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The Mediating Role of Extrinsic Motivation in the Relationship between Mobile Advertising and Customers' Attitudes towards Mobile Advertising

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Abstract: *With its unmatched access to customers in a world becoming increasingly mobile, mobile advertising has become a crucial marketing tactic in today's digital age. This paper explores the complex interaction between consumers' attitudes and mobile advertising, illuminating the elements affecting consumers' views in reaction to these messages. Gaining insight into consumers' perspectives regarding mobile advertising is critical for ensuring its efficacy. This research aims to analyze extrinsic motivation's role as a mediator in the interaction between mobile advertising and consumers' attitudes toward it. An analysis of the relationship between mobile advertising, extrinsic motivation, and customers' attitudes is proposed through the lens of motivational theory and consumer behaviour literature. A conceptual framework is presented to clarify this relationship. The proposed relationships will be examined by collecting data from a diverse sample of mobile users using quantitative research methodologies. The study's results reveal significant direct effects of credibility and irritation from mobile advertising on customers' attitudes towards mobile advertising. Additionally, the study finds that credibility has a significant indirect effect through extrinsic motivation. However, the indirect effects of information, entertainment, and irritation through extrinsic motivation are not statistically significant. These findings provide valuable insights into the factors influencing customers' attitudes toward mobile advertising, particularly highlighting the mediating role of extrinsic motivation.*

Key Words: Customer Attitude, Extrinsic Motivation, Information, Entertainment, Credibility, Irritation

Introduction

Scientific advancements have completely transformed several aspects of human existence. The fast development of mobile Internet technology has made mobile phones much more than just basic voice communication devices. They can now be used as a payment method, shopping mall, game console, entertainment source, fitness tracker, route navigator, and advertising channel, among many other things (Lou & Xie, 2021; Yan et al., 2021). The introduction of mobile phones was a revolutionary accomplishment in the realm of wireless technology. In 1973, the American multinational telecommunications business "Motorola, Inc." unveiled the first handheld wireless mobile phone, marking a significant breakthrough in the evolution of mobile technology (Sivaji & Soundharaj, 2022). The emergence of 2G technology facilitated the widespread adoption of mobile phones, which rapidly became an essential component of contemporary

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life (Sharma et al., [2015](#)). The advent of 2G technology in the late 1980s brought about a significant transformation in the mobile communication business.

As the popularity of 2G mobile phones increased, corporate organizations quickly recognized the potential of mobile phones as an effective marketing tool. They started using mobile phones as a means to promote their goods and services to a broader demographic, capitalizing on the ease and availability of mobile phones. This signified the beginning of a novel epoch in advertising, as mobile phones gained growing significance as a pivotal marketing medium. With the ongoing advancement of mobile technology, smartphones emerged in the late 2000s, providing enhanced functionalities and global accessibility. Smartphones integrate the functionalities of conventional mobile phones with sophisticated processing capabilities, such as internet connectivity, multimedia compatibility, and mobile apps. The simplicity and versatility of smartphones have heightened their appeal as a marketing platform, prompting several firms to create mobile apps and websites to engage with their clients (Joshi et al., [2021](#)). In contemporary society, cell phones have become an indispensable component of our everyday existence, with a vast number of individuals worldwide using them to get information, communicate with acquaintances and relatives, and engage in a diverse array of tasks. Smartphones have emerged as a crucial medium for marketing as well as advertising, enabling firms to connect with their less accessible consumers via creative and captivating methods (Shawky et al., [2022](#)). Mobile advertising is defined by the Mobile Marketing Association as "a form of advertising that is communicated to the consumer/target via a handset" (Kaplan, [2012](#)). Mobile advertising comprises a diverse array of advertising forms that appear on mobile devices, ranging from simple text-based SMS ads to sophisticated banner ads (K. L. Wong et al., [2023](#)). Due to their special capacity to offer location-specific applications, cell phones have a clear edge over other forms of advertising media. Advertisers may now target customers depending on their location and present them with tailored information and offers that correspond to their current environment. Given the immense potential of this type of targeted advertising, it makes sense why cell-phones have grown to be such a popular tool among marketers in recent years.

A study by (Grewal et al., [2016](#)) highlighted the potential power of this technology, and there will probably be more fascinating advancements in the future. Furthermore, Advertisers may use already stated features to provide customized and tailored adverts to their clients, taking into account their geographical location, tastes, and other relevant variables. Advertisers may use location data to provide push alerts to consumers when they are in close proximity to a business or provide discounts on items based on their previous purchase history. Smartphones include location-based functionalities and a highly individualized communication design (Bacile et al., [2013](#)), making them an ideal medium for tailored advertising. Through the analysis of user data, including search history, browsing behaviour, and social media activity, marketers may generate customized adverts that are relevant and captivating to individual consumers (Ghose et al., [2011](#); Nam et al., [2019](#)). According to (Grewal et al., [2016](#)), businesses can now reach their target audience with personalized ads and messages through smart mobile phones and the progress in mobile commerce has created new opportunities for them to do so (Loh et al., [2022](#)). This highlights the importance of mobile advertising media as a platform for organizations to foster customer relationships (Steinhoff et al., [2019](#)). Organizations rely on mobile advertising in a variety of ways, such as advertising via SMS, social networks, in-app mobile advertising and search engines (Le & Wang, [2021](#)). Mobile devices are viewed as an important advertising platform, and organizations devote large financial resources to mobile advertising (Fulgoni & Lipsman, [2017](#); Hashim et al., [2018](#)). While organizations in many sectors have adopted mobile advertising, the promotional aims of mobile marketers have not been met or have had little results.

Based on prior research, most consumers generally have unfavourable opinions and find mobile advertising intolerable (Chen et al., [2008](#); Liu et al., [2012](#); M. Wong, [2010](#)). The Pakistani government is striving to create a digital Pakistan, using technology to improve the lives of its citizens, and mobile advertising plays a significant part in achieving this objective. Researchers in marketing and advertising have utilized various theories to analyze what affects the attitudes of consumers towards mobile advertising. These theories include the technology adoption model (Nysveen et al., [2003](#)), the theory of reasoned action (Bauer et al., [2005](#); Lee et al., [2006](#); Tsang et al., [2004](#); M. Wong, [2010](#)) and the uses and gratifications theory (Brackett et al., [2001](#); Haghirian et al., [2005](#)). The antecedents mentioned in the study

include credibility, entertainment, irritation and informativeness (Haghirian et al., 2005). Nevertheless, existing research has mostly overlooked a crucial inquiry: What are the determinants that drive a customer to embrace and exploit advertising on mobile devices?

(Bagozzi et al., 1992; Igarria et al., 1996) These are two famous scholars who have made major contributions to our knowledge of how motivation theory may be used to better understand consumer adoption of information technology. Research findings indicate that consumers' intentions to accept new technology are impacted by internal and external motivating factors (Kim et al., 2007). Intrinsic motivation is the term used to describe action that is motivated by internal incentives. Put simply, the activity itself is inherently gratifying. On the other hand, extrinsic motivation refers to the act of participating in an activity in order to get rewards from outside sources or to prevent punishment. According to motivational theorists, individuals adopt a new information technology, allowing academics and practitioners to devise more successful ways for marketing new technologies because consumer see the potential for gaining usefulness and pleasure from it (Kim et al., 2007; Teo & Lim, 1999). This research uses the motivation theory, which proved to be beneficial in understanding consumers' attitudes towards mobile advertising by analyzing the factors that influence their extrinsic motives.

While there has been much worldwide study on consumer attitudes towards mobile advertising, there is a dearth of similar research undertaken in Pakistan. In addition, rapid technological advancements have prompted research that is mostly centred on advertising through SMS, excluding newer formats such as mobile utility advertising, mobile web banners, and marketing (Carroll et al., 2007). This study aims to examine consumer attitudes towards mobile advertising in Pakistan, taking into account characteristics such as informativeness, entertainment, irritation, and credibility.

However, there is a lack of knowledge of how extrinsic motivation mediates the effect of these views. This research aims to fill this gap by examining how extrinsic motivation influences the connections between informativeness, entertainment, irritation, and credibility and consumers' attitudes towards mobile advertising. The research seeks to examine these dynamics in order to provide significant insights for marketers and advertisers, with the goal of improving the efficacy of mobile advertising campaigns and enhancing consumer engagement. This issue statement stresses the lack of knowledge on the impact of extrinsic motivation in mobile advertising and underscores the need to do further research to fill this gap.

Literature Review

Consumer Attitude Towards Mobile Advertising

Attitude is a crucial topic in the study of marketing and information systems. Fishbein defined *attitude* as "a learned predisposition of human beings" (Fishbein, 1976). Based on this predisposition, "an individual would respond to an object (or an idea) or several things (or opinions) favourably or unfavourably, which typically comes before consumer intention and consumer behaviour (Cham et al., 2022). Kolter defined attitude as an individual's persistent positive or negative judgments, emotional sentiments, and inclination to take action towards a specific item or concept. Due to extensive research, a substantial amount of literature examines consumer attitudes towards advertising in general and on the Internet.

The Internet's emergence as a unique medium for communication and advertising as advertising budgets transfer from conventional media to digital platforms has prompted much research on the subject (Papacharissi & Rubin, 2000; Wolin & Korgaonkar, 2003).

Furthermore, it encouraged research on individuals' opinions toward online advertising in the internet-based setting. Because of the Internet's participatory nature, several polls show that respondents perceive Internet advertising to be more informative and reliable, providing greater involvement than traditional advertising channels such as newspapers, TV, magazines, broadcasting, Yellow Pages, and direct mail (Schlosser et al., 1999). The popularity of online advertising relies on multiple factors, such as the nature (information) and format (entertainment) of the advertisements (DUCOFFE, 1996). Research has shown that the level of information conveyed and the degree of entertainment an advertisement provides are essential factors determining its efficacy in attracting the viewers' attention. Furthermore, it is crucial to acknowledge that the irritation provoked by commercials may also substantially influence



individuals' perceptions of them, thereby diminishing their efficacy (DUCOFFE, 1996). Prior studies have shown that advertisements that captivate and delight viewers are more inclined to positively influence customers' sentiments towards the promoted brand (Mitchell & Olson, 1981; Shimp & Dyer, 1978). Furthermore, pleasurable, enlightening, and valuable advertisements for facilitating purchase choices can shape individuals' perceptions of Internet advertising (Schlosser et al., 1999). Many crucial aspects are highlighted that influence the efficiency of advertisements on the Internet. These factors include the ad's capacity to captivate the viewer's attention, the clarity of its message, and the appropriateness of the ad to the viewer's requirements and preferences. Advertisements that can achieve a harmonious combination of being visually appealing and providing helpful information while being relevant to the audience have a higher probability of achieving success. In mobile advertising, an observed association exists between customers' positive attitudes towards advertising and their assessment of individual commercials as bothersome, likeable, amusing, etc. Furthermore, consumer attitudes towards mobile phone advertising are heavily influenced by the messaging associated with it. Hence, it is essential to specify message properties with great precision. The research findings also suggested that attitudes towards mobile advertising through mobile phones were shaped over time by the perceived value of advertising and the content of its messages. A customer's attitude towards an advertisement plays a crucial role in determining the success of the advertising, their intents to make a purchase, and their attitudes towards the brand (Tsang et al., 2004).

Advertisement-Related Antecedents

Consumer attitudes towards mobile advertising and the effectiveness of advertising can be influenced by several factors. Some of these factors include purchase intention and the intention to receive mobile advertisements, which may influence the outcomes of mobile advertising. Antecedents connected to advertisements include providing helpful information, the ability to amuse, the potential to irritate, the level of credibility, the degree of personalization, the presence of incentives, and obtaining permission. The antecedents of advertising differ throughout various mediums. For instance, billboard and mobile commercials differ in distinctive attributes such as targeting capabilities, physicality vs. digitality, and interaction. The research delves into the four factors influencing advertising and its effectiveness: informativeness, entertainment, irritation, and credibility.

Informativeness

Informativeness is the "amount of useful and relevant information provided by the advertisement message" (Shaheen et al., 2017). This aspect has undergone significant research in mobile advertising and is widely regarded as one of the most pivotal variables in determining the efficacy of an advertisement. Research has shown that mobile advertisements that provide helpful information are more likely to generate favourable reactions from clients and increase the overall effectiveness of the advertising.

These advertisements are seen as reliable and beneficial, which may assist in establishing a favourable company reputation and enhance consumer connections (Sharif, 2017), and it acts as a driver for acceptance of such advertisements due to their ability to provide up-to-date and timely information (Gao & Zang, 2016; Ünal et al., 2011; Wong, 2010).

H1: Consumers' attitude toward mobile advertisements is affected by the informativeness of the advertisement

Entertainment

Entertainment is "the ability of the advertisement to satisfy the recipient's desire to escape reality and have fun and emotional release" (Rasheed Gaber et al., 2019; Ul Haq, 2012). (Sigurdsson et al., 2018) found that consumers' attitudes towards mobile advertising are influenced by how entertaining they find them, increasing their value. Mobile phones have become essential to modern entertainment and media consumption, providing consumers worldwide with exceptional ease, accessibility, and variety. Future entertainment will probably be significantly shaped by mobile devices as long as technology keeps developing. The entire worth of advertising is greatly influenced by the enjoyment that people derive from

it. Thus, the message must be short and entertaining to get the audience's attention promptly (Kalakota & Robinson, 2002). Thus, the hypothesis is formulated as –

H2: Consumers' attitude toward mobile advertisements is affected by the Entertainment of the advertisement

Credibility

Consumer perceptions and behaviours towards promoted goods and services can be strongly influenced by their impressions of the items' accuracy and reliability (Xu, D, 2006). Credibility is often a significant factor in producing a favourable attitude toward advertising (Tsang et al., 2004). The importance of trust, user experience, relevance and authenticity in mobile marketing activities is shown by the positive connection between customers' attitudes towards mobile advertising and its credibility (Gao & Zang, 2016; Yang et al., 2013). Advertisers may improve customer perceptions and the effectiveness of their mobile marketing by giving priority to these criteria.

H3: Consumers' attitude toward mobile advertisements is affected by the credibility of the advertisement

Irritation

It is defined as "the state of being annoyed, impatient, and even moderately angry" (Sigurdsson et al., 2018) and, based on previous studies, is the primary concern for advertising on mobile devices. According to research, irritation lowers the value of advertisements and leads to unfavourable consumer perceptions of mobile advertising (Gao & Zang, 2016; Okoe et al., 2015; Sharif, 2017; Sigurdsson et al., 2018). According to (Stewart & Pavlou, 2002), advertising on mobile phones can overload consumers with information and present a plethora of confusing information. An abundance of messages that have a detrimental effect on the customer's attitude is one of the other characteristics of mobile advertising that irritates users (Dickinger et al., 2004).

H4: Consumers' attitude toward mobile advertisements is affected by irritation of the advertisement

Extrinsic Motivation

According to (Davis et al., 1992), Extrinsic motivation is the act of engaging in a behaviour because it is believed to be beneficial in attaining a specific goal or value. Things outside of a person might stimulate extrinsic drive. Extrinsically driven individuals, according to motivational theorists, will participate in activities because they will reap the rewards of doing so (Reiss, 2004). People's inclination to embrace new technology may be accurately predicted by extrinsic motivation (Davis et al., 1992). When a new software tool has the potential to increase job performance and raise compensation, for instance, extrinsically driven employees who utilize it are more likely to adopt it. Furthermore, these findings are equally applicable to other fields, such as mobile advertising and how people make use of the Internet on mobile devices (Kim et al., 2007). Based on this, consumers will have a favourable attitude towards mobile advertising if they are motivated by external factors.

H5. The extrinsic motivation mediates the relationship between mobile advertisement -related antecedents (i.e. informativeness, entertainment, credibility, and irritation) and consumer attitudes towards mobile advertisement.

Conceptual Framework

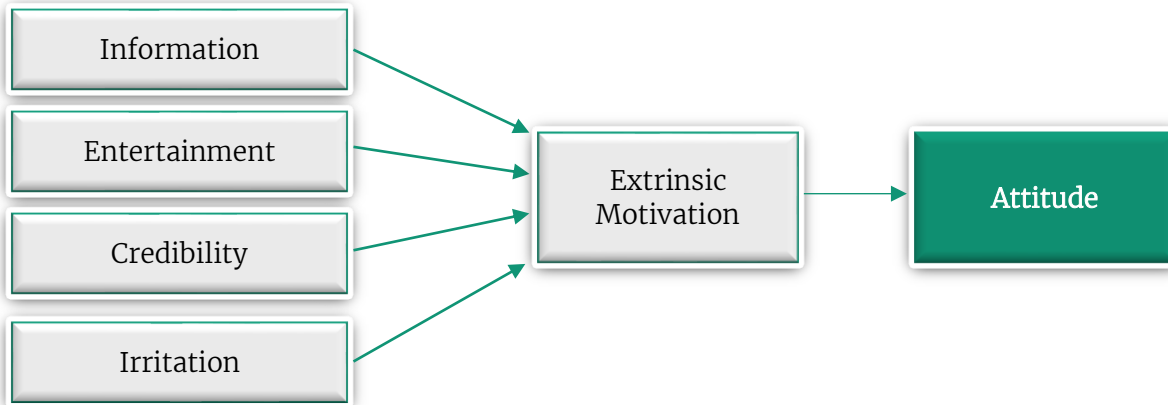
Mobile advertising is proliferating, and more companies are incorporating it into the heart of their marketing strategies. However, how customers feel about mobile advertising plays a significant part in determining its success. When consumers are exposed to commercials, they are more inclined to respond to them and believe them to be informative, entertaining and credible. Additionally, a study has shown how extrinsic motivation functions as a mediator in determining consumers' attitudes towards mobile advertising. *Extrinsic motivation* is the term used to describe external elements that affect consumers' behaviour and attitudes, such as incentives or rewards. Customers' attitudes toward advertisements and



the desire to engage with mobile advertising content are significantly impacted by incentives such as discounts or special offers.

Figure 1

Conceptual framework Advertisement factors



Research Methodology

The research methodology used for this study was a quantitative approach. This study used a survey technique to investigate consumer attitudes towards mobile advertising. This strategy is recommended since it makes gathering data from several sources simple and only requires little time or money. Numerical data is examined and used in quantitative research to inform data collection and analysis procedures. The existing literature and the methods used by earlier research researchers served as the basis for the methodology's adoption (Ajmi et al., 2014). Convenience sampling may be applied to this research as it relies on gathering data from people willing and able to engage in the study. Convenience sampling allows researchers to collect data from a sample that is conveniently accessible. Studies where rigorous sampling approaches would be complex due to concerns about time or resources, can significantly benefit from this. This research aims to examine the influence of mobile advertising on students who are currently enrolled at Sindh University Campus Larkana and own mobile devices. The target demographic comprises individuals who satisfy two conditions: being students at the specified college and actively receiving mobile advertisements. Of the 100 participants, 60 (60%) were categorized as female. The respondents' age distribution indicated that most individuals fell between the 16 and 25 age groups, comprising the most significant share. Conversely, just 2% of the participants fell within the age category of 26 to 36. Regarding respondents, 98% are using mobile devices, whereas only 2% are not using mobile devices. 17% of people do not receive mobile advertisements, unlike 83% who do. Table 1 details the sample demographics.

Various tests are carried out to verify the hypothesis. Survey questions are the principal means of gathering primary data. The survey was created using Microsoft Word and Google Forms. A printed version of the questionnaire and a Google Form emailed to a select few responders were used to collect responses. The gathered responses were verified and entered into SPSS version 21, the Statistical Package for Social Sciences. According to the data gathered from the survey, 100 valid responses were acquired and used for additional analysis. The items for each construct were generated by thoroughly examining the current body of literature.

The measures measuring Information, Entertainment, Credibility, and Irritation were developed based on prior research undertaken by (Bauer et al., 2005; DUCOFFE, 1996; Karjaluoto et al., 2008; Tsang et al., 2004). Furthermore, The Attitude and extrinsic motivation measures were derived from scales established by (Pelletier et al., 1998; Taylor & Todd, 1995).

In order to investigate probable correlations and associations among the variables of interest, the inferential study used an acknowledged statistical method, such as "correlation analysis and multiple regressions." Multiple linear regressions provide useful insights into the predictive potential of independent variables. By evaluating the strength of their association, multiple linear regressions can

explain the variability in the dependent variable. The mediation analysis was performed using SPSS software.

Table 1

Sample Profile

Category	Sub-category	Percentage%
Gender	Male	40
	Female	60
Age	16-25	98
	26-35	2
Mobile Users	Users	98
	Non-users	2
Mobile Advertisement	Users	83
	Non-users	17

Source: Own elaboration

Reliability Analysis

Table 2

The analysis of reliability is measured by using Cronbach's alpha

Reliability Analysis		
Variables	Cronbach's Alpha	N of Items
Information	.701	4
Entertainment	.805	4
Credibility	.773	4
Irritation	.796	4
Attitude	.865	4
Extrinsic motivation	.816	4
Overall Scale Reliability	.897	24

This table shows that we determined Cronbach's alpha for each factor to measure the final questionnaire's reliability. We concluded that each dimension's internal consistency was met since all of Cronbach's alphas were higher than the 0.70 benchmarks (Nunnally, J.C. and Bernstein, I. (1994).

Regression Analysis

Multiple regressions were used to estimate the degree and direction of the dependent-independent connection. Many data analysis methods employ multiple linear regressions to determine the association between independent and dependent variables. This statistical technique enables researchers to analyze the relationship between variations in the independent variables and corresponding variations in the dependent variable. By looking at how strongly two variables are linked, multiple linear regressions can help us determine how well independent variables can explain the variation in the dependent variable.

Table 3

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.497 ^a	.247	.215	.734

a. Predictors: (Constant), Irritation, Credibility, Information, Entertainment

Based on the data in Table 3, we can see that the regression coefficient is 497, and the regression square is 247. Consequently, the adjusted regression square is 215, and the standard error calculated is 734.

**Table 4**ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.801	4	4.200	7.787	.000 ^b
	Residual	51.246	95	.539		
	Total	68.047	99			

a. Dependent Variable: Attitude

b. Predictors: (Constant), Irritation, Credibility, Information, Entertainment

The data in Table 4 demonstrate that mobile advertising considerably influences consumer attitudes, with an average frequency of 7.787. Considering that the p-value for the survey is .000, the table demonstrates that the survey is generally regarded as statistically significant. In this particular instance, the deviation of the hypothesis is accepted.

Table 5Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	1.859	.460		4.038	.000
	Information	.044	.029	.143	1.540	.127
	Entertainment	.025	.030	.084	.863	.390
	Credibility	.118	.028	.390	4.150	.000
	Irritation	-.052	.028	-.169	-1.894	.061

a. Dependent Variable: Attitude

The results did not support H1 since informativeness did not have a significant effect on attitude ($\beta = 0.044$, p-values greater than 0.05), which suggests there is no relationship between informativeness and attitude in this research. Additionally, a number of researches have demonstrated a favourable correlation between informativeness and consumers' opinions towards advertising (Haghirian et al., 2005; Tsang et al., 2004; Zabadi et al., 2012). (Nguyen et al., 2014) concluded that informativeness had no discernible impact on attitudes towards mobile advertising despite the study's contradictory findings. With respect to the factors affecting attitudes, entertainment did not support H2 and had no strong influence ($\beta = 0.63$, p-values larger than 0.05), indicating that entertainment does not have a strong influence on attitudes in this study.

Additionally, prior studies have discovered that the perceived entertainment value of commercials has a greater impact on advertisement than criteria like credibility, informativeness, and irritation (DUCOFFE, 1996; Haghirian et al., 2005). However, there are significant contradictions in the literature, even though most studies conclude that entertainment affects consumer attitudes. (Peng et al., 2006) claim that cell phones are private and delicate gadgets. If they are utilized for advertising, people may be more interested in the message's information than in being entertained. Research conducted by (Jun et al., 2007) provided evidence in favour of this assumption. The results show that only the "Credibility" coefficient ($\beta = 0.118$, p-value less than 0.05) is statistically significant, confirming H3, meaning that credibility plays a meaningful role in shaping attitudes, while other factors such as informativeness and entertainment did not demonstrate statistically significant effects in the study. Customer attitudes regarding receiving mobile commercials are significantly influenced by the credibility of the marketing message (Tsang et al., 2004; Chowdhury et al., 2006). Mobile advertisements are becoming more popular. Several studies have shown a direct correlation between creditability and consumers' attitudes towards mobile commercials (Gao & Zang, 2016; Yang et al., 2013); Ünal et al., 2011; Yang et al., 2013). Based on the above explanation, it can be inferred that creditability is linked to favourable consumer attitudes regarding receiving mobile commercials.

Regarding the factors influencing attitudes H4, irritation showed a marginal negative effect on the attitude towards in-app advertisements ($\beta = -0.052$, p-values are higher than 0.05). There might be a tendency for irritation to have a negative impact on attitudes. The findings of this study are in line with

previous research that suggests irritation can diminish the effectiveness of advertising (Luo, 2002). Mobile advertising media allows advertisers to deliver a wide range of information to their target customers. However, this abundance of information has the potential to distract or overwhelm customers, leading to negative attitudes towards receiving mobile advertisements (Stewart & Pavlou, 2002).

Several studies have indicated that the presence of mobile advertising has the potential to elicit irritation among consumers, thereby reducing their positive attitudes towards receiving such advertisements. In fact, these studies have identified irritation as the most influential factor that shapes customer attitudes towards mobile advertising (Gao & Zang, 2016; Parreño et al., 2013). To sum up, the only factor that demonstrated statistical significance in predicting attitudes towards mobile advertisements was credibility, among all the factors that were examined. Informativeness, entertainment, and irritation did not exhibit any statistically significant effects. These results imply that, relative to other study-considered characteristics, credibility has a greater influence on how users feel about mobile advertisements.

Mediation

Mediation is one of the oldest dispute-resolution approaches (Kressel & Pruitt, 1985). It involves a neutral third party helping two or more disputing parties communicate. Mediation aids scientific research. Science seeks to explain phenomena's processes. Mediation analysis gives researchers a causal chain that leads to a result.

Table 6
Mediation Analysis

Relationship	Direct Effect	Indirect Effect	Confidence Interval		Conclusion
Info→EM→Attitude	0.1950 (0.0561)	0.0394	LLCI -0.1265	ULCI 0.2147	No Mediation
Ent→EM→Attitude	0.1349 (0.1133)	0.0643	LLCI -0.0399	ULCI 0.1859	No Mediation
Cre→EM→Attitude	0.2335 (0.0162)	0.2294	LLCI 0.1283	ULCI 0.3786	Partial Mediation
Irr→EM→Attitude	-0.1720 (0.0413)	-0.0343	LLCI -0.1876	ULCI 0.1112	No Mediation

Information in Mobile Advertising

With a p-value of 0.0561, the direct impact of information in mobile advertising on consumers' perceptions of it was not statistically significant. This implies that there was no discernible direct correlation between the information on mobile advertisements and consumers' attitudes. Additionally, this research examined the information's indirect impact on consumers' attitudes through extrinsic incentives in mobile advertising. There was no statistically significant indirect impact, as shown by the bootstrapped confidence intervals for the indirect effect (BootLLCI = -0.1265, BootULCI = 0.2147), which contain zero. This shows that the connection between the information in mobile advertisements and the attitudes of consumers was not mediated by extrinsic motivation. The findings reveal that mobile advertising information did not significantly affect consumers' attitudes, either directly or indirectly, via extrinsic motivation.

Entertainment in Mobile Advertising

A p-value of 0.1133 suggests that the direct relationship between mobile advertising entertainment and consumers' attitudes was not statistically significant. This implies that no meaningful correlation was found between the entertainment of mobile advertisements and the attitude of the target audience.

Additionally, this study studied how extrinsic motivation, which drives fun in mobile ads, affects consumers' attitudes. It may be concluded that the indirect impact was not statistically significant since the bootstrapped confidence intervals for the indirect effect (BootLLCI = -0.0399, BootULCI = 0.1859)



encompass zero. This suggests that the connection between mobile advertising entertainment and consumers' attitudes was not mediated by extrinsic motivation. The research indicates that mobile advertising entertainment did not significantly affect consumers' attitudes, nor did its indirect influence through extrinsic motivation.

Credibility in Mobile Advertising

With a p-value of 0.0162, the direct impact of credibility in mobile advertising on consumers' attitudes was statistically significant. This suggests that there was a strong direct correlation between consumers' attitudes and mobile advertising credibility. Research conducted by (Gaber et al., 2019) highlights the significance of credibility as one of the most essential components of advertising value.

Furthermore, the study found that there was a statistically significant indirect impact of credibility in mobile advertising on consumers' attitudes through extrinsic motivation. The indirect effect's bootstrapped confidence intervals (BootLLCI = 0.1283, BootULCI = 0.3786) do not contain zero, indicating the partially mediated role of extrinsic motivation in linking between customers' attitudes and mobile advertising credibility, which in turn improves consumer attitude.

This research shows that there was statistically significant evidence of both direct and indirect impacts of credibility in mobile advertising on consumers' attitudes. This implies that customers' attitudes are significantly shaped by credibility, both directly and indirectly, and its impact on extrinsic motivation.

Irritation from Mobile Advertising

With a p-value of 0.0413, the direct impact of mobile advertising-induced irritation on consumers' attitudes towards mobile advertising was statistically significant. This implies that there was a strong negative correlation between consumers' attitude and their irritation with mobile advertising. However, there was no statistically significant correlation between the irritation of mobile advertisements and the attitudes of consumers as a result of extrinsic motivation. Bootstrapped confidence intervals for the indirect impact (BootLLCI = -0.1876, BootULCI = 0.1112) include zero, suggesting that the connection between customers' attitudes and irritation from mobile advertising was not significantly mediated by extrinsic motivation.

According to research, irritation lowers the value of advertisements and leads to unfavourable consumer perceptions of mobile advertising (Gao & Zang, 2016; Okoe et al., 2015; Sharif, 2017; Sigurdsson et al., 2018). According to (Stewart & Pavlou, 2002), advertising on mobile phones can overload consumers with information and present a plethora of confusing information. These findings imply that, while irritation has a negative direct influence on customer attitude, the contribution of extrinsic motivation has little effect on this connection. This suggests to marketers that preserving a good customer attitude in mobile advertising depends on lowering irritation, while tactics that just address extrinsic motivation may not be able to lessen the negative effects of irritation.

Discussion on Results

The results of the study reveal significant direct effects of credibility and irritation from mobile advertising on customers' attitudes towards mobile advertising. Additionally, the study finds that credibility has a significant indirect effect through extrinsic motivation. However, the indirect effects of information, entertainment, and irritation through extrinsic motivation are not statistically significant. These findings provide valuable insights into the factors influencing customers' attitudes towards mobile advertising, particularly highlighting the mediating role of extrinsic motivation. Thus, the findings of Hypothesis 5. To summarize, the results of this study indicate that:

1. Entertainment informativeness was not found to be an important attribute that affected consumers' attitudes toward mobile advertising.
2. Credibility is an important attribute affecting consumer attitudes toward mobile advertising.
3. Irritation was negatively affecting consumers' attitudes toward mobile advertising and preserving a good customer attitude by lowering irritation.

(Tahat et al., 2024) didn't find informativeness to be an important factor affecting consumers' attitudes, while in our study, it was not found to be. This implies that the quantity or quality of information presented had no impact on what consumers thought of a product or service in their research. (Peng et al., 2006) didn't find entertainment to be a factor affecting consumers' attitudes as cell phones are private and delicate gadgets. If they are utilized for advertising, people may be more interested in the message's information than in being entertained. Research conducted by (Jun et al., 2007) provided evidence in favour of this assumption.

Additionally, (Tahat et al., 2024) found credibility to be a factor in predicting the consumer's attitude toward mobile advertisements, while in our study, credibility was also found to be a factor. It indicates that if customers believe the source of mobile advertising to be reliable and trustworthy, they are more likely to react positively to it. Furthermore, (Luo, 2002) claimed that they didn't find irritation to be a factor affecting consumers' attitudes, while our study did not find an important factor as it can diminish the effectiveness of advertising. Mobile advertising media allows advertisers to deliver a wide range of information to their target customers. However, this abundance of information has the potential to distract or overwhelm customers, leading to negative attitudes towards receiving mobile advertisements (Altuna et al., 2009; Stewart & Pavlou, 2002). The study's results suggest that only credibility from mobile advertising revealed a substantial indirect effect through extrinsic incentive, despite both credibility and irritation from the advertisement demonstrating statistically significant direct effects on customers' attitudes. Through extrinsic motivation, information and entertainment in mobile advertising did not significantly affect customers' attitudes directly or indirectly. Understanding these dynamics can help marketers tailor their mobile advertising strategies to enhance customer attitudes and engagement.

Conclusion, Managerial Implications, Limitations and Future Research Directions

In conclusion, the study provides valuable insights into the factors influencing customers' attitudes towards mobile advertising, particularly highlighting the mediating role of extrinsic motivation. The results of the study reveal significant direct effects of credibility and irritation from mobile advertising on customers' attitudes towards mobile advertising. Additionally, the study finds that credibility has a significant indirect effect through extrinsic motivation. However, the indirect effects of information, entertainment, and irritation through extrinsic motivation are not statistically significant. The reliability analysis, conducted using Cronbach's alpha, demonstrates the high reliability of the data collected, with an overall scale reliability of 0.897, indicating the robustness of the study's findings. The demographic and descriptive analysis provides a comprehensive understanding of the respondent characteristics, ensuring the representativeness of the sample. The regression analysis highlights the significant impact of mobile advertising on customer attitudes, with a frequency of 7.787, indicating statistical significance. Furthermore, the mediation analysis reveals the intricate relationships between information, entertainment, credibility, irritation, extrinsic motivation, and customer attitudes towards mobile advertising. According to the study's findings, extrinsic motivation acts as a mediating factor in influencing consumers' attitudes toward mobile advertising. Understanding these dynamics can help marketers tailor their mobile advertising strategies to enhance customer attitudes and engagement.

Managerial Implications

This research has four significant practical consequences for marketing professionals. First, building credibility should be a top priority for managers in their mobile advertising campaigns, as it has been demonstrated to have a statistically significant direct impact on customers' attitudes as well as an indirect influence through extrinsic motivation. In order to build trust with the target audience, communicate honestly and make sure the material is accurate. Second, the statistically significant direct impact of mobile advertising irritation on customers' attitudes demonstrates the importance of addressing factors that might irritate customers. Managers should take great care while creating mobile advertising campaigns to reduce any obtrusive or bothersome components that can cause people to feel negatively about the advertisements. Third, in mobile advertising, extrinsic motivation mediated the relationship between credibility and attitudes, but it did not significantly mediate the relationship between information or entertainment and customers' attitudes. It suggests that it can be useful to recognise and take advantage



of extrinsic motivators. To improve favourable attitudes among customers, managers should investigate how to match their mobile advertising efforts with extrinsic motives, such as incentives, prizes, or social approval. Fourth, given that the study's target audience was Sindh University Campus Larkano students, managers must modify their mobile advertising tactics to appeal to this particular group of people. Having a thorough understanding of the distinctive tastes, behaviours, and motivations of university students may help in creating more engaging and effective mobile advertising campaigns.

Limitations and Future Research Directions

In this study, there are a number of limitations that might potentially open up prospects for more research. The present study is subject to several limitations, which in turn offer potential avenues for future investigation. First, the study's exclusive focus on Sindh University Campus Larkana students may have limited the findings' applicability to other demographics. Second, the study's focus on a particular demographic—students—may have obscured differences in perceptions of mobile advertising among other age groups, occupations, or socioeconomic backgrounds. It may restrict the findings' generalizability to a larger group. Third, our review of the literature on mobile advertising revealed that the two most often researched effects of mobile advertising are consumer attitudes and the intention to receive mobile advertisements; thus, campaigns promoting mobile ads also encourage other behavioural outcomes, such as loyalty and customer satisfaction (Lu et al., 2019) as well as the intention to share mobile advertisements (Sultan et al., 2009). However, little research has been done on these effects. Thus, future studies might concentrate on analyzing how different antecedents affect these effects of mobile advertising. Fourth, the utilization of a qualitative research approach can facilitate the investigation of several new factors, such as consumers' green consumption patterns, that could impact the efficacy of mobile advertising. Reducing the amount of paper used for advertising, such as flyers and brochures, and instead focusing on digital media like TV and smartphones, for example, will be perceived as ecologically beneficial. However, these intriguing characteristics were never investigated since qualitative research methodologies were not frequently used within the realm of mobile advertising. Fifth, our analysis of the literature reveals that there has not been an actual comparison of the intention of consumers—that is, male and female customers—to receive mobile marketing. Therefore, it is advised that future scholars do an empirical investigation of the disparities in customer attitudes between male and female consumers.

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