

Annals of Human and Social Sciences www.ahss.org.pk

Fostering Consumer's Acceptance of SMS-Based Mobile Advertising: A South Asian Perspective

¹Muhammad Ahmad ² Muhammad Luqman Tauheed Rana* ³Zafar uz Zaman Anjum

- 1. Lecturer, Department of Management Sciences, Islamia University of Bahawalpur, RYK, Punjab, , Pakistan
- 2. PhD Scholar, Department of Management Sciences, COMSATS University of Islamabad, Lahore, Punjab, Pakistan
- 3. Assistant Professor, Department of Management Sciences, COMSATS University of Islamabad, Lahore, Punjab, Pakistan

*Corresponding Author luqman19891@hotmail.com

ABSTRACT

This study aims to investigate the drivers that foster the acceptance of SMS-Based Mobile Advertising among the consumers of Pakistan. The mobile industry in Pakistan is expanding quickly; mobile cellular density increased from 60.4% in 2009–10 to 82.08% in May 2023. Given the quick expansion of the mobile phone industry, advertisers worldwide have poured billions of dollars into SMS-based mobile advertising to draw in mobile consumers. On the other hand, these commercials are poorly received and elicit adverse reactions. Data was meticulously gathered and subjected to thorough CFA and SEM analysis. The model's acceptable fit is confirmed by SEM analysis, and path analysis supports the positive relationships between the endogenous construct and utility, context, and trust. Millennials view mobile devices as highly personal but find mobile advertising obtrusive. This study helps marketers to get insights into the phenomenon of how to raise consumer acceptability levels and help marketers accept their advertising initiatives' desired return on investment.

Keywords: Consumers' Acceptance, Mobile Marketing, SMS based Mobile Advertisement **Introduction**

In 1997, a Nokia mobile phone sent the first-ever mobile text message. In 2008, over ten years later, more than 4 trillion text messages had already been sent and received globally, and by 2015, that number will have topped 9 trillion (Omkareshwar, 2012). Marketers and customers may successfully share information about goods and services, the buying and selling goods, and other services using mobile advertising (Su et al., 2022). Mobile advertisements that use SMS are a novel communication that marketers still do not fully understand (Hadi & Aslam, 2023). Unlike online advertising, marketers and big businesses now widely employ SMS-based advertising. Consumers believe text messaging advertisements are more personalized than email services (Grace et al., 2013). Many businesses have spent much money on mobile advertising to draw in mobile consumers, but they have not always seen the desired results. According to Hor-Meyll et al. (2014), SMSbased mobile advertising in the United States hit 320 million dollars in 2011. Two years later, the global investment hit 16.7 billion dollars. By the end of 2016, global investment will have surpassed \$100 billion at this rate (Grewal et al., 2016). Contrarily, consumer response to SMS-based mobile advertisements is highly depressing, and marketers' returns on investment have been quite disappointing (Fulgoni & Lipsman, 2014).

Considering everything, experts have conducted studies to pinpoint the causes and factors affecting mobile advertisements' consumer acceptability. For instance, studies on Brazilian children revealed that their acceptance of mobile advertisements was mainly based on their perceptions of utility and social norms (Hor-Myell et al., 2014). Additionally,

socioeconomic and cultural differences influence buyers' intentions to accept mobile marketing (Bahrainizadeh et al., 2014).

Pakistan is a rapidly developing mobile market, with many Millennials accessing smartphones. Pakistan's mobile industry is expanding quickly; mobile cellular density, which was 60.4% in 2009–10, increased to 82.08% in May 2023 (pta.gov.pk, 2023). With this quickly expanding pace, text message interchange is also growing daily; according to an available report, in the past, from July 2013 to June 2014, Pakistanis sent and received almost 800 million texts daily (Attaa, 2015). Therefore, identifying the factor that affects a mobile user's acceptance of SMS-based mobile marketing can help marketers create effective mobile advertising campaigns and increase return on investment.

Pakistan is a culturally varied nation based on its languages, customs, and—more importantly—the attitudes and behaviors of its citizens. In the past, research on mobile advertising has been conducted in various parts of the world, particularly in America, Europe, and Africa. However, little information on mobile advertising to local customers is available to marketers in Pakistan. Therefore, this study is critical for marketers in this region of the world to learn important information about the acceptability of mobile advertisements, which will ultimately lead them to build successful marketing campaigns. Many studies on mobile marketing have been conducted in the US market. Thus, this study aims to see how young people in Pakistan, where the industry is still developing, respond to this new phenomenon known as mobile advertising.

Literature Review

Mobile Marketing

Mobile marketing enables direct communication between businesses and customers through mobile devices for content distribution (Öztas, 2015). Mobile media is now highly interactive and individualized thanks to mobile phone applications and web-based mobile media. Additionally, it emphasizes the importance of communication between customers and sellers to exchange goods and services through mobile marketing channels (Ström et al., 2014). Short Message Service (SMS), mobile websites, barcode scanning, mobile credit cards, multimedia messaging services (MMS), location-based networks, and in-store technology are among the instruments that fall under the mobile marketing category. Most marketers employ SMS-based mobile marketing tools since they are inexpensive and easy to use (Sripriya & Thomas, 2014).

Short Message Services (SMS)

SMS-based mobile advertisement is now many marketers' most misunderstood marketing medium (Narsi & Charfeddine, 2012). When the first text message was sent in Scandinavia in 1997, it started a revolution in communication and opened up a whole new realm of consumer connection and communication (Hanley & Becker, 2008). The most practical way to communicate messages on mobile devices is through text messaging, sometimes called SMS. Information, advertisements, and other services are distributed to consumers through it. As of 2012, there were 9.6 trillion texts sent and received globally, up from 4.1 trillion in 2008 (Omkareshwar, 2012) and 4.1 trillion in 2008 (Grace et al., 2013). Contrary to other forms of advertising, SMS-based advertisements allow for two-way contact between consumers and advertisers (Drossos et al., 2013).

SMS-based Mobile Advertising as a Mobile Marketing Component

According to Narsi and Charfeddine (2012), mobile advertising is the newest kind of advertising for customer contact. Traditional forms of advertising include those on television, print, and billboards. Mobile advertising combines these with the benefits of web

and mobile telecommunications technology. The market has expanded due to the rapid development of mobile phones, smartphones, mobile applications, and the exchange of helpful information through mobile advertising (Biswas & Vidyasankar, 2014). This has also made it more convenient for marketers to attract more clients. According to Grewal et al. (2016), the global advertising budget will reach \$65 billion by 2019 and increase to \$41 billion through the sale of mobile applications.

Marketers employed useful and beneficial mobile advertising to support and promote goods and services (Wong et al., 2015). It ensures that the message must provide value for the clients to encourage interaction with mobile marketing (Yang et al., 2016). Young people favor mobile advertising because it is simple to use and allows direct message sending and receiving (Sripriya & Thomas, 2014). In addition, marketers found it a convenient method of contact that allowed them to advertise their goods and services more personally than they could with traditional e-mail-based communication (Shareef et al., 2015). Its finest feature is the real-time, two-way connection between the marketer and the customer that SMS-based mobile advertising offers.

Consumer Acceptance of Mobile Advertising

In the past, numerous researchers from around the world have examined the relationship between consumer acceptance of mobile advertising and the various factors that affect this level of acceptance in numerous nations, including Africa, Bangkok, Canada, China, Finland, Germany, Korea, India, Indonesia, Iran, Malaysia, Romania, and Spain. The acceptance of mobile advertising by consumers is influenced by a wide range of factors in Taiwan, Tunisia, the US, and many other countries (Martin-Consuegra et al., 2015; Hsiao & Chang, 2014; Farnes, 2013; Bamoriya & Singh, 2012). Several elements, variables, or predictors have been explored in this section, such as utility, contextual utilization, positive attitude, ease of use, privacy, control, satisfaction, sacrifice, and trust.

Utility

Managing all types of daily living routines and social communication, the mobile phone has become an essential tool for people (Öztas, 2015). Mobile phones provide consumers with the utility that allows them to take benefit of communication, information, and entertainment (Olarte-Pascual et al., 2014). Information that is valuable to consumers, such as weather updates, job opportunities, movies, airline tickets, banking, and online shopping services, is gained through mobile phones (Hew, 2016). Regarding consumers' acceptance, many researchers concluded that perceived utility is the most critical factor (Hor-Meyll et al., 2014).

Context

Context, or the modification of the marketing messages according to the preferences of the customers based on time and location requirements, is a crucial aspect in getting consumers to use mobile and accept mobile advertising (Wu et al., 2015). In order for customers to obtain the special incentive through SMS messages at the location of their physical position close to a business, the context of the information connected to consumption should entail marketing activities that are highly customized (Atkinson, 2013). Consumers are encouraged to accept mobile advertisements when the message is compelling and offers immediate benefits (Shin & Lin, 2016). Contextual use is the most significant and influential aspect of consumer acceptability of mobile advertising (Vatanparast & Butt, 2010; Ratihayu et al., 2008; Merisavo et al., 2007).

Control

The permission-based concept's hallmark is controlled (Merisavo et al., 2007). Before delivering advertisements through SMS, marketers must obtain customer consent, which falls under the permission-based characteristic that gives customers power over whether to accept or reject the advertisements (Kumar et al., 2014). Through the consumer's capacity to exercise control, unwanted communications may be prevented, as can aggravation from mobile advertisements (Wang et al., 2014). According to studies by Hanley and Becker (2008), 80% of consumers reported being annoyed by unwelcome mobile marketing. According to a study by Beneke et al. (2011), customers who receive unsolicited messages get irritated. Consumers are thought to have a negative attitude toward mobile ads because advertisements violate their privacy (Beneke et al., 2011). Marketers should obtain permission before communicating with customers to avoid upsetting customers (Shin & Lin, 2016).

Sacrifice

Sacrifice refers to a consumer's willingness to tolerate unwanted mobile marketing texts. According to Merisavo et al. (2007), scarifies have a detrimental effect on customers' willingness to accept mobile advertising in Finland. Mobile phone users in Pakistan, Romania, and Indonesia are disturbed by unwanted messages since they receive many SMS daily. In Pakistan, up to 1 billion texts are sent daily (Ashraf & Kamal, 2010). Unwanted mobile commercial messages severely affect customers in developed nations like China, Africa, England, and France, where mobile users are rising quickly (Du, 2012).

Trust

Trust is the most essential and crucial aspect of the consumer's acceptance of mobile advertising (Eastin et al., 2016). The trust variables benefit consumer attitudes about accepting mobile advertising (Eastin et al., 2016; Martin-Consuegra et al., 2015). The ability of customers to accept or reject mobile promotional messages creates trust, which is a critical component in the interaction between consumers and marketers (Kumar et al., 2014).

Consumers' consideration of mobile advertising is driven by trust (Atkinson, 2013). Researchers also discovered that although consumers do not always trust advertising and advertisements, this does not always indicate their dislike (Martin-Consuegra et al., 2015). Consumers' poor view of mobile advertising is primarily due to their experience with traditional, distorted web commercial material.

According to Yang et al. (2010), the Merisavo et al. (2007) model was regarded as the most complete and statistically sound consumer acceptability of mobile marketing. The adoption of mobile advertising by consumers is influenced by five criteria, according to Merisavo et al. (2007). Perceived utility, the first component, includes concepts like perceived usefulness, relevance, financial incentives, entertainment value, and information value. The second element was utilizing contextual data, which includes timely and locationbased services. Perceived control, which includes elements like authorization, opt-out, and filter, was the third factor. The second component was perceived sacrifice, which includes the potential for control loss, hazards to privacy and time, annoyance, and intrusion. The final element was trust, including how the operator and marketers utilize personal data and how privacy laws are protected. Figure 2.1 displays the model developed by Merisavo et al. (2007).

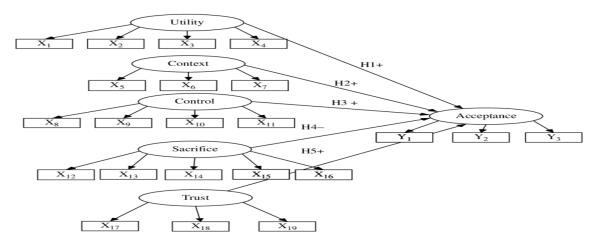


Figure 1: Merisavo et al.'s (2007) Model of Mobile Advertising Acceptance.

The researcher employed the same model and components from Merisavo et al.'s (2007) study to adapt it to the local context in Pakistan.

Hypotheses

- H1. There is a positive relationship between consumers' perceived utility of SMS advertising and their willingness to accept SMS-based advertising.
- H2. There is a positive relationship between consumers' utilization of contextual information in SMS advertising and their willingness to accept SMS-based advertising.
- H3. There is a positive relationship between consumers' perceived control of SMS advertising and their willingness to accept SMS-based advertising.
- H4. There is a negative relationship between consumers' perceived sacrifice in getting SMS advertising and their willingness to accept SMS-based advertising.
- H5. There is a positive relationship between consumers' trust and their willingness to accept SMS-based advertising.

Material and Methods

An advanced questionnaire developed by Merisavo et al. (2007) was integrated into the current research study, a non-experimental, correlational, and quantitative investigation. The researcher utilized a convenient sampling strategy to distribute the 450 questionnaires for the data collection of the sample size. Four hundred-one usable replies were obtained with an 89% response rate. IBM SPSS 24 and AMOS 24 Statistics software were utilized to conduct statistical tests for analyzing and processing data. Confirmatory factor analysis was used to check the model's fit, and SEM path analysis was used to verify the hypothesis. The most influential variable has been found using standardized regression weights, and the amount of variation in the dependent variable caused by the five drivers who functioned as independent variables has been calculated using squared multiple correlations.

Variables' Measurement

The participants' information was gathered using a two-part questionnaire. Twentytwo closed-ended questions from Merisavo et al.'s (2007) study on mobile advertising are included in the questionnaire, along with questions on gathering data on demographics and mobile phone use. Six scales comprise the Merisavo et al. items, five of which are independent variables (utility, context, control, sacrifice, and trust). At the same time, the sixth is a dependent variable measuring consumer acceptability of mobile advertising. The questionnaire's measurement tools employed a five-point Likert scale with the values (1) strongly disagree to (5) strongly agree.

Results and Discussion

According to demographic data, 68% of the 401 participants—53% men and 47% women—were between the ages of 22 and 29. Most participants (35% and 38%) fell into the graduate and postgraduate education categories. Nearly 76% of participants reported having a job today, while 35% reported having a monthly income of less than Rs. 19,999. The Cronbach's Alpha Coefficient, with a cutoff of 0.70, is used to evaluate the instrument's reliability (Sekaran, 2003). The table below demonstrates that all conditions are satisfied.

Table 1Reliability Analysis for Each Dimension and Combined		
Latent Variables	Cronbach's Alpha	
Utility	0.824	
Context	0.755	
Control	0.872	
Sacrifice	0.883	
Trust	0.806	

In this work, the measurement and structural model evaluations were completed using the two-step method advised by Anderson and Gerbing (1988). To determine the convergent validity of a concept, researchers look at the composite reliability values (CR) and average variance extracted (AVE). AVE values must be determined for each latent construct in the measurement model (Hair et al., 2010). A good convergent is one with an AVE of 5.0 or greater, and according to Hair et al. (2010), a suitable value for composite reliability (CR) is 0.60 (Diamantopoulos & Siguaw, 2000). The AVE and composite reliability values for each latent variable are displayed in Table 2. Moreover, to put it more precisely, the outcomes in Table 3 demonstrate no problem with the structural model.

Table 2 AVE and Composite Reliability Values				
Variables AVE CR				
Utility	0.543	0.826		
Context	0.525	0.768		
Control	0.638	0.875		
Sacrifice	0.500	0.869		
Trust	0.585	0.807		

m - 1, 1 - 0

Table 3 Comparison of Goodness of Fit Statistics for the SEM and CFA Model			
Statistics and Indexes	Index Cutoff Values	CFA Model	SEM Model
Chi-Square x 2	Significant p-values expected.	229.788	291.806
Normed Chi-Square (x 2:df	Below than 2.0: Very good. Between 2.0 and 5.0: Can be accepted	1.618	1.504
Root Mean Square Error of Approximation (RMSEA)	Values 0.08 or lower.	0.039	0.036
Goodness-of-fit Index (GFI)	Values nearer to 0.90 or higher.	0.944	0.938

Annals of Human and Social Sciences (A	AHSS)
--	-------

Incremental Fit Indices (IFI)	A value higher than 0.90 is preferable.	0.974	0.76
Normed Fit Index (NFI)	A value higher than 0.90 is preferable.	0.934	0.931
Tucker-Lewis Index (TLI)	A value higher than 0.90 is preferable.	0.968	0.971
Comparative Fit Index (CFI)	A value higher than 0.90 is preferable.	0.974	0.975
Adjusted Goodness of Fit Index (AGFI)	A value higher than 0.90 is preferable.	0.925	0.920

Structural Model Path Diagram and Hypotheses Testing

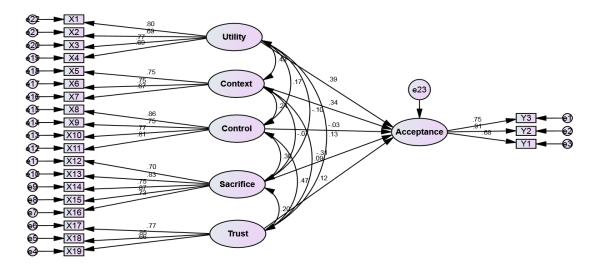


Figure 2: Structural Model Path Diagram

The estimated association between the perceived utility and acceptance of the mobile advertisement is shown in Figure 2, along with a route map. This demonstrates that our initial hypothesis was correct since a positive relationship between customers' perceived utility of mobile advertising and their willingness to accept it can be shown, with a Beta value of 0.39 and a sig. Value of 0.00. The estimated association between consumers' use of contextual information and their acceptance of the mobile advertisement is shown in Figure 2, along with a route map. This suggests that our second hypothesis was also validated, as we have discovered a positive route from using contextual information in SMS advertising and their readiness to accept SMS advertising, with a Beta value of 0.34 and a sig. Value of 0.00. Figure 2 displays a flowchart and an estimate of the link between control and their acceptance of mobile advertisements. The third hypothesis was unsupported. However, it is clear that the perceived control that Pakistani Millennials had over mobile advertising adversely linked with but did not substantially alter their willingness to accept it (beta value -0.03 and sig. value 0.602). Conversely, this discovery goes against several earlier findings.

The path diagram and estimate of the association between consumers' perceived sacrifices in receiving SMS advertising and acceptance of the mobile advertisement are shown in Figure 2 and Table 4. We discovered a negative route with a beta value of - 0.31 and a sig. value of 0.00 from the sacrifices made to get SMS advertising and their readiness to accept it suggests that our fourth hypothesis was supported.

The link between consumers' trust in SMS advertising's ability to protect their personal information and their acceptance of mobile advertising is depicted in Figure 2 and Table 4. This demonstrates that our fifth hypothesis was correct, as we discovered a positive

	Table 4 Estimate of the Relationship				
Exogenous construct		Endogenous construct	β	р	Result
Utility		Acceptance	0.39	0.00	Accepted
Context	>	Acceptance	0.34	0.00	Accepted
Control		Acceptance	-0.03	.602	Rejected
Sacrifice	>	Acceptance	-0.31	0.00	Accepted
Trust		Acceptance	0.12	.033	Accepted

route from consumers' trust in the confidentiality of SMS advertising to their readiness to accept mobile advertising, with a Beta value of 0.12 and a sig. Value of 0.033.

. . .

With a square multiple correlation scores of 0.53, demonstrates that the five factors are responsible for 53% of the variation in the acceptance of mobile advertising. This outcome gives the model's suitability some assurance.

The study's findings contribute to the marketing literature by identifying a negative link between the control driver and the dependent variable of customer acceptability, likely caused by political and cultural factors. The study's conclusions suggest that marketers should protect the privacy and information of Pakistani millennial mobile users. It is also advised to restrict the volume of SMS-based marketing messages delivered to customers and to tailor mobile marketing so that the advertising closely connects to their demands and way of life.

The study's findings, similar to other research (e.g., Nysveen et al., 2005), show that perceived usefulness and contextual information are the two most significant factors encouraging Pakistani consumers to accept mobile advertising. According to the study, Pakistani consumers accept mobile commercials on their cell phones for two main reasons: perceived utility (entertainment, informativeness, and social usefulness) and contextual information (location-based and personalized advertisement). Mainly, young consumers in Pakistan are more inclined to accept SMS-based mobile ads when they feel that they may profit from them and that doing so would allow them to save money and time. They also think localized, relevant, personalized mobile ads may benefit them.

The study's findings refute the notion that young consumers in Pakistan's perception of control and their willingness to engage with mobile advertising are positively associated. Instead, the perceived control was a poor predictor of their propensity to accept mobile adverts, according to the study. Even though this conclusion contradicts specific other research (such as Carroll et al., 2007), it seems consistent with the findings of Merisavo et al. (2007) in Finland. This suggests that young consumers in Pakistan are less likely to accept mobile advertising if they have greater control and filtering options for mobile commercials. Young customers in Pakistan probably feel less essential and ignored due to the daily barrage of unwanted smartphone advertising. As a result, fewer young consumers in Pakistan (51%) had a favorable opinion of mobile advertising; just 48% said they would be open to receiving mobile ads, and only 31% said they would read all future mobile ads.

The study's findings also demonstrate that young Pakistani consumers' perceptions of sacrifice may be a significant roadblock to their readiness to accept SMS-based mobile ads. According to the study, a significant inverse correlation exists between acceptance of mobile advertising and perceived sacrifice. This shows how concerned customers are with their power and privacy. Young consumers in Pakistan are also hesitant to embrace mobile advertising out of concern for their control, privacy, and time and out of respect for becoming overwhelmed with obnoxious or irritating mobile adverts.

The adoption of SMS-based mobile advertising does have a good association with the trust element. Although the relationship is not strong, it significantly influences customers' buying inclination. However, young consumers in Pakistan would accept mobile advertising provided they had confidence in their operators and mobile marketers to use their personal information only with their permission and to follow local laws governing the protection of the customers' data. Additionally, Pakistani mobile marketers must respect customer privacy and use permission-based marketing. To preserve customers' interests, Pakistani regulating bodies for advertising should establish clear guidelines for mobile marketing advertising.

Implications

The study's findings indicate that utility and the contextual information provided in the advertising are the two main factors influencing Pakistani consumers' acceptance of mobile advertisements. To build long-lasting consumer connections, marketers must establish customer-perceived value by concentrating on these two factors. Marketers must create mobile advertising strategies to deliver the ad at the appropriate time and location while keeping contextual information in mind. Customers will feel more valuable as a result, and they can save time and money. Keeping in mind the third most significant aspect, however, trust also plays a vital role in the adoption of products by Pakistani consumers. With the assurance that their privacy would be protected, businesses may utilize text messages to entice customers to interact with adverts and learn more about their services. Marketers must work harder to ensure that customers' personal information is not exploited while protecting their right to privacy by limiting the distribution of intrusive communications.

On the other hand, marketers face a significant challenge in effectively presenting relevant information that is reliable and of use. For instance, because Pakistan is a thirdworld nation, its consumers are experiencing financial and mental crises, which marketers need to consider while creating their campaigns. It is done through techniques that consider the mobile users' lifestyles in Pakistan, such as delivering a small number of text messages and offering personalized value propositions centered on time and money savings. The challenge for marketers is creating more helpful commercials that Pakistani customers consider valuable and beneficial for attaining their daily goals. Marketers may achieve this by utilizing attention-grabbing imagery and claims that demonstrate their care and concern for the security and privacy of their customers. By adhering to the Mobile Marketing Association's rules, marketers may protect customer privacy and eliminate invasive advertising from their mobile marketing initiatives. The two-way personalized connection between consumers and marketers can benefit customers and pique their interest in innovative advertising.

Implementing efficient channels like location-based and permission-based technology may facilitate direct communication between businesses and customers. Such technologies have several drawbacks, including logistical, infrastructural, and security difficulties. To ensure the efficacy of mobile marketing, these problems must be resolved. These innovations encourage customer participation at their convenience and lessen the unwelcome mobile advertising messages consumers receive. Ultimately, this will raise consumer acceptability levels and help marketers accept their advertising initiatives' desired return on investment.

Conclusion

This non-experimental correlation study investigated the connections between the independent variable of consumer acceptance of mobile advertising in Pakistan and the drivers of utility, context, control, sacrifice, and trust. The findings confirm earlier studies showing a connection between mobile advertising acceptability and utility, context, trust, and sacrifice (Merisavo et al., 2007). The results indicate that utility and context are the main factors with the most favorable associations with customer acceptability. There is a significant negative link between sacrifice and control. According to the study, millennials in Pakistan interact with SMS-based mobile advertising as part of their daily routines and desire to protect their personal data and privacy. The following proposals were made as part of the debate and conclusions: (a) additional comparative studies to boost consumer acceptability of mobile advertising, (b) ways to improve mobile advertising campaigns, and (c) concepts for recovering mobile advertising investment. The recent study demonstrates comprehensively that marketers should focus mainly on the usefulness, contextual elements, and relevance of mobile advertising messaging. For instance, marketers could utilize mobile advertising to give customers relevant information or a means to save time or money based on the customer's circumstance, location, or personal profile. Additionally, non-obtrusive and customized mobile commercials can foster mutual understanding and two-way communication between advertisers and customers. The researcher's suggestions for future studies are to enhance the study's findings by including other worthwhile variables and by applying results to different regions of the nation to boost the generalizability of the findings.

Limitations

The study's first limitation is that it only included Pakistani participants, which may differ from consumers from other regions. To determine if the research can be generalized, this presents an opportunity for future research to carry out this search of other emerging countries. Second, the population of this study, which was conducted in Pakistan's metropolis and focused on people between the ages of 18 and 34, was limited. According to Dlodlo and Mahlangu (2013) and Merisavo et al. (2007), these restrictions might mean that the results cannot be applied to populations outside the target population or other regions or nations. Therefore, there is a need for more studies that may involve people from over the top limit and from different areas of the country. Thirdly, the current study also included a convenience sample of customers, a problem present in most online studies. As a result, it is possible that the participants were picked because they might find mobile advertising more acceptable than other samples. Additional research is required to examine this study's external validity conclusions.

Given the fact that the mobile industry is a constantly evolving and growing market. Therefore, future research should survey individuals from various parts of the nation to validate the initial findings, keeping in mind the restriction of the study population. First, a survey with participants ages 18 to 55 may help marketers better grasp how well-received mobile advertising is among Pakistani mobile users. Finally, future research should concentrate on contrasting text message advertising with other mobile advertising strategies, such as MMS, mobile websites, and phone applications, to ascertain which method is more successful in getting Pakistani mobile users to accept mobile advertising. Doing so may help marketers increase the return on their investments.

Recommendations

The study's findings added to our understanding of how mobile advertising is received by Pakistani Millennials who use mobile devices. All five factors—utility, control, context, trust, and sacrifice—correlated with consumers' acceptance of mobile advertising in the current study. The quantitative investigation provides advanced knowledge of the factors influencing Pakistani millennial mobile users' acceptance of mobile advertising. The most significant correlations between utility, context, and customer acceptability were shown, followed by sacrifice, trust, and control. Consumer approval correlated favorably with context, utility, and trust, but sacrifice and control was adversely associated.

Future research might improve our understanding of independent factors not examined in this study. They may impact Pakistani consumers' willingness to accept mobile advertising. Additional research may include other independent variables not covered in the current study, such as consumer spending, cultural aspects of the region, acceptance of text messaging in social contexts, the perceived value of time or money savings, and most likely based on specific message characteristics perception of the consumer regarding the advertising messages.

REFERENCES

- Anderson, J. C., & Gerbing, D. W. (January 01, 1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411-423.
- Ashraf, M., F., & Kamal, Y. (2010). Acceptance of mobile marketing among university students. *Mustang Journal of Business and Ethics*, 1(1), 9-29.
- Atkinson, L. (2013). Smart shoppers? Using QR codes and green smartphone apps to mobilize sustainable consumption in the retail environment. *International Journal of Consumer Studies*, *37*(4). 387-393.
- Attaa, A. (2015, January 06). Pakistanis Exchanged 302 Billion SMS Messages in 2014. https://propakistani.pk/2015/01/06/pakistanis-exchanged-3021-billion-smsmessages-2014/
- Bahrainizadeh, M. Mosleh, A., & Pourdehghan, A. (2014). Personal drivers and factors influencing the attitude toward mobile advertising: A study on mobile phone users. *New Marketing Research Journal* 4(1), 1-20.
- Bamoriya, H., & Singh, R. (2012). SMS advertising in India is tam a robust model for explaining intention? *Organizations & Markets in Emerging Economies*, *3*(1), 89-101.
- Beneke, J., Cumming, G., Stevens, A., & Versfeld, M. (2011). Influences on attitude toward mobile text message advertisements: An investigation of South African youth. *International Journal of Mobile Marketing*, 5(1), 77-97.
- Biswas, D., & Vidyasankar, K. (2014). Privacy preserving and transactional advertising for mobile services. *Computing*, *96*(7), 613-630.
- Carroll, A., Barnes, S.J., Scornavacca, E., & Fletcher, K. (2007). Consumer perceptions and attitudes towards SMS advertising: Recent evidence from New Zealand. *International Journal of Advertising*, *26*(1), 79–98.
- Diamantopoulos, A., & Siguaw, A. (2000). Introducing Lisrel: A Guide for the Uninitiated, London: SAGE.
- Dlodlo, N., & Mahlangu, H. B. (2013). Usage of mobile-devices for recreation among the millennial generation. *African Journal for Physical, Health Education, Recreation and Dance,* 19(4), 874-890.
- Drossos, D. A., Giaglis, G. M., Vlachos, P. A., Zamani, E. D., & Lekakos, G. (2013). Consumer responses to SMS advertising: Antecedents and Consequences. *International Journal of Electronic Commerce*, *18*(1), 105-136.
- Du, P. (2012). Factors influencing consumers' acceptance of mobile marketing: An empirical study of the Chinese youth market. *International Journal of China Marketing*, *2*(2), 24-37.
- Eastin, M. S., Brinson, N. H., Doorey, A., & Wilcox, G. (2016). Full length article: Living in a big data world: Predicting mobile commerce activity through privacy concerns. *Computers in Human Behavior*, *58*(1), 214-220.
- Farnes, D. (2013). Text messaging expands marketing reach of Canadian charities. *International Journal of Mobile Marketing*, 8(1), 121-122.

- Fulgoni, G., & Lipsman, A. (2014). How social media will help ushers in the era of mobile and multi-platform campaign-effectiveness measurement. *Journal of Advertising Research*, *54*(1), 11-16.
- Grace, A., Kemp, N., Martin, F. H., & Parrila, R. (2013). Undergraduates' attitudes to text messaging language use and intrusions of textisms into formal writing. *New Media Society*, 20(10), 1-18.
- Grewal, D., Bart, Y., Spann, M., & Zubcsek, P. P. (2016). Mobile advertising: A framework and research agenda. *Journal of Interactive Marketing*, *34*(1), 3-14.
- Hadi, N. U., & Aslam, N. (2023). Demographic factors and consumer attitude towards unsolicited mobile-based marketing messages: A factorial design. *Online Journal of Communication and Media Technologies*, 13(1).
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: A global perspective. Upper Saddle River: Pearson Education
- Hanley, M., & Becker, M. (2008). Cell phone usage and advertising acceptance among college students: A four-year analysis. *International Journal of Mobile Marketing*, *3*(1), 67-80.
- Hor-Meyll, L., Lima, M., & Ferreira, J. (2014). Why should I accept ads on my mobile phone? Factors affecting the acceptance by Brazilian teenagers. *Brazilian Business Review* (*English Edition*), *11*(4), 130-150.
- Hsiao, W-H., & Chang, T-S. (2014). Understanding consumers' continuance intention towards mobile advertising: A theoretical framework and empirical study. *Behaviour & Information Technology*, *33*(7), 730-742.
- Kumar, V., Zhang, X., & Luo, A. (2014). Modeling customer opt-in and opt-out in a permission based marketing context. *Journal of Marketing Research*, *51*(4), 403-419.
- Martin-Consuegra, D., Gomez, M., & Molina, A. (2015). Consumer sensitivity analysis in mobile commerce. *Social Behavior & Personality: An International Journal, 43*(6), 883-897.
- Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., Salmenkivi, S., Raulas, M., & Leppäniemi, M. (2007). An empirical study of the drivers of consumer acceptance of mobile advertising. *Journal of Interactive Advertising*, 7(2), 1-19.
- Narsi, W., & Charfeddine, L. (2012). An exploration of facebook.com in Tunisia using technology acceptance model (TAM) and theory of reasoned action (TRA). *Interdisciplinary Journal of Contemporary Research in Business, 4*(5), 948-968.
- Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005). Intentions to use mobile services: Antecedents and cross-service comparisons. *Journal of the Academy of Marketing Science*, 33(3), 330-346.
- Olarte-Pascual, M. C., Pelegrin-Borondo, J., Reinares-Lara, E. M., & Sierra-Murillo, M. Y. (2014). La publicidad en el teléfono móvil: Tres grupos de clientes, veintisiete recomendaciones de actuación. *Universal Business Review*, *41*(1), 126-144.
- Omkareshwar, M. (2012). Mobile text messaging: An emerging market tool. *Advances in Management*, *5*(12), 10-16.

- Öztas, Y. B., (2015). The increasing importance of mobile marketing in the light of the improvement of mobile phones, confronted problems encountered in practice, solution offers and Expectations (In World Conference on Technology, Innovation and Entrepreneurship Procedia). *Social and Behavioral Science*, *195*(1), 1066-1073.
- Pta.gov.pk.(2023). TelecomIndicators | PTA. [online] Available at: https://www.pta.gov.pk//en/telecom-indicators [Accessed 08 May 2018].
- Ratihayu, A. P., Agustina, L., Baihaqi, M. F., & Raharso, A. (2008). An empirical study of the drivers of consumer acceptance of Mobile advertising (short message services) in Indonesia. *Journal of Business Strategy and Execution*, 1(1), 1-21.
- Sekaran, U. (2003) Research Methods for Business: A Skill-Building Approach. 4th Edition, John Wiley & Sons, New York.
- Shareef, M. A., Dwivedi, Y. K, & Rana, N. P. (2015). Consumer behaviour in the context of SMSbased marketing. *Marketing Review*, *15*(2), 135-160.
- Shin, W., & Lin, T. T-C. (2016). Full length article: Who avoids location-based advertising and why? Investigating the relationship between user perception and advertising avoidance. *Computers in Human Behavior*, *63*(1), 444-452.
- Sripriya, M., & Thomas, P. E. (2014). SMS as an evolving digital culture for learning. International Journal of Technology Enhancements and Emerging Engineering Research, 2(3), 12-19.
- Ström, R., Vendel, M., & Bredican, J. (2014). Mobile marketing: A literature review on its value for consumers and retailers. *Journal of Retailing and Consumer Services, 21*(6), 1001-1012.
- Su, D. N., Nguyen, N. A. N., Nguyen, L. N. T., Luu, T. T., & Nguyen-Phuoc, D. Q. (2022). Modeling consumers' trust in mobile food delivery apps: Perspectives of technology acceptance model, mobile service quality and personalization-privacy theory. *Journal of Hospitality Marketing & Management*, 31(5), 535-569.
- Vatanparast, R., & Butt, A. H. (2010). An empirical study of factors affecting use of mobile advertising. *International Journal of Mobile Marketing*, *5*(1), 28-40.
- Wang, X., Hong, Z., Xu, Y., Zhang, C., & Ling, H. (2014). Relevance judgments of mobile commercial information. *Journal of the Association for Information Science & Technology*, 65(7), 1335-1348.
- Wong, C-H., Tan, G. W-H., Tan, B-I., & Ooi, K-B. (2015). Mobile advertising: The changing landscape of the advertising industry. *Telematics and Informatics*, *32*(1), 720-734.
- Wu, C. H., Kao, S-C., Wu, C-C., & Huang, S. (2015). Location-aware service applied to mobile short message advertising: Design, development, and evaluation. *Information Processing* and Management, 51(5), 625-642.
- Yang, H., Yu, J., Zo, H., & Choi, M. (2016). User acceptance of wearable devices: An extended perspective of perceived value. *Telematics and Informatics*, *33*(2), 256-269.
- Yang, H., Zhou, L., & Liu, H. (2010). A comparative study of American and Chinese young consumers' acceptance of mobile advertising: A structural equation modeling approach. *International Journal of Mobile Marketing*, *5*(1), 60-76