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Investigation of Attributes Influencing the Attractiveness of Mobile Commerce Advertisements on the Facebook Platform

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Abstract: Examining and analyzing the determinants facilitating consumers' intention to buy via mobile commerce platforms have untapped potential when it comes to advertisement potential and perceived advertising value. Therefore, this paper examines various aspects of the advertisements on mobile commerce platforms and analyzes the importance of intention to buy. The goal of the article is to analyze and determine which aspects of the advertisements have an influence on expediting purchase through mobile commerce. The underlying hypothesis for this investigation is the applicability of the perceived advertising value of mobile commerce, positively associated with attitude towards advertising channels. The Facebook social network has been chosen as an advertisement channel as it is the most popular and biggest investment-generated channel. It is also proven that subjective norms are positively associated with the intention to buy via mobile commerce. This, combined with perceived advertising values and attitudes towards Facebook ads on mobile commerce, influenced the intention to buy.

Keywords: mobile commerce; Facebook; advertisement; intention to buy

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1. Introduction

Nowadays, businesses are spending more of their advertising budgets online and placing special attention on social media as it is a new communication space for companies delivering messages to consumers (Tsimonis et al. 2020). Social media marketing and advertising have positive and significant effects on consumers' intention to buy (Maria et al. 2019). According to Koetsier (2019), the Facebook platform is considered a must for any business growth. Therefore, businesses' marketing expenditure on the Facebook platform continued to grow in 2020 from USD 9.9 to 11.6 billion worldwide (Statista 2021). However, to make such investments, successful marketers must understand how to interact with customers on social media to achieve the goals (Lee et al. 2018).

The effects of advertising elements in social media, Facebook included, the intention to buy or click, and any other consumer actions that lead to a sale are a field that is studied well. The impact is found from the different ad elements, such as emotions evoking, especially positivity and humor (Taylor et al. 2011; Wu et al. 2018; Lee et al. 2018), content informativeness level and type (Haj Eid et al. 2020; Lutfie and Marcelino 2020), video ad length (Munsch 2021; Nettelhorst et al. 2020; Raditya et al. 2020), and content design (Al Kurdi and Alshurideh 2021; Xin Teo et al. 2019). The importance in the same matters of information, entertaining content, advertising value, and being credible has also been confirmed by studies (Warsame et al. 2021).

However, Grewal et al. (2016) pointed out the newness of mobile advertising effectiveness exploration. Additionally, it was proven that consumers perceive mobile commerce and e-commerce differently and, therefore, make different related decisions (Maity 2010). The latter study, as well as the findings by Maity and Dass (2014), suggests that marketers

should differentiate marketing strategy for each platform. Therefore, Dehghani and Tümer (2015) emphasized that there are a lack of studies giving recommendations for mobile advertising specialists on customer behavior, such as motivation, perception, and making decisions, especially by the use of Facebook advertising. This finding is also supported by Shahbaznezhad et al.'s (2021) study, which indicated that content effectiveness on social media in terms of engaging audiences is highly affected by the context and different types of content. Another study by Haj Eid et al. (2020) confirmed that consumers' attitude towards advertisements is influenced by the design of the ad, such as trust, information level, irritation, and interaction, as well as by users' attitudes.

According to Oh et al. (2015), understanding different influence elements of consumers' behavior in social media ads is critical to the further understanding of overall consumer behavior development. Additionally, Deraz (2019) concluded that marketing insights on social networking sites cannot be generalized as a rule for one. Instead, different types of ads for different social platforms should be researched. Therefore, there is a need to explore how to optimize Facebook campaigns by the use of Facebook ad elements in mobile commerce, with the aim of understanding its influence on customer behavior in order to reach business goals.

The paper is structured as follows: the literature review provides a brief scientific overview of the main differences between e-commerce and m-commerce. It also sheds light on the prevailing theoretical streams focused on the determinants of m-commerce and consumers' intentions to buy products through m-commerce platforms. The methodological part introduces hypotheses, research design, and the main reliability indicators. The results section presents the main research findings. The conclusion section generalizes the main insights and provides research limitations and future research directions.

2. Literature Review

2.1. M-Commerce Versus E-Commerce

Various influential studies have been conducted in order to assess the effectiveness of e-commerce platforms, proposing sophisticated multiple-criteria decision-making techniques for solving this task (Wang et al. 2020, 2021). A study by Maity and Dass (2014) concluded that m-commerce should not be perceived in the same way as e-commerce. Additionally, it mentions that marketing strategy managers should consider the information intended to be delivered differently for different commerce types. Therefore, if the budget is low, then communicate the information via m-commerce. However, if the information is more complex and longer, then e-commerce or in-store as a channel should be chosen. Reddy (2014) researched the differences in intention to buy in e-commerce versus m-commerce. It was proven that such consumer behavior is influenced by perceived utility, social influence, and trust. In the study, utility is referred to as "the level of importance that an individual believes a particular technology can have for its use", social influence is the opinions of friends and trusted people, while trust is related to personal confidence. An important aspect to consider is how m-commerce is being adopted. It was found that adoption is affected by social influence, the facilitating conditions, performance, and effort expectancy (Park et al. 2007). Maseeh et al.'s (2020) research found that consumers generally have a positive view of mobile advertising, mainly because it is informative, entertaining, and personalized and helps to make a decision to buy. Others add that not only social influence but also perceived usefulness and perceived ease of use play a vital role in the adoption (Thakur and Srivastava 2013). Similar insights are found by Ghazali et al.'s (2018) study, which states that customers tend to adopt mobile shopping better when it is not difficult to use or navigate the online shop and when it requires low mental effort. Rozina et al. (2021) studied the purchase intent caused by Facebook advertising in mobile commerce, as related to brand equity and image, and confirmed that m-commerce is a different channel for communication. The study of Maity (2010) analyzed consumer decision-making in m-commerce; it was found that even though consumers expect m-commerce and e-commerce to be similar, they do perceive them differently. Additionally, the article

stated that consumers feel more negative (i.e., stressful) about making decisions on m-commerce, and it is different in relation to e-commerce and in-store environments. Lastly, the conclusion and recommendation of the research identified that marketers should give special attention to the advertising information and materials they transmit to consumers via m-commerce channels. The content is also recommended to be simpler when compared with e-commerce advertising.

2.2. Mobile Commerce Advertising and Intention to Buy

Tsang et al. (2004) found that users view mobile advertising negatively unless they receive promotions. However, in a more recent study, Maseeh et al. (2020) concluded differently. Their research found that consumers generally have a positive view of mobile advertising, mainly because it is informative, entertaining, and personalized and helps them to make a decision to buy. Additionally, the same study found that purchase intention and mobile ads have significant relationships, while individual consumer perception plays a moderating role only. Cabiles (2019), Hamouda (2018), and Aziza and Dewi (2019) evaluated consumer responses in their research (e.g., click-through rate, purchase intent), as affected by Facebook, Twitter advertising, and other social media marketing platforms. Mishra (2020) analyzed the user response affected by social media advertising in general. In the research of Camoiras-Rodriguez and Varela (2020), the results drove the insights that customers have more positive intention to shop via mobile when the browsing, online shop interface, and information provided are in a friendly and simple manner. The study by Boardman and McCormick (2018) concluded that out of all shopping channels, m-commerce is mostly favored by females in their 20s, and, with age, the likeability of it decreases. Such insights are explained by the reasoning that younger females are looking for ideas, want to experiment with what is new in the market, and value convenience. However, elderly women (in their 60s) preferred physical stores. Over time, consumers who have a favorable attitude towards mobile shopping apps purchase more frequently (McLean et al. 2020). To sum it up, it can be concluded that, nowadays, consumers generally perceive mobile advertising more positively. The most important elements that affect consumer behavior in m-commerce are mobile connection, mobile devices, and social and digital environments (Koukia et al. 2006). Namin et al. (2020) researched and analyzed banner ad messaging effectiveness. The dependent variables were chosen as the number of clicks and the click-through rate, whilst independent variables were the design elements of banner ads: static vs. animated, ad size, standard vs. non-standard, which, in turn, affect advertising involvement and effectiveness. It shows the importance of intention to buy for different consumer groups. In addition, Koutsiouris and Vrechopoulos (2009) emphasized the consumer's individual characteristics when using m-commerce services. The latter is supported by Love (2005), who mentioned that we need to investigate individual characteristics towards mobile services, including marketing activities. It is found that extroverts have higher adoption of mobile commerce rates, while neuroticism makes it harder (Zhou and Lu 2011). Consumers' intention to use mobile shopping is highly motivated by the willingness to save and is supported by an openness to change and demotivated by self-efficacy (Gupta and Arora 2017). One of the m-commerce value propositions is personalization. The biggest argument for it is that mobile devices are being used by usually one person only (Clarke 2008), and personalization can easily be achieved with the help of advertising. Mekawiea and Hanyb (2020) and Alalwan (2018) confirmed this in their research—for analyzing purchase intentions in the environments related to m-commerce, psychological factors and social media advertising are very important. Chong (2013) researched in more depth the demographic and motivation aspects in terms of m-commerce usage and personalization. One of the main findings was that consumers tend to use m-commerce services if they find them enjoyable, and this is positively affected by location-based services. The latter includes personalization in terms of advertisements, offers, and discounts, which are important aspects to consider for marketers working with m-commerce. Camoiras-Rodriguez and Varela's (2020) study suggested that mobile retailers should differentiate

marketing strategies based on users' personalities. Wu and Hisa's (2008) study analyzed the innovation of e-commerce by distinguishing different recommendations for Internet-enabled commerce, mobile commerce, and ubiquitous commerce. Research suggests that businesses working with m-commerce should review and adapt business elements such as reshaping customer value and relationship building in order to match with opportunities and innovate the business. Specifically, the article draws attention to the fact that m-commerce users have the profile of being pressured by time, have work related to mobiles, are young or/and are considered mobile users. Therefore, one of the suggestions is to design marketing strategies for mobile technologies in order to differentiate from the competition and innovate the business organizations, m-commerce included.

3. Materials and Methods

3.1. Hypotheses Building

3.1.1. Perceived Informativeness

Informativeness as an element can be described when the advertisement presents the essential facts and information, preferably in an easy-to-understand manner (Janssens and De Pelsmacker 2005). Such ads are perceived by consumers as useful, enjoyable (Martins et al. 2018), and more reliable (Janssens and De Pelsmacker 2005).

Ducoffe (1996) stated that the perception of an advertisement being useful by providing relevant information leads to the perception of an ad being valuable. Furthermore, Brackett and Carr (2001) also stated the recommendation from their research that the messaging of an ad should be as informative as it can be due to its high influence on perceiving the high value of an ad. The positive effect of an informative ad on perceived advertising value is also concluded from Tsang et al.'s (2004) study. In addition, a direct link between informativeness effects on attitude was found (Brackett and Carr 2001). Therefore, the following hypotheses are formed:

Hypothesis 1 (H1). *The perceived informativeness of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.*

Hypothesis 1 (H2). *The perceived informativeness of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.2. Perceived Entertainment

McQuail (2005) described entertainment as an element that fulfills the need for diversion, enjoyment, or emotional release. The positive link between entertainment and advertisement value is proven by the research of Kim and Han (2014) and Tsang et al. (2004).

In terms of mobile advertising, it was also found that perceived entertainment is one of the most impactful factors for the attitude towards advertising (Yang et al. 2017). The importance of the ad's entertainment to consumers' attitude about advertising was also confirmed by Murillo et al. (2016). Hypotheses H2 and H3 were formed in accordance with the results of previous research.

Hypothesis 3 (H3). *The perceived entertainment of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.*

Hypothesis 4 (H4). *The perceived entertainment of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.3. Perceived Irritation

Irritation is perceived when consumers see the ad as being manipulative, annoying, or offensive (Ducoffe 1996; Lin et al. 2021; Alwreikat and Rjoub 2021). It can also be referred to as a situation when ad messaging irritates and slows down the user (Kim and Han 2014).

In the mobile context, irritation towards an advertisement can also appear due to the small screen size (Kim and Sundar 2010).

Studies performed by Tsang et al. (2004) and Kim and Han (2014) confirmed that irritation correlates negatively with ad value. Moreover, perceived irritation in the mobile advertising context has also been found to have a negative relationship with advertising value (Koo et al. 2012). Therefore, the further hypothesis is:

Hypothesis 5 (H5). *The perceived irritation of the mobile ad for m-commerce is negatively associated with its perceived advertising value on Facebook.*

3.1.4. Perceived Credibility

Advertisement credibility can be described as the perception of the consumer as to truthfulness and believability perceptions (MacKenzie and Lutz 1989; Jaeger and Weber 2020). Credibility was not on the original Ducoffe's advertising value model as an antecedent of advertising value. This element was proposed by Lin and Hung (2009) and Murillo et al. (2016), who found that perceived credibility is significant when it comes to advertising value. Additionally, Haghirian et al.'s (2005) study found that message content credibility positively influences consumer attitudes to mobile ads. Based on the previous research, the hypotheses are stated as:

Hypothesis 6 (H6). *The perceived credibility of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.*

Hypothesis 7 (H7). *The perceived credibility of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.5. Perceived Interactivity

Interactivity can be described as a degree of possibility on which the user can react and act (Florenthal and Shoham 2010). Ching et al.'s (2013) study exploring online advertising effects on attitudes towards products identified that interactivity adds up. Later, it was confirmed that interactivity is a significant factor of influence on the attitude towards online ads (Ariffin et al. 2018). Therefore, the following hypothesis is:

Hypothesis 8 (H8). *The perceived interactivity of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.6. Perceived Personalization

The element of when the advertisement describes and offers a targeted solution to specific users (usually due to acquired information) can be defined as personalization (Shareef et al. 2017). It was found that how consumers perceive ad personalization impacts their attitude, mainly by making users less resistant and lowering skeptical opinions (Baek and Morimoto 2012). Based on the research, the other proposed hypothesis is:

Hypothesis 9 (H9). *The perceived personalization of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.7. Perceived Advertising Value

According to Tsimonis and Dimitriadis (2019), perceived value has been usually described as the concern between the price paid and the quality received. Based on the original Advertising Value model, Ducoffe (1996) stated that advertising value positively affects consumer attitudes towards ads. Such a relationship has been confirmed by some researchers, who have proved that there is a positive relationship between value and attitude in terms of ads (Murillo et al. 2016). Therefore:

Hypothesis 10 (H10). *The perceived advertising value of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.*

3.1.8. Perceived Price

Nguyen and Gizaw (2014) described "perceived price" as the interpreted individual belief of the product price. Kim et al. (2011) performed a study about internet shopping elements. The research proved that consumers' intention to buy is affected negatively by the product price if it is perceived as high. The following hypothesis has been formed as:

Hypothesis 11 (H11). *The perceived price of m-commerce products is negatively associated with the intention to buy.*

3.1.9. Delivery Terms and Conditions

It is proved that delivery time affects the intention to buy online (Nguyen et al. 2019). However, it is not only related to new customers. It is proven that the client is more likely to come back to purchase again if the seller provides real-time information and accurate expectations about delivery costs and the process (Liu et al. 2019). Based on insights, the following hypothesis states:

Hypothesis 12 (H12). *Clear delivery terms and conditions are positively associated with the intention to buy via m-commerce.*

3.1.10. Perceived Risk

Perceived risk is the uncertainty about the future, usually related to illegal usage of personal and financial information, according to Huang et al. (2014). The study also categorized such risk into categories: economic, performance, psychological, and time-related. The perceived high risk of a consumer will reduce the purchase intention on e-commerce (Sullivan and Kim 2018). Therefore:

Hypothesis 13 (H13). *Perceived risk is negatively associated with the intention to buy via m-commerce.*

3.1.11. Attitude towards Ads

Attitude is "a learned predisposition to consistently behave in a favorable or unfavorable manner with respect to a given object" (Schiffman et al. 2010). The attitude of the consumer is proven to be a reliable prediction of the intention (Gupta and Arora 2017). It has been proven that attitude positively affects the intention to shop online (Jalilvand and Samiei 2012; Raman 2019). Consequently, the hypothesis states:

Hypothesis 14 (H14). *Attitude towards Facebook ads is positively associated with the intention to buy via m-commerce.*

3.1.12. Perceived Shopping Platform's Ease of Use

Ramayah and Ignatius (2010) proved that the description of product selections in terms of ease of use is an unrestricted effort when shopping online. Tsimonis and Dimitriadis (2019) added that ease of use is also related to the website's navigation and downloading time. Perceived ease of use affects consumers' intention to buy online in a positive way (Akhlaq and Ahmed 2014), mainly because of platform usage convenience as well as an efficient interface (Shankar and Rishi 2020). Sharma and Klein (2020) defined the main elements of an online shopping platform for success, which are: systems, information, design, information, and playfulness. Therefore, the hypothesis is:

Hypothesis 15 (H15). *Perceived shopping platform's ease of use is positively associated with the intention to buy via m-commerce.*

3.1.13. Subjective Norm

Hasbullah et al. (2016) proved that the subjective norm has a positive correlation with the intention to buy online. Lim et al. (2017), researching social media influencers, also confirmed that the subjective norm is an essential factor for a consumer's intention to purchase. Thus,

Hypothesis 16 (H16). *Subjective norm is positively associated with the intention to buy via m-commerce.*

The relationships between researched constructs are depicted in a research model below (Figure 1):

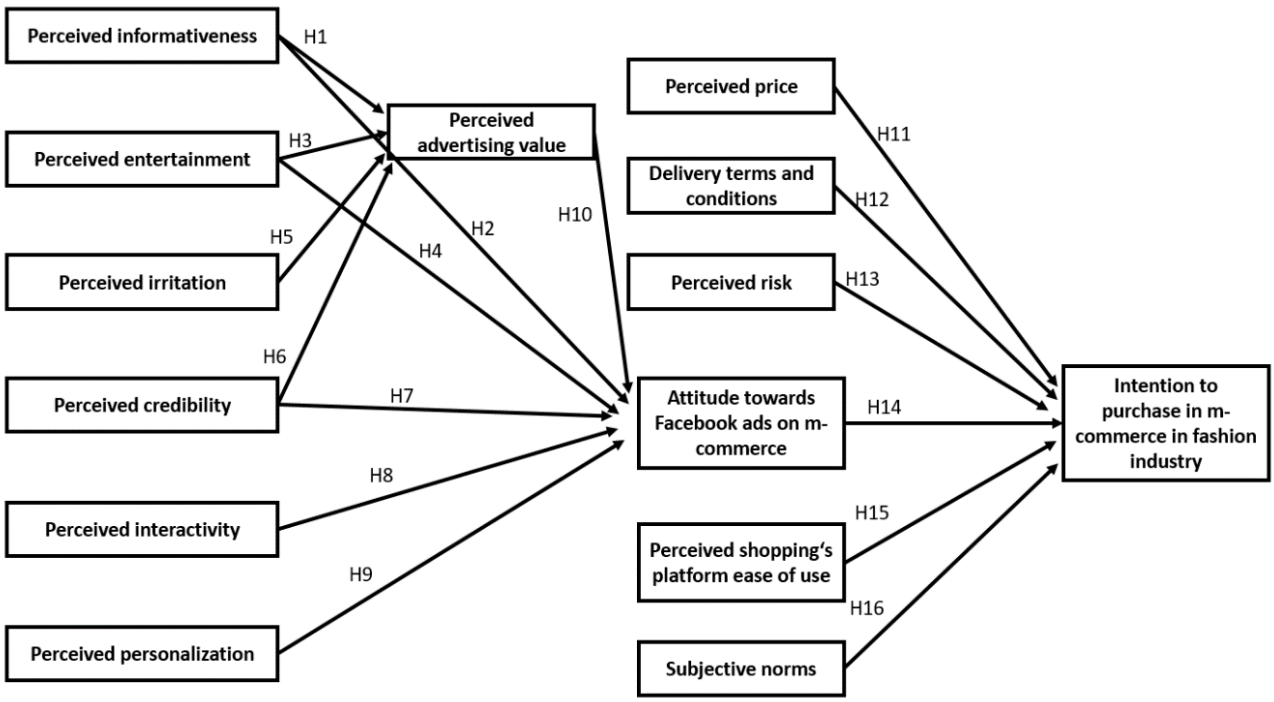

Figure 1. Conceptual research model.

3.2. Research Design and Reliability Indicators

We select a research design type—the cross-sectional survey. This type of research is to observe events that are not directly intervened in and that happen naturally, according to Field (2009). Moreover, it helps to see the big picture of a few variables used in a single-time exploration of the natural reactions to the questions reached without third-party interactions. To collect the data for the research, a structured questionnaire is used. It is the most popular instrument for quantitative research as it allows us to receive data from the target population, according to Mathers et al. (1998). The surveys' question responses have the option to be answered from 5 options. These are based on the 5-point Likert scale. The questions of the survey are presented in the Appendix A.

The survey for the research was created using Google Form using the Lithuanian language. It was shared on a Facebook personal wall, stories, and various Facebook groups. In total, 408 individual responses were collected. The data collection took 26 days—from 18 October 2021 to 12 November 2021. All of the respondents were in line with the basic requirements for participating in data analysis: finishing the questionnaire till the end, being Lithuanian, clothes shopping via m-commerce, using Facebook, and being older than 16. Clothing was selected as one of the most popular categories for buying via mobile commerce. IBM SPSS Statistics 28.0 was used for examining data.

For the evaluation of the reliability and consistency of these scales, the Cronbach's alpha method was applied. Table 1 presents the summary of scale reliability results for variable groups.

Table 1. Scale reliability results.

Variable Group	Scale Items	Cronbach's Alpha	Reliability
Perceived Informativeness	5	0.896	Good
Perceived Entertainment	4	0.893	Good
Perceived Irritation	5	0.843	Good
Perceived Credibility	5	0.828	Good
Perceived Interactivity	4	0.819	Good
Perceived Personalization	2	0.588	Poor
Perceived Advertising Value	3	0.893	Good
Attitude Towards Facebook Ads	4	0.944	Excellent
Perceived Price	3	0.573	Poor
Delivery Terms and Conditions	2	0.713	Acceptable
Perceived Risk	3	0.836	Good
Perceived Shopping Platform's Ease of Use	3	0.762	Acceptable
Subjective Norm	3	0.856	Good
Intention to Purchase	3	0.823	Good

Based on Tavakol and Dennick (2011), if Cronbach's alpha is less than 0.5, then the reliability is unacceptable. Poor consistency is when $0.6 > \alpha \geq 0.5$; it is questionable if $0.7 > \alpha \geq 0.6$, acceptable if $0.8 > \alpha \geq 0.7$, good if $0.9 > \alpha \geq 0.8$, and excellent if alpha is greater than 0.9. Perceived Personalization and Perceived Price both have Cronbach alphas of just slightly above 0.5; therefore, the reliability is considered as poor, and these variables are taken out from further modeling.

In order to check the normality of data distribution, Kolmogorov–Smirnov and Shapiro–Wilk tests were performed. The results are presented in Table 2.

Table 2. Normality of data distribution.

Tests of Normality						
	Kolmogorov–Smirnov			Shapiro–Wilk		
	Statistic	Degrees of Freedom	Significance Level	Statistic	Degrees of Freedom	Significance Level
Perceived Informativeness	0.077	408	<0.001	0.960	408	<0.001
Perceived Entertainment	0.062	408	<0.001	0.966	408	<0.001
Perceived Irritation	0.105	408	<0.001	0.977	408	<0.001
Perceived Credibility	0.084	408	<0.001	0.982	408	<0.001
Perceived Interactivity	0.108	408	<0.001	0.978	408	<0.001
Perceived Advertising Value	0.087	408	<0.001	0.965	408	<0.001
Attitude Towards Facebook Ads	0.081	408	<0.001	0.953	408	<0.001
Delivery Terms and Conditions	0.311	408	<0.001	0.717	408	<0.001
Perceived Risk	0.119	408	<0.001	0.919	408	<0.001
Perceived Shopping Platform's Ease of Use	0.171	408	<0.001	0.849	408	<0.001
Subjective Norm	0.135	408	<0.001	0.920	408	<0.001
Intention to Purchase	0.116	408	<0.001	0.941	408	<0.001

4. Results

Sample Profile and Demographics

Out of 408 respondents, the majority were female (88%), and the rest were male. Such distribution can be explained by each gender's habit of buying clothes. The biggest group of respondents was between 25 to 34 years old (39%). The second largest group was 35–44-year-olds (27%), then the following: 45 to 54 years old—15%, up to 24 years old—12%, 55 to 64 years old—5%, and 1% more than 65 years old. In terms of income, the two major groups were earning EUR 500 to 999 per month (33% of respondents) and EUR 1000 to 1499

per month (28%). The rest of the distribution between the income groups of the participants can be seen in Table 3.

Table 3. Sample profile.

Gender		
Gender	Frequency	Percent
Female	359	88%
Male	49	12%
Total	408	100%
Age		
Age	Frequency	Percent
25 to 34	159	39%
35 to 44	112	27%
45 to 54	63	15%
Up to 24	50	12%
55 to 64	21	5%
More than 65	3	1%
Total	408	100%
Income		
Monthly income	Frequency	Percent
Up to 499 EUR	43	11%
500–999 EUR	133	33%
1000–1499 EUR	115	28%
1500–1999 EUR	56	14%
2000–2499 EUR	34	8%
More than 3000 EUR	27	7%
Total	408	100%

As the research is focused on understanding the effect of ads on Facebook, the respondents were asked how often they used Facebook (Table 4). The majority claimed to be using it for 1–2 h per day (33%); 25% were using it for 2–3 h daily, another 25% for more than 3 h, and the rest (18%) said they were using less than 1 h per day. Considering the responses, a conclusion can be made that respondents are spending time and, therefore, seeing ads on Facebook.

Table 4. Facebook social media usage.

How Often Do You Use Facebook?	**Frequency**	**Percent**
1–2 h per day	133	33%
2–3 h per day	101	25%
More than 3 h per day	100	25%
Up to 1 h per day	74	18%
Total	408	100%

Additionally, for the research, it is important to understand the frequency of users purchasing clothes via a mobile habit. Those who do not purchase clothes via mobile at all were asked not to continue filling out the form. The majority of respondents claimed to be buying clothes in such a way once per month to once per half year (40%). Two other popular options were "less often than once per year" (20%) and "from once per week to once per month" (20%). The full information about the distribution can be seen in Table 5.

Table 5. Frequency of buying clothes via mobile.

How Often Do You Buy Clothes via Mobile?	Frequency	Percent
From once per month to once per half year	163	40%
Less often than once per year	81	20%
From once per week to once per month	80	20%
From once per half year to once a year	74	18%
More than once per week	10	2%
Total	408	100%

The last aspect checked about the respondents were the experience of using smartphones. The vast majority—63% of people—claimed to have more than 10 years' experience of using a smartphone. The full distribution is shown in Table 6.

Table 6. Experience using smartphones.

Your Experience Using Smartphones	Frequency	Percent
More than 10 years	256	63%
7–9 years	106	26%
4–6 years	34	8%
Up to 3 years	12	3%
Total	408	100%

The main descriptive statistics indicators are presented in Table 7. The highest mean of all variables is for Delivery Terms and Conditions, equal to 4.4412, which represents that those respondents agreed that this aspect of buying clothes via m-commerce is important. The lowest mean is for Subjective Norm, equal to 2.3848, which means that this aspect is the least important when buying clothes via m-commerce. The standard deviation is close to 1, which means that the scales are consistent. However, there are three variables—Perceived Shopping Platform's Ease of Use, Delivery Terms and Conditions, and Perceived Credibility, which present that potential outliers might exist. When looking at the skewness of the variables, it shows different patterns, meaning that not all the results are agreeable.

Table 7. Descriptive statistics.

Constructs	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perceived Informativeness	3.4897	1.00225	1.005	−0.537	0.121	−0.186	0.241
Perceived Entertainment	2.9369	1.11094	1.234	−0.091	0.121	−0.764	0.241
Perceived Irritation	2.8059	0.97797	0.956	0.097	0.121	−0.730	0.241
Perceived Credibility	2.9265	0.85997	0.740	−0.223	0.121	−0.242	0.241
Perceived Interactivity	3.1011	0.96421	0.930	−0.169	0.121	−0.411	0.241
Perceived Advertising Value	2.7533	1.05700	1.117	0.099	0.121	−0.606	0.241
Attitude Towards Facebook Ads	2.9032	1.19548	1.429	−0.027	0.121	−0.933	0.241
Delivery Terms and Conditions	4.4412	0.82808	0.686	−1.768	0.121	3.215	0.241
Perceived Risk	3.7108	1.09061	1.189	−0.602	0.121	−0.381	0.241
Perceived Shopping Platform's Ease of Use	4.2459	0.79325	0.629	−1.346	0.121	2.153	0.241
Subjective Norm	2.3848	1.12758	1.271	0.340	0.121	−0.801	0.241
Intention to Purchase	2.4877	1.12056	1.256	0.442	0.121	−0.724	0.241

Taking into account that data sets are non-normally distributed, the Spearman correlation test was performed between all variables. The correlation coefficients of the researched variables are presented in Table 8.

Table 8. Correlation between variables.

Variables	PInf	PEnt	PIrr	PCre	PInt	PAdV	ATFAd	DTCo	PRis	PSPEUs	SNor	IPur
PInf	1	0.696	−0.501	0.671	0.428	0.619	0.672	0.153	−0.032	0.234	0.288	0.457
PEnt	0.696	1	−0.557	0.669	0.444	0.696	0.807	0.118	−0.114	0.166	0.373	0.545
PIrr	−0.501	−0.557	1	−0.48	−0.243	−0.488	−0.594	−0.072	0.306	−0.177	−0.117	−0.298
PCre	0.671	0.669	−0.48	1	0.486	0.72	0.707	0.097	−0.159	0.144	0.41	0.559
PInt	0.428	0.444	−0.243	0.486	1	0.518	0.512	0.188	0.011	0.159	0.272	0.343
PAdV	0.619	0.696	−0.488	0.72	0.518	1	0.829	0.073	−0.139	0.155	0.44	0.592
ATFAd	0.672	0.807	−0.594	0.707	0.512	0.829	1	0.09	−0.132	0.167	0.425	0.599
DTCo	0.153	0.118	−0.072	0.097	0.188	0.073	0.09	1	0.165	0.42	0.073	0.073
PRis	−0.032	−0.114	0.306	−0.159	0.011	−0.139	−0.132	0.165	1	0.123	−0.02	−0.14
PSPEUs	0.234	0.166	−0.177	0.144	0.159	0.155	0.167	0.42	0.123	1	0.097	0.177
SNor	0.288	0.373	−0.117	0.41	0.272	0.44	0.425	0.073	−0.02	0.097	1	0.622
IPur	0.457	0.545	−0.298	0.559	0.343	0.592	0.599	0.073	−0.14	0.177	0.622	1

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

Before constructing and evaluating the final model based on the results, multicollinearity checks between variables were accomplished. According to Alin (2010), multicollinearity exists between variables if the variance inflation factor (VIF) is more than 3. No multicollinearity problem was identified.

The hypotheses were tested using regression analysis. After all the statistical checks, the following variables and corresponding hypothesis were excluded from the further research:

- Perceived Personalization (H9) due to poor scale reliability—Cronbach alpha's below 0.5;
- Perceived Price (H11) due to poor scale reliability—Cronbach alpha's below 0.5;
- Perceived Risk (H13) due to weak and negligible correlations with other variables.

Further analysis of hypothesis testing was performed using linear regression. The hypothesis is considered as supported if significance is $p < 0.05$.

The first part of the model considers Perceived Advertising Value as a dependent variable. The model equation is: Perceived Advertising Value = C + b1 Perceived Informativeness + b2 Perceived Entertainment + b3 Perceived Irritation + b4 Perceived Credibility + ε. The modeling results are presented in Table 9.

Table 9. Perceived Advertising Value linear regression.

Construct	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.258	0.236		1.092	0.275		
PInf	0.128	0.051	0.121	2.497	0.013	0.411	2.436
PEnt	0.261	0.047	0.275	5.556	<0.001	0.397	2.52
PIrr	−0.082	0.042	−0.076	−1.953	0.052	0.648	1.544
PCre	0.516	0.057	0.42	9.06	<0.001	0.452	2.215

H1: The perceived informativeness of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.

The hypothesis significance is 0.013, which is less than 0.05 and is considered statistically significant. Additionally, β = 0.121, t = 2.497. To sum up, the H1 hypothesis is supported.

H3: The perceived entertainment of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.

Hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, β = 0.275, t = 5.556. To sum up, the H3 hypothesis is supported.

H5: The perceived irritation of the mobile ad for m-commerce is negatively associated with its perceived advertising value on Facebook.

Hypothesis significance is 0.052, which is more than 0.05 and is considered statistically insignificant. Therefore, the H5 hypothesis is not supported.

H6: The perceived credibility of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.

The hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, β = 0.42, t = 9.06. To sum up, the H6 hypothesis is supported.

The second part of the model considers Attitude Towards Facebook Ads as a dependent variable. The model equation is: Attitude Towards Facebook Ads = C + b1 Perceived Informativeness + b2 Perceived Entertainment + b3 Perceived Credibility + b4 Perceived Interactivity + b5 Perceived Advertising Value + ε. The modeling results are presented in Table 10.

Table 10. Attitude towards Facebook Ads linear regression.

Construct	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	−0.402	0.113		−3.561	<0.001		
PInf	0.069	0.042	0.058	1.67	0.096	0.411	2.435
PEnt	0.417	0.038	0.388	10.876	<0.001	0.391	2.557
PCre	0.067	0.051	0.048	1.311	0.191	0.37	2.701
PInt	0.062	0.034	0.05	1.835	0.067	0.673	1.485
PAdV	0.527	0.041	0.466	12.718	<0.001	0.371	2.697

H2: The perceived informativeness of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.

The hypothesis significance is 0.096, which is more than 0.05 and is considered statistically not significant. Additionally, β = 0.058, t = 1.67. To sum up, the H2 hypothesis is not supported.

H4: The perceived entertainment of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.

Hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, β = 0.388, t = 10.876. To sum up, the H4 hypothesis is supported.

H7: The perceived credibility of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.

The hypothesis significance is 0.191, which is more than 0.05 and is considered statistically not significant. Additionally, β = 0.048, t = 1.311. To sum up, the H7 hypothesis is not supported.

H8: The perceived interactivity of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.

The hypothesis significance is 0.067, which is more than 0.05 and is considered statistically not significant. Additionally, β = 0.05, t = 1.835. To sum up, the H8 hypothesis is not supported.

H10: The perceived advertising value of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.

Hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, β = 0.466, t = 12.718. To sum up, the H10 hypothesis is supported.

The third part of the model considers Intention to Purchase on M-Commerce in Fashion Industry as a dependent variable. To make sure the modeling is as accurate as possible, a new variable is introduced—Attitude Towards Facebook Ads Calculated (ATFAdCalc). It is calculated based on the Model-2-supported hypothesis equation: Attitude Towards Facebook Ads Calculated = −0.137 + 0.475 Perceived Entertainment + 0.598 Perceived Advertising Value.

The model equation is Intention to Purchase on M-Commerce in Fashion Industry = C + b1 Attitude Towards Facebook Ads Calculated + b2 Delivery Terms and Conditions + b3 Perceived Shopping Platform's Ease of Use + b4 Subjective Norm+ ε. The modeling results are presented in Table 11.

Table 11. Intention to Purchase linear regression.

Construct	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	−0.117	0.244		−0.481	0.631		
ATFAdCalc	0.425	0.04	0.404	10.624	<0.001	0.771	1.296
DTCo	−0.04	0.052	−0.03	−0.782	0.435	0.767	1.304
PSPEUs	0.115	0.055	0.082	2.105	0.036	0.741	1.349
SNor	0.445	0.037	0.448	11.974	<0.001	0.798	1.252

H12: Clear delivery terms and conditions are positively associated with the intention to buy via m-commerce.

The hypothesis significance is 0.435, which is more than 0.05 and is considered statistically not significant. Additionally, $\beta = -0.03$, $t = -0.782$. To sum up, the H12 hypothesis is not supported.

H14: Attitude towards Facebook Ads is positively associated with the intention to buy via m-commerce.

Hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, $\beta = 0.404$, $t = 10.624$. To sum up, the H14 hypothesis is supported.

H15: Perceived shopping platform's ease of use is positively associated with the intention to buy via m-commerce.

Hypothesis significance is 0.036, which is less than 0.05 and is considered statistically significant. Additionally, $\beta = 0.082$, $t = 2.105$. To sum up, the H15 hypothesis is supported.

H16: Subjective norm is positively associated with the intention to buy via m-commerce.

The hypothesis significance is <0.001, which is less than 0.05 and is considered statistically significant. Additionally, $\beta = 0.448$, $t = 11.974$. To sum up, the H16 hypothesis is supported.

To summarize, the hypotheses were tested using empirical research. In total, 3 out of 16 hypotheses could not be tested (H9, H11, H13). The Perceived Personalization and Perceived Price variables were not tested due to poor scale reliability. Perceived Risk was not tested because of weak and negligible correlations with other variables. H2, H5, H7, H8, and H12 hypotheses were not supported due to insignificance, while H1, H3, H4, H6, H10, and H14 hypotheses were supported. The summary is provided in Table 12.

Table 12. Hypothesis testing results.

H1	The perceived informativeness of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.	Supported
H2	The perceived informativeness of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Not supported
H3	The perceived entertainment of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.	Supported
H4	The perceived entertainment of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Supported
H5	The perceived irritation of the mobile ad for m-commerce is negatively associated with its perceived advertising value on Facebook.	Not supported
H6	The perceived credibility of the mobile ad for m-commerce is positively associated with its perceived advertising value on Facebook.	Supported
H7	The perceived credibility of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Not supported
H8	The perceived interactivity of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Not supported
H9	The perceived personalization of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Cannot be tested

Table 12. *Cont.*

H10	The perceived advertising value of the mobile ad for m-commerce is positively associated with the attitude towards Facebook ads.	Supported
H11	The perceived price of m-commerce products is negatively associated with the intention to buy.	Cannot be tested
H12	Clear delivery terms and conditions are positively associated with the intention to buy via m-commerce.	Not supported
H13	Perceived risk is negatively associated with the intention to buy via m-commerce.	Cannot be tested
H14	Attitude towards Facebook ads is positively associated with the intention to buy via m-commerce.	Supported
H15	Perceived shopping platform's ease of use is positively associated with the intention to buy via m-commerce.	Supported
H16	Subjective norm is positively associated with the intention to buy via m-commerce.	Supported

The updated conceptual model with the supported hypotheses is presented in Figure 2:

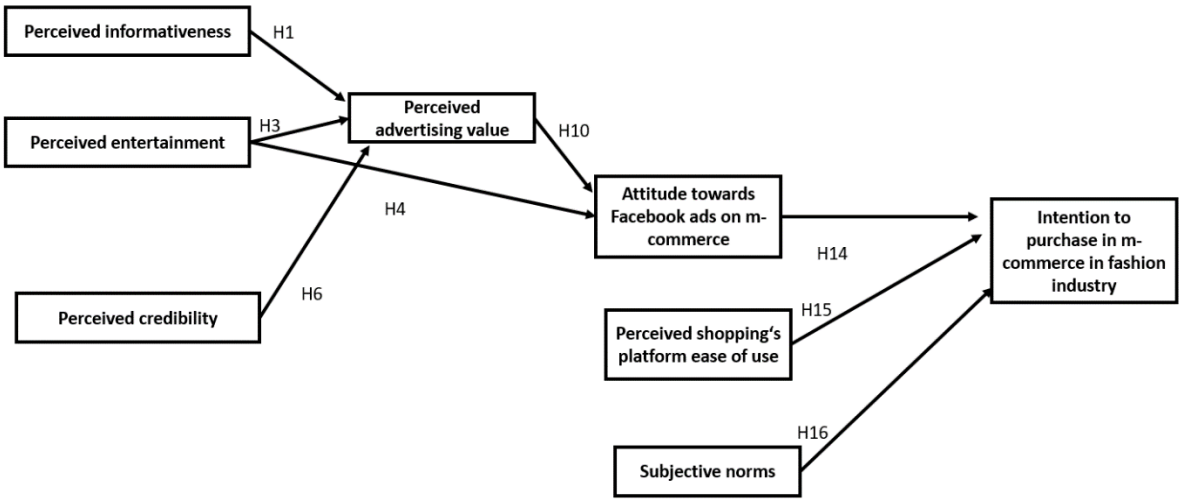

Figure 2. Model with the supported hypotheses.

5. Conclusions and Discussion

The theoretical part of our study identified that mobile commerce and e-commerce are found to have differences in consumers' intention to buy. The most important aspects of mobile commerce advertising were found to be users' view, mobile connection, device, digital environments, consumers' individual characteristics, personalization, and innovation.

The survey outcomes confirmed perceived informativeness, perceived entertainment, and perceived credibility as Facebook ads elements that were supported as significant variables of perceived advertising value. Perceived entertainment and perceived advertising value were confirmed as significant variables positively impacting attitudes towards Facebook ads on mobile commerce. The attitude towards Facebook ads on mobile commerce and the perceived shopping platform's ease of use and subjective norm were supported as the main elements influencing consumers' intention to purchase, using mobile commerce, from the fashion industry. The hypotheses were confirmed only partially, which shows the necessity of additional studies in the area of irritation and the interactivity of the mobile ad for mobile commerce with attitudes towards Facebook ads. For further studies, it is recommended to apply for specific brands, perform the study on different industries, and execute globally focused research and/or specify the elements for the respondents.

5.1. Managerial Implications

The direct impact affecting the intention to purchase on m-commerce in the fashion industry in a positive way is affected by three aspects. First is how the platform helps us to perceive the consumers' ease to use when shopping. It is important to make sure that it is easy to choose the product, to operate and understand the platform itself, as well as to take care of the fast downloading and loading time of the platform. Secondly, the subjective norm plays an important role too. Therefore, marketers need to make sure that people important to the consumer, similar to them, as well as those whom they look up to, would encourage them to buy clothes via smartphones. Lastly, the importance lies in the attitude towards Facebook ads, which means that marketers need to make sure that consumers think such ads are a good thing, have a favorable opinion about them, and like them in general.

However, the task to create the desired attitude towards Facebook ads on m-commerce has some aspects that need to be worked on in order to form it in a positive way. The first thing to consider is the perception about Facebook ads being entertaining—it needs to be pleasing and enjoyable. The second thing is the perception of the value that advertisement creates, including usefulness and importance. The research showed that perceived entertainment is an important factor. The other variable to take into account is the credibility the customer perceives. The Facebook ad needs to be convincing, credible, trustworthy, believable, and a useful reference for the purchase. The last contributor is perceived informativeness. It is important to ensure the ads are a good product information source, are relevant, provide timely information, and are up-to-date and convenient.

5.2. Research Limitations

The gender distribution is highly unequal as a large majority of the respondents were females. Therefore, a study with equal representation of men and women would be beneficial. Increased sample size may also help to derive additional insights. Furthermore, the respondents were allowed to imagine shopping experiences and ads on Facebook as they wanted to. Such a situation might bring misunderstanding and low consistency between the specific clothing brand cases. To adapt the insights for a specific brand, a more accurate case scenario needs to be given. Additionally, to adapt such research implications for industries other than the clothing industry, another type of literature review is required, and, therefore, the hypotheses and survey questions need to be adapted.

Moreover, to investigate the effect of Facebook ads elements more accurately, exact content examples could be given. This could lead to a more unified understanding of the elements given (i.e., informativeness, entertainment, credibility) as, in this case, it was left to respondents' free interpretation.

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Appendix A

Table A1. Questionnaire of the Facebook advertising elements.

Variable	Statement	Source
Perceived Informativeness	Clothes ads on Facebook via mobile are good sources of product information	Ducoffe (1996)
	Clothes ads on Facebook via mobile supply relevant product information	Ducoffe (1996)
	Clothes ads on Facebook via mobile provide timely information	Ducoffe (1996)
	Clothes ads on Facebook via mobile are good sources of up-to-date product information	Ducoffe (1996)
	Clothes ads on Facebook via mobile are convenient sources of product information	Ducoffe (1996)
Perceived Entertainment	Clothes ads on Facebook via mobile are entertaining.	Ducoffe (1996)
	Clothes ads on Facebook via mobile are pleasing.	Ducoffe (1996)
	Clothes ads on Facebook via mobile are enjoyable.	Ducoffe (1996)
	Clothes ads on Facebook via mobile are fun.	Ducoffe (1996)
Perceived Irritation	Clothes ads on Facebook via mobile are annoying.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are irritating.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are deceptive.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are confusing.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile insult people's intelligence.	Ducoffe (1996), Brackett and Carr (2001)
Perceived Credibility	Clothes ads on Facebook via mobile are convincing.	Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are credible.	Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are trustworthy.	Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are believable.	Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are useful references for purchasing products.	Brackett and Carr (2001)
Perceived Interactivity	Clothes ads on Facebook via mobile make it easy to convey my opinion.	Kim and Ko (2012)
	Clothes ads on Facebook via mobile allow us to exchange opinions or conversations with other users.	Kim and Ko (2012)
	Clothes ads on Facebook via mobile allow two-way interactions with a brand.	Kim and Ko (2012)
	Clothes ads on Facebook are interactive.	Ching et al. (2013)
Perceived Personalization	Clothes ads on Facebook communicate targeted solutions and offers to me.	Peppers and Rogers (1999)
	Clothes ads on Facebook are personalized.	Peppers and Rogers (1999)
Perceived Advertising Value	Clothes ads on Facebook via mobile are useful.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are valuable.	Ducoffe (1996), Brackett and Carr (2001)
	Clothes ads on Facebook via mobile are important.	Ducoffe (1996), Brackett and Carr (2001)

Table A2. Questionnaire of elements affecting intention to purchase.

Attitude Towards Facebook Ads	Clothes ads on Facebook via mobile are a good thing.	Tsang et al. (2004)
	I like clothes ads on Facebook via mobile.	Tsang et al. (2004)
	My general opinion about clothes ads on Facebook via mobile is favorable.	Tsang et al. (2004)
	I like to watch clothes ads on Facebook via mobile.	Tsang et al. (2004)
Perceived Price	When buying clothes via smartphone, price comparisons between online and offline are important to me.	Wei Yongchang et al. (2018)
	When buying clothes via smartphone, price promotions are important to me.	Wei Yongchang et al. (2018)
	When buying clothes via smartphone, the price versus performance ratio is important to me.	Wei Yongchang et al. (2018)
Delivery Terms and Conditions	The clarity of delivery terms and conditions when buying clothes via smartphone is important to me.	Chen et al. (2010)
	The length of delivery time when buying clothes via smartphone is important to me.	Chen et al. (2010)
Perceived Risk	When buying clothes via smartphone, I worry about the product quality.	Wei Yongchang et al. (2018)
	When buying clothes via smartphone, I worry about payment privacy.	Added by thesis author
	When buying clothes via smartphone, I worry about the risk of information privacy.	Wei Yongchang et al. (2018)
Perceived Shopping Platform's Ease of Use	The ease of choosing the product on a shopping platform when buying clothes via smartphone is important to me.	Zeithaml et al. (2002)
	The ease of operating and understanding the shopping platform when buying clothes via smartphone is important to me.	Zeithaml et al. (2002)
	The shopping platform's downloading and loading time when buying clothes via smartphone is important to me.	Tsimonis and Dimitriadis (2019)
Subjective Norm	People important to me think I should buy clothes via smartphone.	Mainardes et al. (2020)
	It is expected that people like me should buy clothes via smartphone.	Mainardes et al. (2020)
	People I look up to expect that I should buy clothes via smartphone.	Mainardes et al. (2020)

Table A3. Questionnaire on intention to purchase.

Intention to Purchase	I prefer to buy clothes via mobile rather than other online or offline options.	Wei Yongchang et al. (2018)
	As I see clothes ads on Facebook, I have the intention to buy clothes via my smartphone.	Taylor and Bearden (2002)
	After seeing clothes ads on Facebook, I would recommend them to other people buying via smartphone.	Taylor and Bearden (2002)

Table A4. Shortened names of the variables.

PInf	Perceived Informativeness
PEnt	Perceived Entertainment
PIrr	Perceived Irritation
PCre	Perceived Credibility
PInt	Perceived Interactivity
PAdV	Perceived Advertising Value
ATFAd	Attitude Towards Facebook Ads
DTCo	Delivery Terms and Conditions
PRis	Perceived Risk
PSPEUs	Perceived Shopping Platform's Ease of Use
SNor	Subjective Norm
IPur	Intention to Purchase

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