attitude towards targeted advertising*) have a moderate explanatory value, while one construct (*ad avoidance)* has a weak explanatory value. More specifically, the constructs *infotainment, ad irritation, ad credibility* and *privacy concern* can explain 68% of the variance for *perceived value of targeted advertising*. Additionally, *perceived value of targeted advertising* can explain 32% of the variance of *ad avoidance* and 59% of the variance of *attitude towards targeted advertising.*

Table 8 Summary of hypothesis testing	Correlation coefficient	Results
H1 Infotainment → Perceived ad value	0.75 (p<0.01)	Supported
H2 Ad irritation → Perceived ad value	-0.55 (p<0.01)	Supported
H3 Ad credibility → Perceived ad value	0.71(p<0.01)	Supported
H4 Privacy concerns → Perceived ad value	-0.26 (p<0.01)	Supported
H5 Perceived ad value → Ad avoidance	-0.57 (p<0.01)	Supported
H6 Perceived ad value → Attitude towards targeted advertising	0.77 (p<0.01)	Supported

CONCLUSION AND DISCUSSION

Relationships between the variables

This study contributes to a better understanding of the variables that impact the perceived value of targeted advertising. We found that the consumer's perception of advertising value can be influenced positively with credibility and infotainment of the advertisement. This is in line with previous studies conducted by (Ducoffe, 1996; Goldsmith, Lafferty and Newell, 2000; Okazaki, 2004; Wang and Sun, 2010; Aktan et al., 2016) According to Liu et al. (2012), when consumers believe that advertising is credible and trustworthy, then they are likely to have a favorable perception about the perceived value of advertising. According to Gefen (2000), without ad credibility, consumers would not want to continue their relationship with a company after a single transaction.

Moreover, the construct *infotainment* seems to impact the *perceived value of targeted advertising* the most. This is because in a competitive market like the internet, the advertisements need to be interesting and catch the consumer's eye (Liu et al. 2012. According to Cauberghe and De Pelsmacker (2010), entertainment establishes an emotional connection with consumers and thus is considered to be an important factor in effective advertising.

Furthermore, we found that *ad irritation* has a negative relationship with the *perceived value of targeted advertising*. This is in line with prior research which showed that irritation negatively affects advertising value and attitude towards online advertising (Ducoffe, 1996 and Luo, 2002). Marketers can avoid irritation by making sure that the advertising is not annoying, insulting or offensive (Ducoffe, 1996).

The construct *privacy concerns* is also found to have a negative relationship with the *perceived value of targeted advertising*. This can be traced back to past studies which show that it is important for consumers to have control over their own personal data and the collection of it (Boerman et al., 2017). However, like Zarouali et al. (2018) found in his study, the relationship between *privacy concerns* and perceived advertising value remains rather unclear. This can be seen by looking at the relatively low correlation coefficient of -0.23.

Moreover, we were also interested in finding the antecedent of ad avoidance. We found that consumers who have a low advertising value perception, have a higher ad avoidance. Advertisers should make their advertising more appealing by making the advertisements more informative and entertaining, because that leads to a higher perceived value of targeted advertising.

Lastly, another objective of this research was to find the effect of perceived value of targeted advertising on the consumers' attitudes towards Facebook's targeted advertising. We found a positive relationship between advertising value and attitude towards targeted advertising. This means that consumers who perceive Facebook's advertising value to be high, will also have a positive attitude towards targeted advertising. This is also in line with past literature (Ducoffe, 1996); Petrovici and Marinov, 2007; Liu et al., 2012)

Contributions of the study

This research studied the antecedents affecting the perceived value of targeted advertising as well as the effect the perceived value of advertising has on ad avoidance and attitude towards targeted advertising. From a theoretical point of view, this study contributes to the knowledge on targeted advertising by looking at the factors which increase perceived advertising value (i.e., infotainment and ad credibility) as well as the factors which decrease the perceived advertising value (i.e., ad irritation and privacy concerns). Our study found that consumers who have a high perceived value of targeted advertising can make them less likely to avoid advertisements, further proving the importance of the perceived advertising value.

Furthermore, our findings can be used by marketers and advertisers to help them create targeted advertisements which include a high degree of infotainment and credibility factors, while minimizing irritation and privacy concerns. Because consumers tend to view advertisements as a reference point when making a purchase (Xu, 2006), it is important that informative content of an advertisement is presented in an entertaining way in order to increase the consumer's attitude towards the advertisement. Companies should not neglect the credibility of their message on their advertisements, because if the credibility is low, then consumers will not continue their relationship with the company beyond a single transaction (Gefen, 2000). Lastly, marketers should be aware of the factors which negative influence the consumer's perception of the advertisement, such as irritation and privacy concerns, in order to decrease ad avoidance and increase positive attitudes towards targeted advertising.

LIMITATIONS

Despite the interesting findings from this study, it is important to recognize the limitations. This study focused mostly on students, which means that the results can not necessarily be generalized with other groups.

Moreover, we did not have a specific advertisement which we showed to all the participants in our survey, instead they had to answer the survey questions based on their own perception of the advertisements they see on Facebook. This is why it is important to note that the results are purely based on the perceptions of the participants that took the survey.

FUTURE RESEARCH

Future research can study the targeted advertising perceptions on other social media websites that make use of personalization, such as Instagram. Moreover, our study only looked at the perception of targeted advertising, but it could be interesting to look at how targeted advertising impacts the purchase behaviour. Also, future studies can focus on cross-cultural factors which may have an influence on the perception of advertising value.

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References

Aaker, D., & Bruzzone, D. (1985). Causes of Irritation in Advertising. *Journal of Marketing*.

Aitken, R., Gray, B., & Lawson, R. (2008). Advertising effectiveness from a consumer perspective. *International Journal of Advertising*.

Alwitt, L., & Prabhaker, P. (1994). Identifying who dislikes television advertising: not by demographics alone. *Journal of Advertising Research*.

Baglione, S., & Tucci, L. (2019, 2 23). Perceptions of Social Media's Relevance and Targeted Advertisements. *Journal of Promotion Management, 25*(2), 143-160.

Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*.

Bauer, R., & Greyser, S. (1968). Advertising in America, the consumer view. 1105114.

Bautista, J., & Lin, T. (2014). Predictors of Perceived Value in Location-based Advertising and Consumer Attitudes.

Boerman, S., Kruikemeier, S., & Borgesius, F. (2017). Online behavioral advertising: A literature review and research agenda. *Journal of Advertising, 46*, 363-376.

Brehm, J. (1966). *A Theory of Psychological Reactance.* New York: Academic Press.

Cauberghe, V., & De Pelsmacker, P. (2010). Advergames. *Journal of Advertising*.

Chen, J., & Stallaert, J. (2014). An Economic Analysis of Online Advertising Using Behavioral Targeting. *MIS Quarterly, 38*(2), 429-A7.

Clement, J. (2020). *Global Digital Population as of April 2020*. Retrieved from Statista.

Deighton, J., & Kornfeld, L. (2009). Interactivity's Unanticipated Consequences for Marketers and Marketing. *Journal of Interactive Marketing*.

Dhar, S., & Varshney, U. (2010). Challenges and business models for mobile location-based services and advertising. *Communications of the ACM, 54*(5), 121-128.

Dolnicar, S., & Jordaan, Y. (2007). A market-oriented approach to responsibly managing information privacy concerns in direct marketing. *Journal of Advertising*.

Drèze, X., & Hussherr, F.-X. (2003, 9 1). Internet advertising: Is anybody watching? *Journal of Interactive Marketing, 17*, 8-23.

Ducoffe, R. (1995). How consumers assess the value of advertising. *Journal of Current Issues and Research in Advertising*.

Ducoffe, R. (1996). Advertising value and advertising on the web. *Journal of Advertising Research*.

Ducoffe, R., & Curlo, E. (2000). Advertising value and advertising processing. *Journal of Marketing Communications, 6*(4), 247-262.

Elliott, M., & Speck, P. (1998). Consumer perceptions of advertising clutter and its impact across various media. *Journal of Advertising Research*.

Facebook. (2017). How to target Facebook ads.

Falk, R., & Miller, N. (1992). *A primer for soft modeling.* Ohio: University of Akron.

Fávero, L., & Belfiore, P. (2019). *Data Science for Business and Decision Making.*

Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*.

Gaber, H., Wright, L., & Kooli, K. (2019, 5 22). Consumer attitudes towards Instagram advertisements in Egypt: The role of the perceived advertising value and personalization. *Cogent Business & Management, 6*(1).

Gefen, D. (2000, 2 1). Gefen, D.: E-commerce: the role of familiarity and trust. OMEGA 28(6), 725-737. *Omega, 28*, 725-737.

Gordon, M., & De Lima-Turner, K. (1997). Consumer attitudes towards Internet advertising: A social contract perspective. *International Marketing Review*.

Gurău, C., Ranchhod, A., & Gauzente, C. (2003). "To legislate or not to legislate": A comparative exploratory study of privacy/personalisation factors affecting French, UK and US Web sites. *Journal of Consumer Marketing*.

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). Multivariate Data Analysis. *Vectors*.

Ham, C., & Nelson, M. (2016). The role of persuasion knowledge, assessment of benefit and harm, and third-person perception in coping with online behavioral advertising. *Computers in Human Behavior, 62*, 689-702.

Henseler, J., Ringle, C., & Sinkovics, R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*.

Humayun Kabir Chowdhury, Nargis Parvin, Christian Weitenberner, M. (2006). CONSUMER ATTITUDE TOWARD MOBILE ADVERTISING IN AN EMERGING MARKET: AN EMPIRICAL STUDY. *International Journal of Mobile Marketing*.

Iacobucci, D., & Churchill, G. (2018). *Marketing Research: Methodological Foundations, 12th edition.*

IHS Markit. (2017). *The Economic Value of Behavioural Targeting in Digital Advertising*. Retrieved from https://datadrivenadvertising.eu/wp-content/uploads/2017/09/BehaviouralTargeting_FINAL.pdf

Jai, T.-M., Burns, L., & King, N. (2013, 5 1). The effect of behavioral tracking practices on consumers' shopping evaluations and repurchase intention toward trusted online retailers. *Computers in Human Behavior, 29*, 901–909.

Kaiser, H., & Rice, J. (1974). Little jiffy, mark IV. *Educational and psychological measurement, 34*(1), 111-117.

Kornias, G., & Halalau, R. (2012). *Factors influencing users' attitude towards display advertising on Facebook.* Jönköping University.

Lehmkuhl, F. (2003). *Kuesse und Machotests, [Online.* Munich, Germany: Focus.

Liu, C., Sinkovics, R., Pezderka, N., & Haghirian, P. (2012). Determinants of Consumer Perceptions toward Mobile Advertising - A Comparison between Japan and Austria. *Journal of Interactive Marketing*.

MacKenzie, S., & Lutz, R. (1989). An Empirical Examination of the Structural Antecedents of Attitude toward the Ad in an Advertising Pretesting Context. *Journal of Marketing*.

Martin, K., Borah, A., & Palmatier, R. (2017). Data privacy: Effects on customer and firm performance. *Journal of Marketing*.

McDonald, A., & Cranor, L. (2010). Americans' attitudes about internet behavioral advertising practices. *Proceedings of the ACM Conference on Computer and Communications Security.*

McQuail, D. (1983). *Mass Communication Theory: An Introduction.* London: Sage Publication.

Mehta, A. (2000). Advertising attitudes and advertising effectiveness. *Journal of Advertising Research*.

Miyazaki, A. (2008, 5 1). Online Privacy and the Disclosure of Cookie Use: Effects on Consumer Trust and Anticipated Patronage. *Journal of Public Policy & Marketing - J PUBLIC POLICY MARKETING, 27*, 19-33.

Nunnally, J. (1978). *Psychometric Theory.* New York: McGraw-Hill.

Obermiller, C., & Spangenberg, E. (1998). Development of a scale to measure consumer skepticism toward advertising. *Journal of Consumer Psychology*.

Okazaki, S. (2004). How do Japanese consumers perceive wireless ads? A multivariate analysis. *International Journal of Advertising*.

Okazaki, S., Katsukura, A., & Nishiyama, M. (2007). How mobile advertising works: The role of trust in improving attitudes and recall. *Journal of Advertising Research*.

Petrovici, D., & Marinov, M. (2007). Determinants and antecedents of general attitudes towards advertising: A study of two EU accession countries. *European Journal of Marketing*.

Phelan, C., Lampe, C., & Resnick, P. (2016). *It's Creepy, But it Doesn't Bother Me.*

Prendergast, G., Liu, P., & Poon, D. (2009). A Hong Kong study of advertising credibility. *Journal of Consumer Marketing, 26*(5), 320-329.

Reuters. (2017). Facebook Now Has an Almost Advertising-Only Business Model. *Fortune*.

Rust, R. (2016). Comment: Is Advertising a Zombie? *Journal of Advertising, 45*(3), 346-347.

Saadeghvaziri, F., & Hosseini, H. (2011). Mobile advertising: An investigation of factors creating positive attitude in Iranian customers. *African Journal of Business Management, 5*(2), 394-404.

Sheehan, K., & Hoy, M. (1999). Flaming, complaining, abstaining: How online users respond to privacy concerns. *Journal of Advertising*.

Simonson, I. (2005). Determinants of customers' responses to customized offers: Conceptual framework and research propositions. *Journal of Marketing*.

Speck, P., & Elliott, M. (1997). Predictors of advertising avoidance in print and broadcast media. *Journal of Advertising*.

Srinivasan, S., Anderson, R., & Ponnavolu, K. (2002). Customer loyalty in e-commerce: An exploration of its antecedents and consequences. *Journal of Retailing*.

Stewart, D., & Ward, S. (1994). Media Effects on Advertising. In D. Stewart, S. Ward, J. Bryant, & D. Zillmann (Eds.), *Media Effects: Advances in Theory and Research.* Hillsdale, NJ: Lawrence Erlbaum.

Tsang, M., Ho, S., & Liang, T. (2004). Consumer attitudes toward mobile advertising: An empirical study. *International Journal of Electronic Commerce*.

Turow, J., King, J., Hoofnagle, C., Bleakley, A., & Hennessy, M. (2011). Americans Reject Tailored Advertising and Three Activities that Enable It. *SSRN Electronic Journal*.

Wang, Y., & Sun, S. (2010). Examining the role of beliefs and attitudes in online advertising: A comparison between the USA and Romania. *International Marketing Review*.

Xu, D. (2006). The influence of personalization in affecting consumer attitudes toward mobile advertising in China. *Journal of Computer Information Systems*.

Xu, H., Oh, L., & Teo, H. (2009). Perceived effectiveness of text vs. multimedia Location-Based Advertising messaging. *International Journal of Mobile Communications*.

Yan, J., Liu, N., Wang, G., Zhang, W., Jiang, Y., & Chen, Z. (2009). How much can Behavioral Targeting help online advertising? *WWW'09 - Proceedings of the 18th International World Wide Web Conference*.

Zarouali, B., Poels, K., Ponnet, K., & Walrave, M. (2018). Everything under control?": Privacy control salience influences both critical processing and perceived persuasiveness of targeted advertising among adolescents. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 12*(1), 5.

APPENDIX

Table 9

Correlations

			Infotainment	Irritation	Credibility	PrivacyConcerns	Avoidance	NewAttitude	NewAdValue
Spearman's rho	Infotainment	Correlation Coefficient	1.000	-.603**	.639**	-.240**	-.634**	.661**	.745**
		Sig. (2-tailed)	.	.000	.000	.003	.000	.000	.000
		N	157	157	157	157	157	157	157
	Irritation	Correlation Coefficient	-.603**	1.000	-.544**	.405**	.533**	-.534**	-.547**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
		N	157	157	157	157	157	157	157
	Credibility	Correlation Coefficient	.639**	-.544**	1.000	-.344**	-.505**	.613**	.707**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000
		N	157	157	157	157	157	157	157
	PrivacyConcerns	Correlation Coefficient	-.240**	.405**	-.344**	1.000	.367**	-.209**	-.255**
		Sig. (2-tailed)	.003	.000	.000	.	.000	.009	.001
		N	157	157	157	157	157	157	157
	Avoidance	Correlation Coefficient	-.634**	.533**	-.505**	.367**	1.000	-.593**	-.571**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000
		N	157	157	157	157	157	157	157
	NewAttitude	Correlation Coefficient	.661**	-.534**	.613**	-.209**	-.593**	1.000	.771**
		Sig. (2-tailed)	.000	.000	.000	.009	.000	.	.000
		N	157	157	157	157	157	157	157
	NewAdValue	Correlation Coefficient	.745**	-.547**	.707**	-.255**	-.571**	.771**	1.000
		Sig. (2-tailed)	.000	.000	.000	.001	.000	.000	.
		N	157	157	157	157	157	157	157

**. Correlation is significant at the 0.01 level (2-tailed).

Survey questions

Screening questions
1. Do you agree to participate in this survey? *(Yes-no)*
2. Are you 18 years or older? *(yes-no)*
3. What gender do you identify with? *(male-female-prefer not to say)*
4. How often do you use Facebook? *(always-often-sometimes-occasionally-never)*
5. Are you aware of the fact that Facebook provides targeted (personalized) advertisements? *(yes-no)*

Infotainment (1 (strongly disagree-7 strongly agree)
1. Facebook advertisements are entertaining
2. Facebook advertisements are enjoyable
3. Facebook advertisements are pleasing
4. Facebook advertisements are a good source of information
5. Facebook advertisements are a convenient source of product information

Ad irritation (1 (strongly disagree-7 strongly agree)
1. Facebook advertisements are annoying
2. Facebook advertisements are irritating

Ad credibility (1 (strongly disagree-7 strongly agree)
1. Facebook advertisements are credible
2. Facebook advertisements are convincing
3. Facebook advertisements are believable

Perceived value of targeted advertising (1 (strongly disagree-7 strongly agree)
1. Facebook advertisements help me find products that match my interests

Privacy concerns (1 (strongly disagree-7 strongly agree)
1. I am concerned about the misuse of my personal information
2. I believe that personal information is often misused
3. I fear that my personal information may not be safely stored
4. I am uncomfortable when my personal information is shared without my permission
5. I believe that companies share information without permission

Ad avoidance (1 (strongly disagree-7 strongly agree)
1. I ignore all advertisements on Facebook
2. I hate personalized advertisements on Facebook
3. I would prefer if there were no personalized advertisements on Facebook

Attitude towards targeted advertising (1 (strongly disagree-7 strongly agree)
1. I consider websites that are tracking my online behaviour to be invasive (R)
2. I would stop using websites that use targeted advertising (R)
3. I prefer to see advertisements that match my preferences
4. I do not care if advertisers track and collect data about me