



An Empirical Analysis on Consumer's Perception, Attitude and Adoptability of SMS Advertising: Bangladesh Perspective

Dewan Muhammad Nur -A Yazdani¹, Md Adnan Rahman², Shaikh Sabbir Ahmed Waliullah³, Taha Husain⁴, KaziFayzus Salahin⁵, Swad Ahmed Mahfuz⁶, Tanvir Abir⁷

¹Research Associate, Creative Research & Consultancy, Dhaka 1205, Bangladesh; dewanyazdani@gmail.com

²Senior Lecturer, College of Business Administration – CBA, International University of Business Agriculture and Technology, Dhaka -1230, Bangladesh; adnan.cba@iubat.edu

³Senior Lecturer, College of Business Administration – CBA, International University of Business Agriculture and Technology, Dhaka -1230, Bangladesh; shaikh.waliullah@iubat.edu

⁴Lecturer, Department of Gender and Development Studies, Begum Rokeya University, Rangpur. Rangpur-5404, Bangladesh; ahmthusain@gmail.com

⁵Senior Data Analyst, Eminence Associates for Social Development, Dhaka-1207, Bangladesh; salahin@eminence-bd.org; kazifsalahin@gmail.com

⁶Consultant & Auditor, R&G Consulting; swad.mahfuz@gmail.com

⁷Associate Professor, Ahsanullah University of Science and Technology, Dhaka-1208, Bangladesh; t.abir73@gmail.com

Corresponding author: Dewan Muhammad Nur-A Yazdani, Research Associate, Creative Research & Consultancy, Dhaka 1205, Bangladesh, Bangladesh; dewanyazdani@gmail.com

Citation: Yazdani et al. (2020). An Empirical Analysis on Consumer's Perception, Attitude and Adoptability of SMS Advertising: Bangladesh Perspective. *International Journal of Humanities Arts and Business (IJHAB)*; Vol-I, Issues-I.

ABSTRACT : Nowadays, telecom companies and business organizations are taking advantage of text message advertising to disseminate information, promote their products, and build rapport with the customer. This study primarily examines consumers' understanding, attitude, and adaptability of SMS advertising from the perspective of Bangladeshi consumers. A standardized cross-sectional descriptive quantitative survey was designed to determine the factors that affect customers' attitudes towards SMS advertising. The participants in the study were university undergraduates in Bangladesh. The research examined multiple observations and popular expectations of mobile advertisements using the partial list square method. A total of 350 questionnaires were distributed equally among university students, resulting in a sample size of 324. The path modelling was carried out using PLS-SEM software (Smart PLS 3.3.3). The results indicated that the r^2 value for the input factors on purchasing behavior explained an average of 20.03% of the change in purchasing behavior. These variables included attitude toward purchasing, monetary advantages, and trust. Additionally, the research demonstrated that "Monetary Benefits" and "Trust" would influence respondents' attitudes and behaviors toward SMS advertisements. The latest evidence indicated that the SMS material has a clear and statistically relevant impact on attitude. Monetary incentives have a significant effect on the creation of a positive attitude towards the business. Similarly, frustration is another critical fact that has a negative and statistically relevant impact on attitude. Mobile phone ads can be the principal source of relevant knowledge on a product or service.

Keywords- Perception, attitude, adaptability, SMS advertising, monetary benefits, time factors.

I. INTRODUCTION

Advertising is a means of communication that encourages and motivates customers to take action. Short Messaging Service (SMS) has long been popular as a means for providing advertisements. Mobile operators in Bangladesh for several years took advantage of SMS to establish some strong consumer relationships. James (2015) described SMS marketing as a strategy that uses a technique called permission-based text messaging to distribute promotional messages to consumers. Four telecom operators are operating in Bangladesh and contain a total of 165,615 million subscribers. GP belongs to 76.469 million users, Robi 49.321 million, Banglalink 34.948 million, and Teletalk 4.877 million (BTRC, 2020). Generally, the mobile operator sends SMS to its user for contact and the distribution of deals and information.

Mobile marketers can quickly send short messaging service (SMS) advertisements to customers based on their demographic and regional details. Advertisers using the wireless platform around the world already have incorporated SMS within the media mix (Tsang et al., 2004). Companies take full advantage of mobile communications because submitting SMS is relatively cost-effective (Sabokwigina et al., 2013). Since mobile marketing saves a great deal of time, it has earned the approval of several retail firms (Rip and Kemp, 1998). Mobile advertising was mainly done by mobile operators and, to a lesser extent, by consumer brands (Virtanen, Bragge, & Tuunanen, 2005). Cellphone users typically hold negative views on mobile advertisements. Consumer's behaviors tend to be more pessimistic after watching smartphone advertisements (Tsang et al., 2004).

Given the capacity of SMS as an advertisement tool, the scale of use, adoption, and efficacy attracted limited attention from academics and marketer researchers (Merisavo et al., 2007). We know that companies have developed a lot to meet, educate, promote and offer customer care. Here new devices have improved how customers may exchange knowledge and build a connection between specific product categories. Besides, the growth and prevalence of communication through Short Messaging Service (SMS) is growing day by day and has turned smartphone ads into a modern and successful advertisement medium. Wireless technology advancement, including internet connectivity through cell phones, often provides an important medium for delivering advertising messages to customers for selling goods. Mobile marketers can also establish customer-centered approaches by recognizing the variables that affect consumers' attitudes toward SMS advertising. SMS ads are a significant low-cost choice for targeting a large variety of clients. However, digital solid marketing approaches rely on knowledge of the elements that influence customers' responses to SMS advertising. This analysis will include recommendations for addressing and designing successful marketing approaches for prospective digital advertisers by defining these considerations.

Hence, the key aim of this analysis is to examine the cell phone users' actions and attitudes towards SMS ads. And the primary goal is to investigate the degree of approval of SMS ads and whether the advertisements can influence the intention of the consumer to react to the ad, to analyze the groups of SMS which consumers are more likely to receive, to investigate the variables affecting the mood of the user when getting the SMS advertising and to assess the estimated period for the consumer to obtain the SMS advertising to businesses.

II. LITERATURE REVIEW

A massive advertising outlet has been generated by the cell phone (Saadeghvaziri & Seyedjavadin, 2011) with several benefits, including low expense, security, flexibility, and speed of distribution (Shadkam, 2017; Yaghoobi et al., 2014). SMS is considered a common data service source, the most useful and special feature (Dickinger et al., 2004). Mobile ads aim to well define prospective consumers with text messaging, thereby improving the response-to-advertisement ratio (Reyck&Degraeve, 2003). Mobile advertisement is cheap and creative and can be highly aimed at anyone (Beatrix, 2007). SMS allows consumers of cell phones to submit and address messages and is a commonly used mobile phone technology (Kim, Park, and Oh, 2008).

Some reasons that have mobile marketing impact and efficacy include mobile technologies and adoption rates, regular restrictions, and degree of customer acceptance in various cultural settings (Sultan and Rohm 2008). SMS ads and customers are closely linked by providing customers with any form of actual advantages, such as incentives, promotional sales, and other deals, which would reduce the confusion created by SMS advertisement and increase the perceived value of the knowledge it provides. Gramophone users receive 6 SMS per day, compared to 5 for Banglalink subscribers, 3 for Airtel subscribers, 4 for Teletalk subscribers, and 4 for Robi subscribers (Khalil et al., 2020). The permission-based SMS model would mitigate privacy issues because users should retain the discretion of their details if chosen for smartphone ads (Barwise & Strong, 2002). Quality and interest of advertisements are the main factors that affect the customer's attitude towards mobile advertising (Dickinger et al., 2004).

However, subscribers have to receive SMS in many situations because of its nature (Byrne BM, 2013). Studies showed that 98% of SMSs are acknowledged, whereas, at the same time, 22% of emails and 12% of posts on Facebook are generated. Similarly, a further study revealed that consumers using SMS (95%) slightly higher than other mobile apps and software like Facebook Messenger (37%), Skype (20%), Twitter (17%), Blackberry Messenger (17%) and WhatsApp (16%). Work also showed that most (97%) of SMS messages were read sharp within 03 minutes of receipt. Updating the smartphone with newly developed skills has established an innovative transformation in connectivity and access to advertising online, service providers and leisure activities for users. Still, at the same time, for some other mobile advertising strategies, short messaging service has a leading role (Shadkam, 2017).

The practical importance of SMS ads contributes enormously to the willingness of the user to consider SMS advertisements (Shadkam, 2017). Entertainment has a significant effect on customers' behavior towards SMS ads (Razzak et al., 2019). Funny and amusing, well-targeted advertisements are more likely to affect customer purchasing intention for branded goods (Dickinger et al., 2004). Besides, Krishnamurthy (2001) found that by exposing them to different types of interactive competitions, acceptance and attitude towards SMS advertising may be increased, and could also increase the understanding of the advertising message.

Economic opportunities to attach value to SMS ads were also noticed, and customer decisions to approve SMS advertisements have also been affected by such value (Drossos et al., 2007). Economic advantages for SMS advertising refer to persons agreeing to start receiving advertisements on their cellular telephones for a financial incentive promised or expected. (Edwards et al., 2002). Besides, irritation theory describes the customer's adverse response to the unwanted post. The perception of customer irritation from SMS ads negatively relates to their attitudes towards SMS advertising (Csikszentmihalyi, 2014). Advertising via SMS is generally considered valuable if sent after receiver approval (Ducoffe, 1996). For SMS ads to be accurate and efficient, receiving permission from SMS advertisers is a fundamental feature.

Evidence has also shown that users are more willing to support SMS ads if they feel that the personal details they send to advertisers would not be misused (Merisavo et al., 2007). On the other hand, numerous studies demonstrate that users reject clear MS communications due to confidentiality concerns (Dickinger et al. 2004) and argue that unwanted messages that interrupt day-to-day activities would significantly damage the reputation of a business (Hoyer & MacInnis, 2008; Muk, 2007). Studies also established the importance of timely delivery of promotional messages, and one of the best factors of customer attitude to receiving SMS ads is in the related position in the perspective of the receivers of such ads (Merisavo et al., 2007; Rettie et al., 2005; Xu et al., 2008).

III. STUDY HYPOTHESIS

H 1: Providing correct and relevant details will help the customers build a positive attitude towards SMS advertising.

Attitude is a significant idea in research on showcasing and data frameworks. Fishbein and Ajzen characterized a mentality as a learned inclination of people (Fishbein & Ajzen, 1975). In light of this inclination, an individual would react to any thought or various propositions. Attitude is additionally a significant developed idea for data frameworks research. Embody that consent-based promoting contrasts from customary irrelative publicizing in that SMS about explicit items, administrations, or content are sent uniquely to people who have expressly demonstrated their ability to get the message (Tsang, 2014). This review centers around deciding customer attitudes towards SMS promotions. It is derived that the demeanor towards SMS ads will influence both the achievement of SMS publicizing efforts and the development of positive attitudes of shoppers who get SMS notices. It was outlined by (Aslam et al., 2016), (2000) that SMS ads and the SMS publicizing medium, by and large, will influence the accomplishment of the promoting effort that targets different consumers. Buyers' attitude comprises three parts: insight, influence, and conation (Booyse & DU Plessis, 2014). SMS promotion of a specific brand affects a shopper's conviction framework, which impacts and prompts the purchaser to foster a particular demeanor towards the publicized brand. A consumer's attitude concerning a brand affects the customer's expectation to buy the brand offers. Impacts of publicizing exercises by SMS are affected by purchaser disposition towards promoting message, promoting organization and media. Assuming the organizations need to send their messages through mobile devices, starting them need to see how shoppers see, gauge the mobiles as a wellspring of promoting, and what perspectives purchasers show (Salamah, 2016). Eshra & Beshir, (2019) demonstrated a positive connection between purchaser perspectives toward SMS advertising and purchasing choices. Rajesh et al. (2019) found that the customers' attitude has a critical relationship with their goal to buy the promoted items. Administrations and factors like things, cost, and timing are essential to know the buyer's disposition to buy. Again, SMS advertising plays a critical part in deciding buyers' future purchasing conduct to utilize and develop a positive attitude towards SMS promotion (Almossawi, 2014).

H 2: People's perception of monetary benefits impacts a positive attitude towards the SMS company and affects purchasing decisions.

Prospective consumers like to receive financial compensations from promoting SMSs designated to them. An overview led in a research conducted in the USA discovered that 59% of the participants consented to receive versatile promotions if paid by \$1. While around 66% of the participants agreed to get portable promotions in case they were compensated. Money-related advantages for SMS promotion allude to individuals consenting to get advertisements on their cell phones for a guaranteed or expected monetary motivator (Aslam et al., 2016). This method of developing SMS offers an alluring benefit of enabling prospective clients with an unmistakable incentive to get SMS promoting's proposition the award different means, for example, coupons or versatile pool, which can be introduced at a store or a shop for markdown on the acquisition of administrations or items. Customers who can easily and successfully recognize their value limits and impact various items have expressed an interest in driving financial compensations for direct showcasing. Thus the purchasing frequencies also will increase. Special endeavors can adjust shoppers to buy according to their choices and therefore, retailers can also effectively use this choice to help sell their deals (Abdul & Muhammad, 2019). Uplifting perspectives and buying aims have likewise been decidedly related to motivators for SMS advertisements. Moreover, a recent study has identified money-related advantages as the key factors that sway versatile commercials generated by SMS advertising while influencing prospective customers to purchase the products as per their choices (Mishra & Soni, 2020).

LVI.

H 3: The mindset of citizens towards SMS ads has a significant effect on creating trust towards the business that provides the SMS.

In connection with SMS promotion, customers' mindset towards SMS giving organizations foster positive trust. In light of the past studies, an effective SMS help set up the consent of clients, remote administrations suppliers control and brand trust, which fundamentally shapes the client's trust towards the SMS advertising and the company behind it (Julsrud et al., 2017). The information within

the SMS eludes to the substance of the message, for example, notice type like competition, surveying, unique offers, message personalization and the time and recurrence of a promotion. The message additionally identifies with the area; for example, area designated offers, inclinations of buyers, authorization, customer control and security. Privacy and security have been found to affect a shopper's mentality positively or negatively towards the organizations giving the SMS advertisements (Beza et al., 2018). The significant impact over purchasers' intentions towards SMS advertising is the thing that develops their attitude or feelings about the organizations that send SMSs to their cell phones. Also, among the essential variables influencing demeanor towards promotions is the validity of the SMS giving organizations when the customers see their SMSs (Bakr et al., 2019). It is significant because the shoppers foster either positive/negative discernment towards the cases about the brand/item publicized in the ad, either to be honest and convincing and that influence demeanor towards SMS notices overall. The trust towards the SMS advertisements joins the validity of the ad source and the validity of the actual promotion. Customers' insights regarding how right, accurate, and reliable the promotion and the SMS advertisement sources will influence their attitudes towards the notice, thus building trust (Logan, 2017).

IV. METHODOLOGY

A standardized questionnaire was constructed to determine the variables that would influence consumers' attitudes concerning SMS ads. The study comprises numerous parts related to the broader usage of SMS advertisements and the reasons affecting the customer's more general disposition towards SMS advertisements. Cell phone consumers were asked to evaluate the aspects that influence their response to SMS advertisements using a five-point Likert scale (1= Strongly Disagree and 5= Strongly Agree). The data were collected over six weeks, and the respondents were nationwide undergraduates from different universities. The pre-tested questionnaire was used among fifteen randomly selected cell-phone holders and consumers before data collection, leading to some minor improvements to the sentence structure of some of these survey questions, including the prevailing attitude towards the mobile advertising and credibility of SMS marketing. Cronbach's alpha had been used to estimate the sample's reliability and internal consistency.

The target group was the cell phone users and subscribers. That being said, this study's sample size equates to 350 users and owners of cell devices due to the use of a wide variety of sizes while keeping the study costs down. For 324 questionnaires, the survey responses were obtainable.

V. RESULTS

Demographic Characteristics

Data from a total of 324 eligible participants were included in this study. Of the total sample, 166 participants (51.2%) were male and mostly aged between 28-38 years (202, 62.3%). Of the respondents, 299 (98.7%) had a university degree or higher, and 176 (54.3%) were married. About 247 participants (76.2%) lived with their families and were working full time or part-time (249 participants [76.9%]) (Table-1).

Table 1: Characteristics of the study population

Variables		n	Percent (%)
Gender	Male	166	51.2
	Female	158	48.8
Level of Study	HSC or Equivalent	25	7.7
	Graduate	164	50.6
	Postgraduate	131	40.4

	Doctorate	4	1,2
Age Category	18-28	119	36.7
	28-38	202	62.3
	38-48	3	.9
Marital Status	Single	134	41.4
	Married	176	54.3
	Divorced	14	4.3
Professional Status	Student	74	22.8
	Working (Full time)	169	52.2
	Working (Part-time)	80	24.7
	None	1	.3
Living Arrangement	Living Alone	42	13
	Living with Family	247	76.2
	Sharing/Living with Flat mates	31	9.6
	Others	4	1.2
Household Income	Below 10,000	8	2.5
	10,000-20,000	8	2.5
	20,000-30,000	39	12.0
	30,000-40,000	60	18.5
	40,000-50,000	84	25.9
	50,000-60,000	54	16.7
	60,000-70,000	39	12.0
	70,000-80,000	13	4.0
	80,000-90,000	6	1.9
	90,000-100,000	4	1.2
	Above - 100,000	9	2.8

VI. RELIABILITY AND VALIDITY

All values of Cronbach's alpha, composite reliability and rho-A were far above the 0.70 marks, as seen in the table below. These results indicated the constructs were reliable and well performed. AVE was above 0.50, indicating the convergent validity for each construct. Finally, all the VIF values were below 3, which confirmed the absence of multi-collegiality problems within the analysis constructs (Table-2).

Table 2: Reliability Analysis

	Items	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Variance Inflation Factor
Appeal	4	0.749	0.764	0.763	0.740	1.209
Attitude	13	0.820	0.854	0.860	0.750	1.172
Entertainment	2	0.827	0.727	0.843	0.728	1.294
Irritation	4	0.718	0.702	0.761	0.752	1.095
Monetary Benefits	4	0.786	0.734	0.781	0.776	1.134
Product Involvement	5	0.805	0.767	0.717	0.795	1.364

Trust	2	0.739	0.747	0.780	0.639	1.256
Behavior	5	0.722	0.865	0.770	0.792	-

For each deal, the value of the Fronell-Larcker test was less than 0.70 to define distinguishing validity for each build. The HTMT ratio was below 0.90 to include proof of distinguishing validity for structures of the analysis (Table-3).

Table 3: Fronell-Larcker criterion and Heterotrait-Monotrait Ratios

Fronell-Larcker criterion								
	Appeal	Attitude	Behaviour	Entertainment	Irritation	Monetary Benefits	Product Involvement	Trust
Appeal	0.583	-	-	-	-	-	-	-
Attitude	0.293	0.592	-	-	-	-	-	-
Behavior	0.262	0.527	0.541	-	-	-	-	-
Entertainment	0.227	0.464	0.283	0.853	-	-	-	-
Irritation	0.008	0.233	0.129	0.283	0.593	-	-	-
Monetary Benefits	0.184	0.212	0.251	0.150	0.027	0.613	-	-
Product Involvement	0.402	0.377	0.351	0.406	0.124	0.252	0.543	-
Trust	0.222	0.371	0.391	0.275	0.068	0.330	0.476	0.628
Heterotrait-Monotrait Ratios								
Appeal	-	-	-	-	-	-	-	-
Attitude	0.550	-	-	-	-	-	-	-
Behavior	0.716	0.829	-	-	-	-	-	-
Entertainment	0.461	0.642	0.528	-	-	-	-	-
Irritation	0.330	0.436	0.350	0.551	-	-	-	-
Monetary Benefits	0.536	0.327	0.513	0.259	0.454	-	-	-
Product Involvement	0.634	0.594	0.818	0.740	0.551	0.826	-	-
Trust	0.688	0.610	0.825	0.521	0.245	0.723	0.891	-

VII. DATA ANALYSIS AND FINDINGS

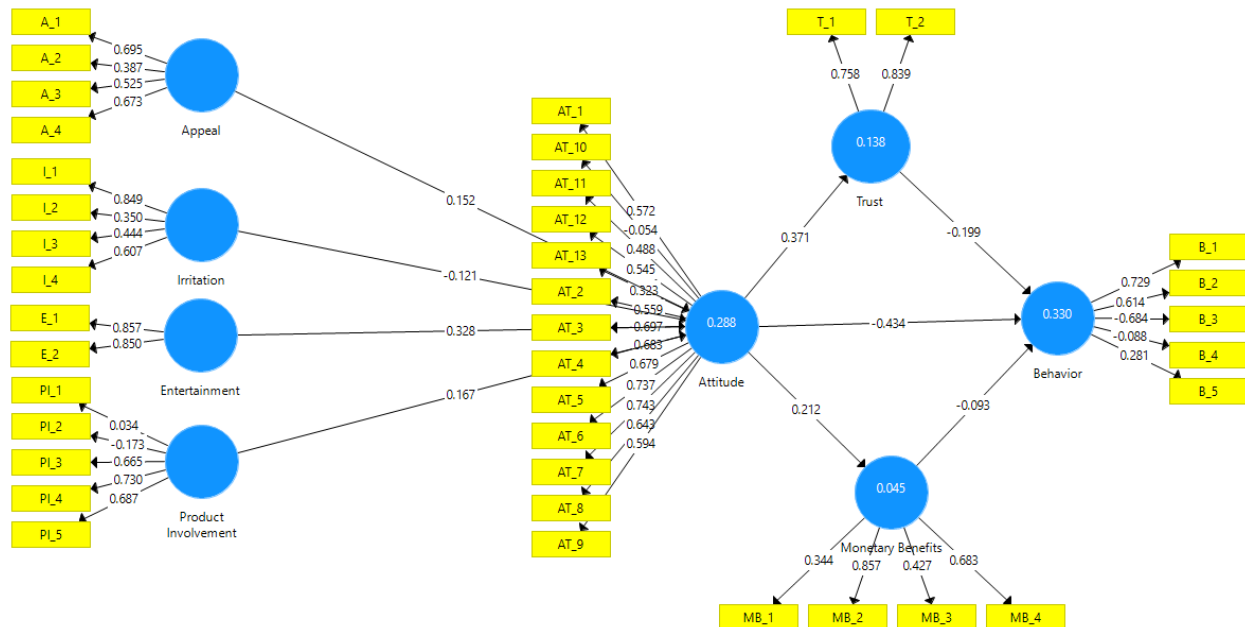
7.1. Path Analysis

The r^2 value for the input variables on the behavior towards buying explained that an average of 20.03% of the change in behavior towards buying could be explained by the attitude towards buying, monetary benefits and trust. The model's predictive relevance (Q^2) value was the average of 0.061, which indicated a low predictive relevance (Chin, 2010) (Table-4).

Table 4: Hypothesis testing

Hypothesis	Coefficient	t-values	Sig.	Decision	Q^2	r^2	f^2
1 Appeal → Attitude	0.152	2.918	0.004	Accept	-		0.227
2 Entertainment → Attitude	0.328	6.114	0.000	Accept	-	0.28	0.116
3 Irritation → Attitude	-0.121	2.512	0.012	Accept	-	8	0.219
4 Product Involvement → Attitude	0.167	3.238	0.001	Accept	-		0.329
5 Attitude → Monetary Benefits	0.212	3.682	0.000	Accept	-	0.045	0.247

6	Attitude → Trust	0.371	7.211	0.000	Accept	0.138	0.160
7	Attitude → Behavior	-0.434	9.273	0.000	Accept	0.090	0.240
8	Monetary Benefits → Behavior	-0.093	1.616	0.007	Accept	0.013	0.311
9	Trust → Behavior	-0.199	3.519	0.000	Accept	0.080	0.247



Research standardized path values, t-values and degree of importance are seen in the table above. The path coefficient between appeal and attitude ($\beta = 0.152$, $p = 0.004$) suggested a strong and constructive attitudinal impact. The path value on attitude for the entertainment ($\beta = 0.328$, $p = 0.000$) indicated the content's optimistic and statistically important influence on attitude. The path value for the attitude irritation ($\beta = -0.121$, $p = 0.012$) indicated the irritation's detrimental and statistically relevant effect on attitude. The path value for the product involvement on attitude ($\beta = 0.167$, $p = 0.001$) showed that the impact of the product involvement on attitude is positive and statistically significant. As for the path value for the attitude and monetary benefits ($\beta = 0.212$, $p = 0.000$) showed that attitude impacted on monetary benefit positively and also attitude impacted on trust positively ($\beta = 0.371$, $p = 0.000$).

As for the factor affecting purchase decisions, the results described in the table above indicated that the impact of attitude on buying activity ($\beta = -0.434$, $p = 0.000$) was statistically relevant and unfavorable. The path coefficient for monetary gains on purchasing behavior ($\beta = -0.093$, $p = 0.007$) often portrayed confidence's impact on OPI as significant and negative. Finally, the path coefficient for trust in buying behavior ($\beta = -0.199$, $p = 0.000$) depicted trust's outcome as both unfavorable and substantial.

7.2. Mediating Effects

As stated in the table below, the mediation impact of monitoring benefits between buying attitude and behavior indicated that monitoring benefits mediate and complicate the interaction between buying attitude and behavior ($\beta = -0.020$, $p = 0.035$). The trust mediated and confounded the interaction between the attitude and attitude towards purchasing. The conclusion indicated that trust mediates the interaction between attitude and buying activity ($\beta = -0.074$, $p = 0.002$) (Table-5).

Table 5: Meditating Effect

	B	t-value	Sig.	Decision
HM1: Attitude → Monitory Benefits → Behavior	-0.020	1.432	0.035	Mediation
HM2: Attitude → Trust → Behavior	-0.074	3.115	0.002	Mediation

VIII. DISCUSSION

The literature has noticed that SMS is an effective medium for mobile ads and people's reaction to mobile advertisements depends on the advertisement issues. SMS is an important marketing tool. Subscribers can't help but receive SMS (Byrne BM, 2013). Updating technologies and developing social networking, cell phone carriers and other businesses also use SMS advertising. Short messaging service (SMS) could lead to other marketing instruments (Shadkam, 2017). Several benefit considerations are leading telecom carriers and enterprises to use an SMS network for advertisements. Low expense, efficiency, flexibility and production pace are some of SMS's advantages (Yaghoobi et al., 2014). Citizens are also turning on their cell phones to advertise SMS. The report revealed Grameenphone users get 6 SMS a day, while Banglalink subscribers get 5, Airtel subscribers 3, Teletalk subscribers 4 and Robi subscribers 4 (Khalil et al., 2020). The study also revealed several people's responses after receiving the SMS. Advertising issues are an important factor in people's reactions. Reaction from citizens after getting SMS varied from individual to individual. Many people found it funny and fun, while others got annoyed after receiving SMS. This study's findings showed an important and optimistic impact of the appeal on attitude. The path coefficient between appeal and attitude ($\beta = 0.152$, $p = 0.004$) suggested a strong and constructive attitudinal impact. The path effect on attitude for the entertainment ($\beta = 0.328$, $p = 0.000$) indicates the optimistic and statistically significant influence of entertainment on attitude. The behavior of users towards SMS ads also had a significant effect on culture (Razaak et al., 2019). Many driving forces such as culture, reputation and information had been historically identified as a source in mobile marketing performance (Tsang et al. 2004; Okazaki & Barwise, 2014).

The most important criteria for SMS ads are known to be appeals. Engagement of the offer, attitude towards SMS ads, rewards, and promotional attraction strongly affect customer attitude towards SMS advertisement. This research also demonstrated the detrimental and statistically important impact of frustration on attitude. Mobile advertisement is a strong source of relevant knowledge, and confident citizens are interested in monetary advantages expressed through SMS. Entertainment and intelligence function as an effective promotional tool for SMS (Chang & Chen, 2014). User confidence is a highly significant element in the reception of SMS ads. Trust means confidence that the marketer will produce what was advertised (Al-Maghrabi & Dennis, 2012). A significant outcome of this study was that trust mediated and confused the relationship between the attitude and behavior towards buying. The finding indicated that trust mediates the interaction between mindset and purchase behavior.

The impact of confidence on purchasing behavior is often important as well as negative. When a customer obtains an SMS ad campaign, time and place status significantly affect consumer's attitude to accept SMS advertisements. By identifying the consumer at a specific point in time, an advertising message may become contextually valid (Gidofalvi et al., 2008; Xu et al., 2008). In addition, the path value for the attitude and monetary benefits ($\beta = 0.212$, $p = 0.000$) shows that attitude positively affects monetary benefit and also positively impacts attitude on confidence ($\beta = 0.371$, $p = 0.000$). Attitude impact on purchasing behavior ($\beta = -0.434$, $p = 0.000$) is negative and statistically important.

IX. CONCLUSION

SMS advertising is one of the best promotional platforms for mobile operators and other forms of business organizations. Consumer expectations and actions toward SMS ads are distinct. Issues of ads like- culture the monetary gain has a significant effect on the successful interactions with the perceptions and actions of customers. In contrast, irritation harms the attitudes and behaviors of consumers. Confidence and timely knowledge often play a significant role in advertisements through SMS. SMS ad is one type of marketing advertisement which brings information and offers from

various mobile operators and businesses. Mobile ad serves as a medium for informal contact. Here, the direct relationship between sender and receiver is established by this type of communication system. In Bangladesh, the idea of internet ads is embraced by a range of firms, including telecom operators. And our study explored the attitude of contemporary consumers in Bangladesh toward mobile advertising. The study's beauty was that it addressed all the aspects of the impacts caused by SMS ads. It also checked the clear effect of content, frustration, reputation and advertisement opportunities on customer attitude. The material, style and arrangement of mobile ads must be correct to get the approval of mobile advertisement to the target market or user. Mobile advertising is based on modern, sophisticated internet technologies, where SMS is the cost-effective promotion of text messages. The sending and receiving of text messages are also simple as the no. of cell phone users are growing each day. Promotional communications through SMS touched a market as much as practicable. Advertisers may use the SMS advertisement services offered by a mobile advertising agency to connect at the best time with their target market. And thus with an effective interaction between the customers and the companies sending SMS ads will help develop a functional marketing campaign.

Author Contributions: Conceptualization, D.M.N.-A.Y. and M.A.R.; Data curation, S.S.A.W. and P.B.; Formal analysis, S.A.M. and K.F.S.; Investigation, D.M.N.-A.Y. and T.H.; Methodology, T.A., S.A.M., T.H. and S.S.A.W.; Project administration, D.M.N.-A.Y., T.H. and P.B.; Resources, D.M.N.-A.Y., and T.H.; Supervision, S.A.M., T.H. .; Validation, K.F.S. and K.E.A.; Visualization, S.A.M. and T.H.; Writing—original draft, T.A. and T.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Acknowledgments: The authors are grateful to BTRC, Grameenphone, Robi, Teletalk, Banglalink, Airtel and their consumers for cooperation throughout the research.

Conflicts of Interest: All authors declare no conflict of interest

REFERENCES

- Abdul, R., & Muhammad, A. (2019). Behavior and attitude of the mobile phones users towards SMS advertising: A study in an emerging economy. *World Journal of Advanced Research and Reviews*, 4(1), 025-036.
- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological bulletin*, 82(2), 261.
- Al-Maghrabi, T., & Dennis, C. (2012). The driving factors of continuance online shopping: gender differences in behaviour among students—the case of Saudi Arabia. *International Journal of Business Information Systems*, 9(4), 360-384.
- Almossawi, M. (2014). Effectiveness of SMS advertising (a study of young customers in Bahrain). *Global Journal of Management and Business Research*.
- Aslam, W., Batool, M., & Haq, Z. U. (2016). Attitudes and behaviors of the mobile phones users towards SMS advertising: A study in an emerging economy. *Journal of Management Sciences*, 3(1), 63-80.
- Bakr, Y., Tolba, A., & Meshreki, H. (2019). Drivers of SMS advertising acceptance: a mixed-methods approach. *Journal of Research in Interactive Marketing*.
- Barwise, P., & Strong, C. (2002). Permission-based mobile advertising. *Journal of interactive Marketing*, 16(1), 14-24.
- Beza, E., Reidsma, P., Poortvliet, P. M., Belay, M. M., Bijen, B. S., & Kooistra, L. (2018). Exploring farmers' intentions to adopt mobile Short Message Service (SMS) for citizen science in agriculture. *Computers and Electronics in Agriculture*, 151, 295-310.
- Booyse, C., & Du Plessis, E. (2014). *Curriculum studies: Development, interpretation, plan and practice*. Van Schaik.
- Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. routledge.
- Beatrix Cleff, E. (2007). Privacy issues in mobile advertising. *International Review of Law Computers*

- and Technology, 21(3), 225-236.
- Chang, C. W., & Chen, G. M. (2014). College students' disclosure of location-related information on Facebook. *Computers in human behavior*, 35, 33-38.
- Chin, W. W. (2010). Bootstrap cross-validation indices for PLS path model assessment. In *Handbook of partial least squares* (pp. 83-97). Springer, Berlin, Heidelberg.
- Csikszentmihalyi, M. (2014). Play and intrinsic rewards. In *Flow and the foundations of positive psychology* (pp. 135-153). Springer, Dordrecht.
- Dickinger, A., Haghiri, P., Murphy, J., & Scharl, A. (2004, January). An investigation and conceptual model of SMS marketing. In *37th Annual Hawaii International Conference on System Sciences, 2004. Proceedings of the* (pp. 10-pp). IEEE.
- Drossos, D., Giaglis, G. M., Lekakos, G., Kokkinaki, F., & Stavraki, M. G. (2007). Determinants of effective SMS advertising: An experimental study. *Journal of Interactive advertising*, 7(2), 16-27.
- Ducoffe, R. H. (1996). Advertising value and advertising on the web. *Journal of advertising research*, 36(5), 21-21.
- Eshra, D., & Beshir, N. (2019). Effect of consumer attitude towards sms advertising and demographic features on egyptian consumers buying decision. *Journal of Marketing Management*, 7(2), 70-76.
- Gidofalvi, G., Larsen, H. R., & Pedersen, T. B. (2008). Estimating the capacity of the location-based advertising channel. *International Journal of Mobile Communications*, 6(3), 357-375.
- Julsrud, T. E., & Bakke, J. W. (2017). Trust, friendship, and expertise: the use of email, mobile dialogues, and SMS to develop and sustain social relations in a distributed work group. In *The Reconstruction of Space and Time* (pp. 159-190). Routledge.
- Khalil, I., Rasel, K. A., Kobra, K., Noor, F., & Zayed, N. M. (2020). CUSTOMERS' ATTITUDE TOWARD SMS ADVERTISING: A STRATEGIC ANALYSIS ON MOBILE PHONE OPERATORS IN BANGLADESH. *Academy of Strategic Management Journal*, 19(2), 1-7.
- Kim, G. S., Park, S. B., & Oh, J. (2008). An examination of factors influencing consumer adoption of short message service (SMS). *Psychology & Marketing*, 25(8), 769-786.
- Logan, K. (2017). Attitudes towards in-app advertising: a uses and gratifications perspective. *International Journal of Mobile Communications*, 15(1), 26-48.
- Merisavo, M., Kajalo, S., Karjalainen, 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), 41-50.
- Mishra, S., & Soni, D. (2020). Smishing Detector: A security model to detect smishing through SMS content analysis and URL behavior analysis. *Future Generation Computer Systems*, 108, 803-815.
- Muk, A., & Chung, C. (2015). Applying the technology acceptance model in a two-country study of SMS advertising. *Journal of Business Research*, 68(1), 1-6.
- Okazaki, S., & Barwise, P. (2011). Has the time finally come for the medium of the future?: Research on mobile advertising. *Journal of Advertising Research*, 51(1 50th Anniversary Supplement), 59-71.
- Rajesh, S., Raj, G., Dhuvandranand, S., & Kiran, D. R. (2019). FACTORS INFLUENCING CUSTOMERS' ATTITUDE TOWARDS SMS ADVERTISEMENT: EVIDENCE FROM MAURITIUS. *Studies in Business & Economics*, 14(2).
- Razzaq Abdul, R. and Muhammad, A., (2019). Behavior and attitude of the mobile phones users towards SMS advertising: A study in an emerging economy: *World Journal of Advanced Research and Reviews*, ISSN: 2581-9615, Cross Ref DOI: 10.30574/wjarr
- Rettie, R., Grandcolas, U., & Deakins, B. (2005). Text message advertising: Response rates and branding effects. *Journal of targeting, measurement and analysis for marketing*, 13(4), 304-312.
- Reyck, B. D., & Degraeve, Z. (2003). Broadcast scheduling for mobile advertising. *Operations Research*, 51(4), 509-517.
- Rip, A., & Kemp, R. (1998). Technological change. *Human choice and climate change*, 2(2), 327-399.

- Sabokwigina, D., Malima, G., & Mpogole, H. (2013, May). SMS advertising in Tanzania: Factors affecting consumer attitudes. In *2013 IST-Africa Conference & Exhibition* (pp. 1-9). IEEE.
- Salamah, M. W. (2016). *The intercultural experiences of Saudis in the UK: gender segregation and media Islamophobia*. Nottingham Trent University (United Kingdom).
- Shadkam, M. (2017). Consumer's attitude to receive and response to SMS advertising. *International Journal of Business Information Systems*, 24(1), 69-90.
- Sultan, F., & Rohm, A. J. (2008). How to market to generation m (obile). *MIT Sloan management review*, 49(4), 35.
- Tsang, E. (2014). *Foundations of constraint satisfaction: the classic text*. BoD—Books on Demand.
- Tsang, M. M., Ho, S. C., & Liang, T. P. (2004). Consumer attitudes toward mobile advertising: An empirical study. *International journal of electronic commerce*, 8(3), 65-78.
- Virtanen, V., Bragge, J., & Tuunanen, T. (2005). Barriers for mobile marketing and how to overcome them. *Proceedings of the Hong Kong Mobility Roundtable, Hong Kong*.
- Xu, N., Liu, L. F., Sun, X., Chen, C., Wang, Y., Han, D. D., ...& Yu, B. (2008). Bipolar switching behavior in TiN/ZnO/Pt resistive nonvolatile memory with fast switching and long retention. *Semiconductor science and technology*, 23(7), 075019.
- Yaghoobi, N. M., Bakhshimazdeh, M., & Alikhasi, M. (2014). Providing a framework for development of mobile government using fuzzy Delphi and fuzzy AHP: a case of mobile government in Iran. *International Journal of Business Information Systems*, 16(4), 393-408.
- Zanton, E. (1981) 'Public attitudes toward advertising', in Hunt, K. (ed.), 'Advertising in a New Age', *Proceedings of the Annual Conference for the American Academy of Advertising*, Brigham Young University Press, Provo, pp. 141 – 146.