

THE IMPACT OF MOBILE ADVERTISING ON CONSUMER'S BEHAVIOR

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ABSTRACT

This study aims to contribute to a better understanding of the intrusive nature of mobile advertising and its implications for consumer behavior. The research focuses on investigating the consequences of mobile advertising intrusion and its impact on consumer perceptions and purchase intentions. A conceptual model is proposed based on a thorough review of the literature, and empirical data is collected from a sample of 120 Tunisian students.

The study begins by examining the concept of commercial intrusion in video games, and subsequently explores the consequences of advertising intrusion. To quantify the impact of this intrusion, the study adopts a quantitative methodology and analyzes the relationships between perceived advertising intrusion, attitudes, and behavioral intentions.

The findings reveal that mobile advertising has a negative impact on individuals' perceptions towards advertisements. Consumers who receive mobile advertising without their permission exhibit a decrease in their purchase intent. This suggests that intrusive advertising practices have a detrimental effect on consumer attitudes and subsequent purchase decisions.

Furthermore, the study highlights the need to consider various moderating variables, such as age and gender, in the examination of advertising intrusion effects. Future research avenues may explore the role of other consequences resulting from the intrusive nature of mobile advertising, including political conceptions of private life and social conceptions of intimacy. These avenues could be tested within a mobile setting to provide further insights into the impact of advertising intrusion on different aspects of consumers' lives.

The implications of this research are relevant for both academics and practitioners. It sheds light on the importance of ethical advertising practices, emphasizing the negative consequences associated with intrusive mobile advertising. Advertisers and marketers should consider the potential backlash and negative consumer perceptions that can arise from intrusive advertising tactics. By understanding the implications of advertising intrusion, practitioners can design more effective and consumer-friendly mobile advertising strategies.

In conclusion, this study contributes to the literature by examining the consequences of mobile advertising intrusion on consumer perceptions and purchase intentions. The findings suggest that intrusive advertising negatively affects individuals' attitudes towards advertisements and reduces their purchase intent. Future research should further explore the complex relationships between advertising intrusion, consumer attitudes, and various moderating variables. Ultimately, this knowledge can assist advertisers in developing more targeted and less intrusive mobile advertising campaigns.

INTRODUCTION

Today's advertising is constantly changing and evolving. Surprisingly, its position as an index is growing increasingly attractive. This is referred to as "mind-molding" (Cathelat, 1992). Mobile advertising is an invaluable method for establishing a relationship between a brand and a consumer based on proximity. "It is tactile, interactive, and personalized". (Merabet, & Benhabib, 2017). Every year, up to 80 000 advertising are exposed (Media Action Network, 2020), without counting the multitudes of commercials, pop-ups,

promotional emails, and merchandise sales in movies and video games. Video games produced 192,7 billion dollars in sales in 2021; that amount is predicted to climb to 203,1 billion this year. An increase in the number of players, particularly young people. Without a doubt, this new crowd contributes greatly to the fortunes of huge firms due to its vast spending power on the family, loyalty, and desire for luxury. The multimedia advertising content is based on aggressive marketing aimed at expanding the pool of potential customers. In a globalization-mediated world where manipulative advertising is pervasive ((Danciu, 2014);(Gatignon & Le Nagard, 2015), the client is overwhelmed by a plethora of enticing strategies that highlight brand-name foods, clothing, and beauty products, among others, and have an effective impact on their physical and psychological metabolism, as well as their daily reactions. In the absence of sensitization campaigns and audiovisual advertising defining good behaviors, parents are unable to keep up with the growth of media and mobile apps, monitor content, and control the poor habits of life of young mobile users. The goal of this study is to demonstrate the effects of advertiser intrusion into video games in attracting young people, thereby altering their thoughts and influencing their behavioral intentions. Ad companies acquire significant advertising space, both on mobile devices and in traditional media. Among the most prominent mobile advertisers are telephone companies, high-tech specialists, the automotive industry, agricultural groups, and the leisure and entertainment industries.

The general question prompts us to inquire: To what extent does the presence of advertising in video games affect young people? Our research is divided into two parts to focus on the issue. The first section presents a review of the literature on the consequences of advertising intrusion, and the second section presents the research methodology as well as the results obtained.

LITERATURE REVIEW

Mobile Advertising

The evolution of digital media has resulted in numerous studies on consumer attitudes toward online advertising, such as those conducted by(Cox, 2010)), (Hani, 2018) (Kurniawati, 2020) and (Kim, 2020). (Kim, 2020) Multinational corporations are focusing on mobile advertising in order to capitalize on the opportunities provided by information and communication technologies. It refers to any type of communication about products or services that involves the use of a mobile device (Li, 2004). In contrast to traditional media such as television or radio, the smartphone allows for the establishment of very good relationships with consumers, particularly young consumers, and the ability to reach them at any time and from any location (Maneesoonthorn, 2006). Publications are becoming more personalized, responsive, interactive, and, most importantly, contextualized (A. MERABET, & BELKAID, A., 2021). Researchers and professionals anticipate a significant increase in this market. According to (Zhang, 2012), mobile advertising will be the most prevalent form of communication in the coming years. However, while the initial response to mobile advertising campaigns appears to be encouraging, some studies show that mobile advertising is less effective. Among the factors influencing its effectiveness is the fact that some consumers regard it as intrusive. Mobile advertising refers to the distribution of advertisements via mobile devices such as mobile phones. Previously, promotional messages were sent via text message (SMS) (Reyck, 2003). With technological advancements, advertisers now have a plethora of techniques at their disposal. In contrast to traditional media, m-publicity has the ability to explicitly proclaim itself to consumers. M-publicity reveals unique characteristics in comparison to traditional media advertising (personalization,

interactivity), as well as some limitations (complexity and technological limitations) (Haghirian, 2005).

Advertising Intrusion

Several marketing studies have been conducted on the topic of advertising intrusion (Fadairo, 2020);(Chouk, 2021);). She is defined as a "psychological reaction to advertisements that interfere with a consumer's cognitive processes" (Edwards, 2002). In reality, it is "a negative perception of an individual caused by a lack of respect for what he considers to be his own space" (L. Perraud, 2013). As a result, the consumer perceives this advertising intrusion as a violation of his personal space (Chouk, 2021). A forced advertisement is a forced exposure (Chatterjee, 2008) or a disruption in the consultation process of an editorial unit that interferes with the consumer's goals (Ha, 1996). In their bi-mnemonic model, (Philippon, Chapelle, Blairy, & Emotion, 2002) show that intrusion is explained by "thoughts or images strongly charged emotionally, [...] very poorly developed cognitively [...]." These are "spontaneous cognitions" that can sometimes include various representational elements (images, thoughts, etc.). The term "intrusion" refers to the unexpected appearance of these spontaneous insights into the domain of individual conscience. In fact, perceived intrusion disrupts the cognitive process in which the person is involved. It results in problems and negative emotional reactions in the user, such as irritation, which leads to advertising fraud and negative attitudes (Edwards, 2002); (Li, 2004), especially when it is important or urgent (McCoy, 2004). It is important to note that the advertising formats mandated to individuals are inherently intrusive (for example, pop-up, interstitial, certain video formats, etc.). In general, they are not well received by consumers. To put it in other words, the intrusion is seen as an individual perception rather than a feature of the advertising message that interferes with a person's cognitive process and has an adverse effect on the effectiveness of the advertisement.

It is impossible to discuss incursion without mentioning the theory of reactance developed by (Brehm, 1966). According to this theory, people fight against anything that attempts to control their behavior or limit their freedom of choice. As a result, the position of rejection or withdrawal is taken. A number of researchers have relied on this theory to explain the intrusion of advertising (Edwards, 2002); (Morimoto, 2006). Publicity aims to change people's behavior. Persuasion attempts may be seen as coercive and impinge on the freedom of those who are subjected. Unwelcome behavior that has been imposed by an outside force is considered an intrusion and elicits a negative reaction from us.

Research hypotheses

Attitudes

The effects of perceived intrusion on attitudes are theoretically justified by advertising persuasion models (Petty, 1981); (MacKenzie, 1986)), particularly the Mackenzie model (1989). Moreover, a number of studies have suggested a link between advertising perception and attitudes (Homer, 1992); (C. M. Derbaix, 1995); (L. Perraud, 2012). The studies of (Li, 2004) and (Edwards, 2002) open the door to perceived intrusion, allowing for an examination of ad distribution characteristics, publisher site consultation situation, and internet-specific factors (Djafarova, 2017).

Indeed, attitude toward advertising is defined as "predisposition to respond favorably or unfavorably to a public stimulus during a specific exposure situation" (MacKenzie, 1986). Work on persuasion mechanisms on the internet has revealed that attitudes toward the site have an effect on beliefs about the announcement (Karson, 2005). (Peterman, 1999) discover

that a positive attitude toward the site is appropriate when it encourages users to maintain control. Evidently, the perception of a loss of control may influence attitudes toward the site, and while the perceived intrusion may not be related to a loss of control in other contexts (Morimoto, 2006), it is likely that the intrusive nature of the advertising aggravates attitudes toward the site. It is therefore necessary to investigate whether perceived intrusion affects attitude responses, as previous studies have suggested, based on the general hypothesis that perception affects attitude. As a result, we propose Hypothesis H1, according to which the perception of advertising intrusion influences behavioral responses (attitude toward advertising).

H₁: Perceived advertising intrusion has a negative impact on attitude responses.

Behavioral Intentions

Persuasion models are often used to demonstrate advertising effectiveness in terms of attitudes, intentions, and purchasing behavior, but they are rarely used to explain advertising inefficiency. To reach the end of the persuasion process, we propose studying purchase intent as a result of perceived advertising intrusion. The automatic gate, developed by Derbaix and Grégory (C. Derbaix, Gregory, P., Lavoisier, L. M., Lehu, J. M., Pecheux, C., Poncin, I. & Vanhamme, J. , 2004) in the LISA model, tends to show that many choices are made unconsciously and without specific intent. As a result, doing a perceptual analysis will lead to the individual making decisions automatically. As a result, perception is a channel via which the environment can directly initiate action. Among the available actions are: purchasing and visiting. These two factors have been proven and confirmed by persuasive models (L. Perraud, 2013).

H₂: Perceived advertising intrusion has a negative impact on consumer behavior intentions.

The Resistance Intentions

Resistance behaviors are incorporated into (Krugman, 1983) explained that advertisements that disrupt the targeting of consumers might elicit negative reactions, exacerbating intrusion, negative attitudes, and resistant behavior. As a result, it is likely that perceived advertising intrusion will lead to resistance to the public object (Akrim, 2017). The literature contains two crucial characteristics that are strongly resistant to perceived intrusion, namely the intention of expressing (speaking) and the intention of departure.

In this study, we chose to thoroughly examine the purpose of expression, which (Hirschman, 1970) defines as a "declared willingness to communicate one's dissatisfaction with the circumstance of public exposure." The most crucial determinant influencing the survival and profitability of publishers' websites is their ability to maintain a good attitude about them over time (Poh, 2002).

According to (Speck, 1997), advertising acts as a noise in the consumer's area. They define it as "any element of communication that affects the availability, cost, or value of the desired content," which can cause discomfort or extreme irritation, limiting advertising effectiveness and resulting in a sort of resistance protest.

This seems to reinforce the notion that perceived public interference might motivate resistance behaviors (Fransen, 2015). We are attempting to put in place more aggressive resistance expressions. Several authors (Perraud, 2012); (L. Perraud, 2013) have studied the relationship between perceived advertising intrusion and resistance intents (intention expression).

H₃: *Perceived advertising intrusion has a negative impact on resistance intentions.*

Irritation

Despite the fact that irritation and intrusion are both sensations, irritation is defined as a "momentary impatience" (Aaker, 1985) or "as a precursor to satisfaction and manifests as irritation, enervation, expectation, impatience, or nervousity" (Helme-Guizon, 2002). The annoyance is mitigated by the instructive value of the announcement (Lee, 1992). According to (Naik, 2002), annoyance is related to the number of requests, or more specifically, their frequency. It is an emotive response to a specific advertisement, whereas an intrusion is related to a certain execution factor, regardless of the ad that contains this factor.

Irritation is a negative emotional reaction caused by the intrusion (Edwards, 2002). She corresponds to the dissatisfaction and displeasure that consumers express in response to various forms of advertising (Aaker, 1985). The annoyance increases if the consumer does not close the advertisement and is forced to view it, and it increases even more if it interrupts a cognitive activity (McCoy, 2004). The perceived intrusion has been identified in the literature as one of the factors that contribute to consumer annoyance (Krugman, 1983).

H₄: *Perceived advertising intrusion has a positive impact on irritation.*

Avoidance

(Edwards, 2002) established a link between intrusion and public avoidance. These authors demonstrate that perceived intrusion is positively related to avoidance. However, this latter is a method of publicity contouring. Several negative attitudes of advertising have already been observed among users. If the cognitive and emotional responses are negative, it is reasonable to expect a negative behavioral response. They also set off mechanisms in the users' brains to avoid advertising. Similarly, this phenomenon has been extensively researched by several authors across a wide range of media. (Speck, 1997) define it as "the response of a media user to a reduced exposure to advertising content." Consider the zapping of a television. Avoidance manifests itself through behaviors such as changing the channel, leaving the room, or closing a public advertisement (Speck, 1997) ; (Cottet, 2010). As a result, consumers avoid advertising not because of its content, but because they perceive it to be invasive. (Edwards, 2002) shown in their study that perceived intrusion had a favorable effect on avoidance. Indeed, consumers regard advertising as an impediment when they believe it prevents them from achieving their goal or objective (Speck, 1997). For many reasons, people avoid mobile advertisements in a different way than they do other traditional media. As a result, we propose the following hypothesis Figure 1:

H₅: *Perceived advertising intrusion has a positive impact on avoidance.*

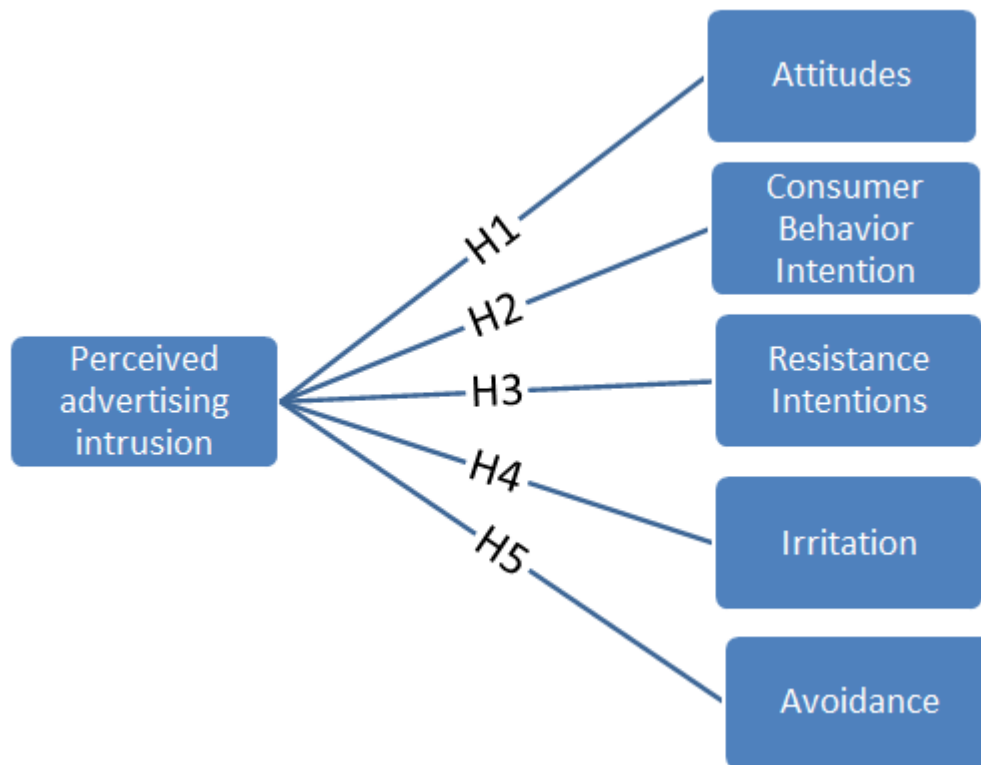


FIGURE 1
CONCEPTUAL MODEL

RESEARCH METHODOLOGY

All of the model's variable measurements were included in a questionnaire that we administered in person. We chose the sampling method based on convenience. Our research was conducted using a sample of 120 students from Tunis Manar University, the characteristics of which are listed in the Table 1 below. This demographic is the most likely to use a smartphone, and the majority of previous studies have focused on students (A. MERABET, & BELKAID, A., 2021). The use of an sample of students allows for a high level of sociodemographic, attitudinal, and behavioral homogeneity, allowing for an accurate measurement of the construct (Peterson, 2001). We used the Likert semantic scale of 5 degrees, from "completely agree" to "completely disagree" for this questionnaire. According to (Touzani), this scale is the most relevant in the Tunisian context.

Table 1 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE			
Measure	Item	Frequency	Percentage
Gender	Male	50	42%
	Female	70	58%
Age	18-20 ans	40	34%
	20-25 ans	60	50%
	> 25 ans	20	16%

The scales employed have been verified in the literature and have demonstrated high reliability. The following measures were used: perceived intrusion (Li, 2004); attitudinal reactions (Lavoisier, 2000); behavioral intentions (L. Perraud, 2013); resistance intents (L.

Perraud, 2013); irritation (Ducoffe, 1996); avoidance of mobile advertising (L. Perraud, 2013), (Cho, 2004).

Results and discussion

Collection of Data

In this work, we used the PLS approach to model structural equations (Partial Least Squares). She, like other structural equation methods, allows us to investigate causal relationships between latent variables at the same time. However, she relies on the technique of regression in least squares to estimate the models. This method is widely used in marketing (Hair Jr, 2014) and works well for small sample, as in our case. The Smart PLS software version 3 was used.

Reliability and Validity

The convergent validity can be confirmed using the Average Variance Extracted (AVE) (BENNACEUR, 2019); a value of 0.5 is recommended. The results demonstrate the convergent validity of all measurement scales (table 2).

Discriminatory validity: Three methods are used to assess discriminatory validity (Petty, 1981) ; (Henseler, 2015). First, the (Fornell, 1981) test when $AVE > R$; second, the Cross-loading (Chin, 1998) approach when the Cross-loading. Our measurement model's quality was satisfactory in terms of dependability and the validity of the chosen scales.

Table 2 SCALE RELIABILITY			
	Cronbach's Alpha	Composite Reliability	AVE
Avoidance	0,859	0,914	0,781
Attitudes	0,801	0,883	0,716
Intrusion	0,944	0,928	0,872
Irritation	0,933	0,917	0,897
Behavioral intentions	0,873	0,901	0,674
Intentions of resistance	0,783	0,872	0,696

The predictive ability of the model may be estimated using R^2 in the PLS approach (Hair Jr, 2014). All R^2 values are under the minimum recommended limit of 0.10 by (Santosa, 2005).

Test hypotheses and discussion

To determine the importance of direct structural links using the PLS approach, we used the work of (Hair Jr, 2014) with a 5% significance level (table 3).

The research hypotheses are based on the findings of the literature review. Statistics testing confirm some relationships while casting doubt on others.

Indeed, the hypothesis H1 demonstrating the influence of advertising intrusion on consumer views about advertisements is accepted ($=0.082$).

Acceptance of the first hypothesis is consistent with the work of (Li, 2004), (Edwards, 2002) and (Burns, 2006). Thus, the advertising intrusion that users perceive when visiting a website has an impact on the whole persuasive process.

The hypothesis H2, which describes the relationship between advertising intrusion and behavioral intention, is accepted ($=0.037$). She is consistent with the work of (Edwards, 2002). Indeed, the expressed purpose is an activity that necessitates specific resources (temps,

perception, etc.) However, attitudes about advertising and public relations are more likely to be a poor reason for an individual to expend the necessary effort to express dissatisfaction and reveal his or her disagreement.

The goal of Hypothesis H3 is to establish the presence of relationships between perceived intrusion and resistance manifestation (expressing intention) of the internet user in public forms ($=0.105$). This result is consistent with the work of (Hirschman, 1970) and (L. Perraud, 2013) users frequently engage in goal-oriented behaviors such as searching for information, reading an e-mail, reading an article, downloading a video game, and so on. Invasive advertising causes disillusionment with the current mission and is thus regarded as an impediment to achieving the goals. This disturbance (whether mild or severe) may disrupt users' focus (Chouk, 2021).

The hypothesis H4 shows that perceived intrusion has a positive effect on irritation ($=0.091$). If irritation and intrusion are both perceptions, (Aaker, 1985) define irritation as "momentary impatience". She is an emotional reaction to a certain advertisement, while the incursion is linked to a specific execution element, regardless of which advertisement embodies this element.

The hypothesis H5 allows us to see that perceived intrusion has a positive effect on avoidance. Take note of the strongest relationship ($= 0,147$) between perceived intrusion and attitudes against advertising. These findings back up Morimoto and Macias' (Morimoto, 2006) findings. As a result, this finding supports the findings of (Edwards, 2002), who discovered that perceived intrusion influences avoidance behavior. However, the content of the items used on the exit behavior scale suggests that avoidance can be especially persistent, particularly among mobile internet users seeking alternative websites or switching browsers in an attempt to protect themselves from advertisements.

Table 3 HYPOTHESIS TESTING					
Assumptions	Relations	B	T	P	Results
H1	Advertising intrusion ->Attitude	0,082	1,722	0,022	Confirmed
H2	Advertising intrusion -> Behavioral intention	0,037	1,746	0,079	Confirmed
H3	Advertising intrusion -> Resistance intention	0,105	1,995	0,011	Confirmed
H4	Advertising intrusion -> Irritation	0,091	1,722	0,024	Confirmed

H5	Advertising intrusion -> Avoidance	0.147	2,558	0,001	Confirmed

CONCLUSION

From the start, the goal of this study was to contribute modestly to a better understanding of the intrusive nature of mobile advertising. The critical component of advertising effectiveness on a mobile device. Some studies have the advantage of focusing just on the antecedents of advertising intrusion.

Following a thorough review of the literature, a conceptual model has been proposed that depicts the consequences of mobile advertising's intrusive nature. This was put to the test with a group of 120 Tunisian students. The findings show that advertising has a negative impact on people's perceptions toward advertisements. As a result, consumers who get mobile advertising without their permission reduce their purchase intent negatively.

This study first studies commercial intrusion in video games before identifying the consequences of the idea of commercial intrusion. To quantify the impact of this advertising intrusion, the consequences of this intrusion must be examined in the literature and quantitative methodology. Furthermore, this study may address the need to clarify the relationships between perceived advertising intrusion, attitudes, and behavioral intentions.

This study examines commercial intrusion in video games before identifying the consequences of advertising intrusion. To quantify the impact of this advertising intrusion, the consequences of this intrusion must be examined in the literature and quantitative methodology. Furthermore, this study may address the need to clarify the relationships between perceived advertising censorship, attitudes, and behavioral intentions.

There are several research avenues that can be considered. On the one hand, investigate the role of the consequences of the intrusive nature of mobile advertising, such as more political conceptions of private life and more social conceptions of intimacy, and test them in a mobile setting. Consider other moderating variables such as age and gender.

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