



Evaluating the Influence of SMS Advertising on Consumer Purchase Intention: A PLS-SEM Approach

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Abstract: Short Message Service (SMS) advertisements through cellular phones play a dominant role in the promotion of any product or service. The current study intends to inspect the effect of SMS advertising on consumer purchase intention using the Stimulus-Organism-Response (SOR) model. The data is gathered from 304 people to examine the consumers' intentions towards SMS advertisements. For this purpose, a close-ended questionnaire survey form is used. Then, Structural Equation Modeling (SEM) is applied for data analysis. The results depict positive and significant associations among the variables. For instance, SMS advertising perceptions have a significant direct impact on SMS advertising value, attitude towards SMS advertising, and purchase intention. Likewise, SMS advertising value and attitude towards SMS advertising foster consumers' intention to purchase products. This implies that SMS advertising has crucial functions even in present times because consumers are influenced to purchase particular products or services due to SMS advertisement. This study is beneficial for marketers as it assists in better decision-making for productive advertising campaigns using mobile phone-based SMS advertising.

Keywords: SMS advertising perception, SMS advertising value, purchase intention, Attitude towards SMS advertising value, SOR framework.

Introduction

The world is quite interrelated in today's time; for instance, the emerging trends of adapting technology have made the communication channel convenient and effective all over the world which facilitates the flow of information between individuals and business operations. The prominent illustration of technology in making a connection between business and consumer is advertising through short message service (SMS), which has played a pivotal role in building purchase intention among consumers. SMS advertising refers to a medium used for sending product and service-related marketing messages to consumers (Al Khasawneh & Shuhaiber, 2013; Tsang et al., 2004). To expand the reach of customers, this type of technology has provided numerous benefits in the context of marketing-based data, emerging trends, recommendations, and preferences among consumers (Sharma et al., 2021; Wang & Genç, 2019).

Previous studies have witnessed that advertising through mobile has great potential to create consumer purchase intention (Noor et al., 2013; Basheer & Ibrahim, 2010; Beneke et al., 2010; Gao et al., 2010; Jayawardhena et al., 2009; Kim et al., 2012; Merisavo et al., 2007). In sharing value-added services with customers, SMS has been considered a beneficial factor (Sharma et al., 2021; Uddin et al., 2019). The advertising attitude of consumers has changed positively when they are approached by advertising in which the information is

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more familiar with their circumstances (Lee et al., 2017; Yang et al., 2013). As technology advanced, it changed over time to enable automation, customization, and integration with other digital marketing platforms. SMS advertising has significant reach and cost-effectiveness, but it also has regulatory issues because it needs opt-in consent and privacy compliance to keep customers' trust. Considering SMS advertising, some studies also inspect the interrelations of consumer attitude with behavioral intention (Sharma et al., 2021; Wang & Genç, 2019). A research paper by Sharma et al. (2021) describes an example that Wang and Sun (2010) proclaiming that attitude towards online advertising may positively affect the online purchase intention of consumers. Last but not least, it was observed that exceeding 90% of the target market read received SMS within an extremely brief time of 15 minutes after sending (Sharma et al. 2021; Bakr et al., 2019). SMS advertising significantly impacts the purchase intention of consumers by adding value, SMS Ads perception, and attitude towards SMS ads.

Ample research has been performed on SMS advertising and purchase intentions. SMS marketing is anticipated to be the utilization of mobile phone services, particularly SMS, which is expected to quickly increase with rising mobile phone penetration and falling tariff costs. Prior research has been done to evaluate customer views concerning SMS advertising, but it is still in its early stages (Phau & Teah, 2009). Numerous elements of SMS advertising have been studied in this field of research, including acceptance (Carroll et al., 2007; Rettie and Brum, 2001), uses and gratifications (Leung and Wei, 2000), interpersonal influences (Muk, 2007), and demographic effects (Okazaki, 2007). SMS usage as an advertising source has gained extensive consideration in current periods. Consequently, limited research has been done to determine the opinions of targeted individuals regarding SMS as a tool for advertising or promotion of products or services. Following Mukattash et al. (2023), the ability to advertisement counters some constraints like mood, advertisement insight, and profile of the targeted consumers. Particularly, people's nature and receiving time of SMS reflect the mood of people, demonstrating a significant impact on SMS advertisements. Additionally, previous studies inferred that advertising attitude brings variations in brand attitude (De Keyzer et al., 2022). However, earlier research (Kim and Han, 2014; Yang et al., 2014) did not corroborate this fact.

The consumer attitude regarding SMS and receipt of SMS advertising has been the subject of several research, however, not all of the research has been carried out in Pakistan. We found that there is a scare of research on SMS advertising, so that, we focus on identifying the connection of SMS advertising with consumer intention because the volume of average buying is increasing every day. According to SMS Marketing Statistics (2012), 86 % of mobile users reported that they send or receive a minimum of one text each week, however regularly it is considerably more. More than 9.6 trillion SMS texts were exchanged in only 2012 alone. 95 % of mobile users (smartphone and non-smartphone users) used cellular SMS services for SMS marketing to engage with their clients. Cellular phone dispersion reached 100% in the year 2010 as the market for mobile communication spread quickly. In 2012, the mobile advertising industry expanded by up to 184%. Thus, it is imperative to analyze whether customers' purchase intention is directed by the value of SMS advertising? Moreover, the perception it holds in the minds of the consumers also holds prominence as to the convincing affirmative attitude and purchase intention of the consumers.

This study would play a vital role in adding a significant part to the research field regarding SMS advertisement in the geographical region of Pakistan. The efficiency of SMS advertising in Pakistan is impacted by a number of contextual factors, such as the high frequency of mobile spam, limited digital literacy, and privacy concerns. Customers' perceptions and values of SMS advertisements are seriously hampered by these problems.

Due to recent problems frequent outages in mobile network services and the rise in unsolicited marketing messages, consumers are becoming more skeptical, which may have an impact on how they feel about SMS advertising and, eventually, their intention to buy. These issues necessitate a better comprehension of how SMS advertisements are viewed in various consumer demographics and geographical areas, especially with regard to trust, relevance, and value. Moreover, limited scholars have delved into the role of SMS advertisement on the attitude and purchase intention of the consumer, particularly through SMS Ad value in Pakistani dynamics. For instance, the impact of SMS advertisement on the purchase intention of Pakistani consumers has been assessed by Shaheen et al. (2017), Hassan et al. (2017), Ali et al. (2023), Khalil et al. (2023), and Raees et al. (2023). However, none of the studies looked at the SMS Ad value for the linkage between SMS Advertising and purchase intention.

As we know the healthy relationship between customers and sellers plays a vital role in every field so SMS service helps to maintain their relationship very effectively because whenever a company or any industry is going to launch a new product or gives a discount offer, they inform via SMS advertising and try to influence their targeted audience to buy their product. SMS advertising is a very smart and convincing way to create awareness in the minds of customers. Therefore; this study explores more about how factors of advertising influence purchasing behavior of customers (general public). The study adds more values as to indicate how these SMS Advertising features affect the ads value and eventually impact the purchase intention of Pakistani consumer. This study is very helpful for the marketing management of the industry in the enhancement of SMS advertising after understanding the consumer intention towards it. Moreover, the present literature is engrossed with use of TPB model on the related topic. However, this study considers S-O-R model for the justification of the specified variables. When examining how external stimuli, such as advertisements, affect customer behavior, the S-O-R model is frequently employed in advertising research. SMS advertisements act as the stimulus in this instance, and the model enables a thorough investigation of the ways in which these advertisements affect the Organism (perception, value, and attitude) before leading to a Response (buy intention). This dynamic is essential to comprehending how SMS advertisements affect customers' decisions to buy. On the contrary, TPB may not be as well suited to capturing the complex stimuli-response relationship that defines advertising and marketing, where emotions, perceptions, and attitudes play a significant role, despite being widely used in understanding behaviors, particularly in contexts like health and intentions to perform specific behaviors.

The rest of the sections of this paper are ordered as chapter 2 discusses the literature review. Chapter 3 discusses methodology, Chapter 4 is based on results, discussion, and conclusion, and at last in Chapter 5 policy implications, limitations, and conclusion are reported.

Literature Review

Theoretical Context

The analysis of this study relies on the stimulus-organism-response (SOR) Framework. The aforesaid framework was proposed by Mehrabian and Russell (1974) and plays a major role in ecological thinking (Chopdar & Balakrishnan, 2020; Sharma et al., 2021).

The applied frameworks elaborate the behavior of an individual by creating emotional and cognitive statements that lead to responses or answers. In this psychological theory, stimulus represents as the statement, organism as an individual, and response as the reactions, effects, and answers. Chen et al. (2019) and Sharma et al. (2021) examine an association

between perception of consumers through SMS advertising and Purchase Intention through S-O-R model.

Sharma et al. (2021) claimed that SOR Framework describes the stimulus as SMS ads perception (PER) from trustworthiness, entertainment, knowledgeability, annoyance, and message significance which generates value of SMS ads and people's attitude on SMS ads (organism) which consequently led to response which is purchase intention (PI). We assess the direct influences of SMS Ads Perception (PER), SMS Ads value (ADV), and attitude of SMS Ads (ATT) over purchase intention (PI).

The SMS ads perception (stimuli) is created by different advertising elements which are trustworthiness, entertainment, knowledgeability, annoyance, and message significance to develop a constructive perception of product/service/brand in consumer's perception. These stimuli can facilitate consumers to develop a positive perception toward purchase intention (Wee et al., 2014 & Sharma et al. 2021). Peng and Kim (2014) used S-O-R model to investigate the consumer's behavior towards online shopping emotional purchases and their repurchase intentions affected by website stimuli.

Another study about the application of S-O-R Framework aims to know the influence of different dimensions of purchase intention for apparel shopping on e-merchandising indications and emotive conditions of Gen-Z (Thomas & Mathew 2018). Laato et al. (2020) utilized S-O-R framework to investigate the unusual behavior of consumers (for instance hoarding toilet paper, and food) during the early period of COVID-19.

Hypotheses Development

Perception regarding SMS Ads and Value of SMS Ads

The degree of entertainment, knowledgeability, and annoyance of an advertisement elucidates the level of an advertisement's value (Ducoffe, 1995). According to many current studies, SMS and cellular advertising are employed to project the scopes of advertising perception (trustworthiness, entertainment, info, annoyance, and message significance) to explore the value of advertisement (Kim & Han, 2014; Aydin & Karamehmet, 2017; Pintado et al., 2017; Lin & Bautista, 2020; Arora & Agarwal, 2019; Bakr et al., 2019; Martins et al., 2019). SMS advertising directly impacts a consumer's mind in many ways. According to previous discussions and research, advertising perception is based on trustworthiness, entertainment, knowledgeability, annoyance, and message significance. These factors create a better perception in a consumer's mind regarding how advertising is useful and relevant to them and create awareness about the product and service through advertising.

One of the other prior research (Aydin & Karamehmet, 2017; Lin & Bautista, 2020; Bakr et al., 2019; Wang & Genç, 2019) inspected and revealed that advertising attributes directly impact on advertising value. According to the discussion and various verifications advertising through SMS effect emphatically in the minds of customers and builds a positive relationship between perceptions regarding SMS Ads and the Value of SMS Ads (Aydin & Karamehmet, 2017; Martins et al., 2019).

H1: SMS advertising positively influences SMS advertising value.

Perception and Attitude of Individuals to SMS Ads

SMS ad perception is formed by five constructs i.e., trustworthiness, entertainment, info, annoyance, and message significance. Many researchers work on SMS mobile advertising and proposed the dimension of advertising perception (trustworthiness, entertainment, info,

annoyance, and message significance) to evaluate the outcome's impact on value (Arora & Agarwal, 2019; Bakr et al., 2019; Martins et al., 2019; Kim & Han, 2014; Lin & Bautista, 2020; Pintado et al., 2017; Aydin & Karamehmet, 2017) and attitude towards SMS advertising (Khasawneh & Shuhaiber, 2018; Wang and Genç, 2019).

Some Relevant research revealed that the attitude toward SMS advertising is influenced positively by trustworthiness (Al Khasawneh & Shuhaiber, 2013). Some other researchers worked on it such as Al Khasawneh and Shuhaiber (2013) concluded that entertainment in SMS advertising perception played a constructive part in influencing the advertising attitude. Customers are more likely to see an SMS advertisement favorably (positive attitude) and be inclined to make purchases if they get it for a product they recently looked for or are interested in (positive perception). Previous Studies revealed that informativeness of the mobile advertising was observed most potential factor in impacting attitudes towards consumer advertisements (Al Khasawneh & Shuhaiber, 2013; Bauer et al., 2005; Ducoffe, 1995; Luong, 2007; Merisavo et al., 2007; Siau & Shen, 2003; Sultan et al., 2009; Tsang et al., 2004; Xu et al., 2008). Annoyance is one of the perceptions of people towards SMS advertising. Previously, Tsang et al. (2004), Al Khasawneh and Shuhaiber (2013), and Salem et al. (2023) confirmed the annoyance impact negatively on attitude toward SMS.

Following Jacoby and Hoyer (1990) and Al Khasawneh and Shuhaiber (2013), messages that are not relevant do not have a clear idea about advertising or are mistakenly incomplete. Despite of this, if advertisers make efforts to message relevancy, then it is considered an important factor in the success of advertising (Al Khasawneh & Shuhaiber, 2013; Taylor et al., 2012). By considering the above discussions, the hypothesis is formulated as under:

H2: SMS Ads perception positively influences attitude towards SMS Ads.

SMS Ads Perception & Purchase Intention

The rapid increment in the use of mobile phones and technology also increases the advertising techniques to enhance consumer's purchase intention. Based on Sharma et al. (2021) and Reibstein et al. (1980) researches, perception performs its role as a sensual skill and it might influence a consumer's behavior to an action that can be required or undesirable. It becomes essential to examine and incorporate it into a complete model of advertising's effect on the purchase intention of consumers. So, as stated by Sharma et al. (2021), purchase intention in consumers is influenced positively by SMS advertising.

The distinctive perspective is that SMS ad perception is created by five constructs i.e.: trustworthiness, entertainment, info, annoyance, and message significance (Sharma et al., 2021). These five perceptions impact differently on the mind of consumers and the intention of purchasing so, the behavior of purchasing may vary from SMS advertising if the message is not properly convey to the consumers. Izquierdo-Yusta et al. (2015) and Okazaki et al. (2007) are evidence that if an advertisement is worthwhile, trustworthy, reliable, and factual, then the consumers respond significantly to the advertisement.

Likewise, when customers are exposed to calming, interesting, and entertaining advertising, they form significant perceptions (Sharma et al., 2021; Chang, 2013), which assists in the development of optimistic attitudes and strongly impacts consumer perceptions regarding advertising value (Choi et al., 2008; Liu et al., 2012; Martins et al., 2019; Pintado et al., 2017; Tseng & Teng, 2016; Amoako et al., 2023).

H3: SMS Ads Perception positively influence purchase intention.

SMS Ads Value and Buying Purpose

Contribution of perceived SMS advertising value for growing the flow of experience because they fully focus on the receiving of messages and neglecting irrelevant thoughts (Hoffman & Novak, 2000).

The preceding literature shows that people use SMS advertising extensively due to its exclusive characteristics, easy-to-target specific pool of customers, and real-time attractive structures (Al-Meshal & Almotairi 2013). So, SMS advertising value directly influences the customers' purchasing intention. However, according to some studies investigating the relationship between advertising value and purchase Intention, consumers show a positive attitude toward services and products when increase in purchase intention. Sharma et al. (2021) and Zeithaml (2000) describe the perceived value of consumers as a full-scale assessment of a product's or service's usability. It is regarded as a subtle distinction between what was acquired and what was delivered (Sharma et al., 2021; Yang & Peterson, 2004). Numerous earlier researches that included advertising value discovered that it had a positive influence on attitudes (Sharma et al., 2021; Aydin & Karamehmet, 2017; Liu et al., 2012; Martins et al., 2019; Pintado et al., 2017) and the purchase intention as well (Sharma et al., 2021; Lin & Bautista, 2020; Martins et al., 2019).

H4: SMS advertising value positively influences purchase intention.

SMS Advertising and Buying Intention Attitude

Noor et al. (2013) claimed that the attitude of consumers to mobile advertising has a noteworthy association with purchase intention of products and services. Bauer et al. (2005); Radder et al. (2010) & Noor et al. (2013) revealed that mobile advertising attitudes sturdily influenced the purchase intention of consumers.

Another study depicted the significant results on attitude towards SMS advertisements increase intention toward purchases of products/ services (Ho Nguyen et al., 2022; Yin et al., 2024). According to Zaremohzzabieh et al. (2021) Zhang et al. (2023) attitude towards advertising is a helpful construct that provides the positive effects on brand attitude and consumer's purchase intention. Therefore, based on the above discussion, a subsequent hypothesis is proposed:

H5: Attitude towards SMS advertising positively influences purchase intention.

Research Methodology

The present study is based on the explanatory method as it emphasizes explaining the features of the study. This study begins with a wide-ranging knowledge and then applies the research as an instrument that could shortly lead to the subjects. This research determines how SMS advertising impacts on purchasing behavior of a customer. Moreover, a quantitative econometric technique permits a researcher to make the population of the study generalized, which is the key downside of a qualitative approach. The aforementioned design is employed in the study is viewed as the most appropriate because it enables a thorough examination of the elements being studied, offering a comprehensive understanding of their connections and underlying mechanisms. This approach works especially well when the purpose is to describe cause-and-effect dynamics, which is essential to the study's goal of understanding how various factors interact in addition to describing the events. Furthermore, the application of a quantitative econometric technique is appropriate for the goal of the

study since it makes it easier to analyze big data sets, enabling statistical testing of hypotheses and objective measurement. As qualitative methods are generally less scalable and more context-specific, this approach is particularly helpful for inducing results to a larger population.

A questionnaire (closed-ended structured questions) was created to collect the data and observe the reaction of consumer purchasing behavior towards SMS advertising. In addition, we apply the convenience non-probability sampling method for garnering the data because it acquires the data from known members of the immediate population. This sampling method is very easy and useful for gathering the required data to conduct the study. Moreover, due to the high response rate, the results can be widespread to the full target population and can be skewed. The sample size of this study is 304 people.

Additionally, the study was carried out with consideration for the ethical issues surrounding the collection of data. Regarding the respondents' confidentiality, there has been no breach. The study ensures respondents' voluntary involvement and informed consent.

Questionnaire and Measurement Instrument

The responses were measured on a 1-to-5-point Likert-type scale format i.e., 1 – Strongly Disagree to 5 – Strongly Agree. All the questions follow the five-point Likert scale response format. Moreover, respondents' information used in the study was kept confidential. The questions of Advertising value have been adopted from Ducoffe (1995) and Liu et al. (2012). The items of Attitude toward SMS advertising have been taken from the study of Wang and Sun (2010). Likewise, items of trustworthiness, entertainment, info, and annoyance have been taken from Liu et al. (2012), Ducoffe (1995), Liu et al. (2012), Wang and Sun (2010). Lastly, questions of message significance have been taken from Tseng and Teng (2016) and Purchase intention from Martins et al. (2019).

Data Analysis

The PLS software: Smart PLS 3.2.3 (Ringle et al., 2014) has been utilized in this study for determining the measurement model and structural model (Hair et al., 2011). A measurement model is used to evaluate the reliability and validity. Whereas, a structural model is used for analysis of the hypothesis (Anderson and Gerbing, 1988).

Demographics

Table 1 displays an analysis of the demographics of the study. It shows the gender and age distribution of respondents. Particularly, frequency of male respondents is 142 and percentage is 46.71% and frequency of female respondents is 162 and percentage is 53.29%. As per the age distribution, the frequency of ages 16 to 26 is 133 and the percentage is 43.75%, the age frequency of 26 to 36 years old respondent is 102 and the percentage is 33.55%, the frequency of 36 to 46 years old respondent is 69 and the percentage is 22.70%.

Table 1 Demographics Details

Items	Frequency	Percentage
Gender		
Male	142	46.71%
Female	162	53.29%
Total	304	100.00%

Age		
16-26 years	133	43.75%
27-36 years	102	33.55%
37-46 years	69	22.70%
Total	304	100.00%

Measurement Model

A measurement model assesses the model's fitness. The model evaluates the construct reliability, individual item reliability, convergent validity, and discriminant validity.

Construct Reliability & Convergent Validity

Table 2 consists of Cronbach’s alpha, composite reliability, and average variance extract (AVE) outcomes. The Cronbach’s alpha and composite reliability values surpass the value of 0.7, thus it reaches the established standard (Straub, 1989). Next, composite reliability values also exceed the standard threshold of 0.7, corroborating the standard of Churchill (1979). Lastly, the average variance extract (AVE) results show that all the values are greater than 0.5 and consequently meet the established standards of Fornell and Larcker (1981). It accesses convergent validity of the research through AVE.

	Items	Loadings	Cronbach’s Alpha	Composite Reliability	Average Variance Extracted
ADV	ADV1	0.831	0.792	0.878	0.707
	ADV2	0.876			
	ADV3	0.845			
ATT	ATT1	0.768	0.821	0.882	0.651
	ATT2	0.817			
	ATT3	0.821			
	ATT4	0.820			
PI	PI1	0.866	0.857	0.913	0.777
	PI2	0.894			
	PI3	0.884			
SMSP	CRE1	0.738	0.820	0.868	0.882
	CRE2	0.737			
	CRE3	0.758			
	CRE4	0.750			
	ENT1	0.793			
	ENT2	0.715			
	ENT3	0.671			
	INF1	0.746			
	INF2	0.702			
	INF3	0.719			
	IRR1	0.884			
MER1	0.771				

Notes: SMSP = SMS Ads perception, ADV=SMS advertising value, ATT=attitude towards SMS ads, PI= purchase intention

Discriminant Validity

Fornell-Larcker Criterion

The correlation coefficient between various variables is confirmed in the table 3. According to Fornell and Larcker (1981), all diagonal values surpasses the non-diagonal values. Hence this table meets their criteria.

	ADV	ATT	PI	SMSP
ADV	0.841			
ATT	0.676	0.807		
PI	0.624	0.749	0.882	
SMSP	0.708	0.703	0.795	0.939

Notes: SMSP = SMS Ads perception, ADV=SMS advertising value, ATT=attitude towards SMS ads, PI= purchase intention

Loadings and Cross Loading

Table 4 presents the result of the loadings and cross-loadings construct of every item. Higher values are loaded in their own construct. The result meets the criteria and standards of (Gefen and Straub, 2005).

	ADV	ATT	PI	SMSP
ADV1	0.831	0.532	0.537	0.562
ADV2	0.876	0.552	0.494	0.596
ADV3	0.845	0.616	0.543	0.626
ATT1	0.496	0.768	0.561	0.608
ATT2	0.551	0.817	0.608	0.701
ATT3	0.547	0.821	0.596	0.666
ATT4	0.583	0.820	0.649	0.676
PI1	0.523	0.606	0.866	0.649
PI2	0.593	0.675	0.894	0.711
PI3	0.535	0.695	0.884	0.738
CRE1	0.504	0.610	0.613	0.738
CRE2	0.511	0.598	0.577	0.737
CRE3	0.618	0.656	0.636	0.758
CRE4	0.527	0.667	0.649	0.750
ENT1	0.406	0.525	0.480	0.793
ENT2	0.483	0.566	0.543	0.715
ENT3	0.489	0.574	0.493	0.671
INF1	0.596	0.616	0.611	0.746
INF2	0.498	0.573	0.548	0.702
INF3	0.565	0.563	0.541	0.719
IRR1	0.151	0.294	0.378	0.884
MER1	0.049	0.216	0.205	0.771

Notes: ADV= advertising value; ATT= attitude towards SMS advertising; PI= purchase intension; CRE= credibility; ENT= entertainment; INF= informative; IRR= irritation; MER= message relevance; SMSP= SMS advertising perception.

Heterotrait-Monotrait Ratio (HTMT)

The result of HTMT is exhibited in Table 5. It shows that all values of HTMT do not exceed the standard value of 0.85 following the criteria of a (Henseler et al., 2015). Now, the structural model can be employed because the measurement model has found convergent and discriminant validity.

	ADV	ATT	PI	SMSP
ADV				
ATT	0.835			
PI	0.756	0.890		
SMSP	0.813	0.850	0.703	

Notes: SMSP = SMS Ads perception, ADV=SMS advertising value, ATT=attitude towards SMS ads, PI= purchase intention

Structural Model

The structural model is utilized for the hypotheses testing. Evaluation of structural model based on regression analysis. In this study, we develop five hypotheses (shown in Table 6) and the result shows that all five are accepted and affect a direct relationship.

Hypothesis	Regression Path	Effect type	β -Coeff	P Values	Remarks
H1	SMSP -> ADV	Direct Effect	0.709	0.000	Accepted
H2	SMSP -> ATT	Direct Effect	0.824	0.000	Accepted
H3	SMSP -> PI	Direct Effect	0.520	0.000	Accepted
H4	ADV -> PI	Direct Effect	0.175	0.026	Accepted
H5	ATT -> PI	Direct Effect	0.271	0.000	Accepted

Notes: SMSP = SMS Ads perception, ADV=SMS advertising value, ATT=attitude towards SMS ads, PI= purchase intention

Discussion

The first hypothesis (SMSP -> ADV) is accepted and expresses the positive and significant linkage between SMS ad perception and SMS ad value ($\beta= 0.709$, $p < 0.05$). As per the study of Sharma et al. (2021), conclusion depicted that SMS advertising perception built with the constructs (i.e., annoyance, message significance, info, entertainment, and trustworthiness) is influenced positively on SMS advertising value which means that relevancy, trustworthiness, info, entertaining and annoyance associated with SMS ads messages can increases the value of advertisement.

The second hypothesis (SMSP -> ATT) reveals the significant and constructive connection between SMS Ad perception (SMSP) and attitude toward SMS advertising (ATT) with ($\beta= 0.824$, $p < 0.05$). A past study (Al Khasawneh & Shuhaiber, 2013) confirms that SMS ads perception influences the attitude towards SMS ads perception positively.

The third hypothesis (H3) is (SMSP -> PI) shows a significant and affirmative relation exists between SMS advertising perception and purchase intention ($\beta= 0.520$, $p < 0.05$). Outcome displays that the perception of SMS advertising which may comprise (annoyance, trustworthiness, entertainment, info, and message significance) positively influences purchasing behavior of consumers. Previous study (Xu et al., 2009) is evident that

the connection between SMS ads perception and purchase intention is positive, but this paper studied the efficacy of text-based advertisement versus multimedia location-based advertisement on consumer's purchase intention. Therefore, the results are explored on two different advertisement channels (SMS and MMS) advertising acts differently on different product types (i.e., apparel and movie tickets). When the construct of SMS ads perception increases significantly then the purchase intention of consumers also increases.

The fourth hypothesis (**ADV -> PI**) reveals a positive and significant connection between advertising value and purchasing intention ($\beta=0.175$, $p < 0.05$). Results align with former studies (Sharma et al., 2021; Lin & Bautista, 2020; Martins et al., 2019) that the SMS Ads Value affects positively on Purchase intention. Therefore, adding value to the advertisement of a product or service will increase the possibility of acquiring the product/service and increase consumer purchasing behavior.

The fifth hypothesis (**ATT -> PI**) shows the important connection between attitudes towards SMS ads and purchase intention. Results conclude that the attitude and purchase intention are positively related to each other. The results are supported by (Sharma et al., 2021) and the findings reveal that the SMS advertising attitude influences consumers' purchase intention. Hence purchasing behavior will increase when the consumer builds an optimistic attitude towards SMS advertising.

Conclusion & Recommendations

Conclusion

This study focuses on investigating the impact of SMS Advertising on Consumer Purchase Intention using SOR framework. We find a significant influence of SMS Advertising over consumer purchase intention. This research is limited as we analyzed results only from the perspective of those who belong to Karachi and the target respondents of this study are those who use cellular phones and SMS message services, we have created a questionnaire survey form which is based on (closed-ended questions) and collect data from 304 peoples to observe the reaction of consumer purchasing behavior towards SMS advertising. The study hypothesis proposed that advertising value, attitude towards SMS advertising, and SMS advertising perception have a direct effect on purchase intention. Moreover, SMS advertising perception which may include (annoyance, entertainment, trustworthiness, message significance, and info) also directly influences SMS advertising value and attitude towards SMS ads and these variables are also supported by each other. This study is very helpful for the marketing management of the industry in the enhancement of SMS advertising. Also, benefit from forecasting better decision-making for productive advertising campaigns using mobile phone-based SMS service advertising.

Managerial Implications

Our research has numerous managerial implications that can be utilized in order to design their marketing strategies. As compared to other marketing strategies, SMS advertising is a very easily accessible and cost-effective way of marketing. In this research, we focus on a few variables that impact SMS Advertising and the purchase intention of consumers and results depicted that all variables are significant. SMS Ad perception and SMS Ad value are positively related to each other, which means marketers have to build positive SMS ad perception in order to increase ad value. The message in the SMS advertising should be relevant and accurate, as well as reliable information needs to be provided. Based on the findings, SMS advertising must be interesting, entertaining, and trustworthy so consumers

have a higher probability of responding optimistically. Moreover, ensures that customers really would not feel bombarded with advertisements frequently or irregularly which can irritate them. The greater perception of SMS ads eventually led to a higher SMS ad value. As per Thomas and Mathew (2018) study, in this digital age, marketers have to find factors that can work optimistically for their SMS Ad campaigns in order to draw customers' attention and raise purchases. The results revealed that SMS Ad value boosts the purchase intention among consumers therefore marketers have to focus on customer satisfaction. SMS ad value might be increased by understanding consumers' unfulfilled demands and requirements. Advertisers have to grasp these requirements and try to connect with the advertisement so it can increase the value of the advertisement and have a higher probability of increased purchase intention. Ultimately, SMS Ad perception can strongly influence the attitude of consumers towards SMS Advertising and impact purchase intention consequentially. Likewise, if all the five constructs of SMS ad perception (trustworthiness, entertainment, info, annoyance, message importance) are significant then is more probable to obtain an affirmative influence on the attitude of consumers toward advertising, and purchase intention. Hence, while structuring their marketing tactics, our findings recommend marketers that they must concentrate on strengthening SMS ad perception and value creation to create a highly favorable attitude among consumers about SMS advertising.

Future Recommendation

The results may differ from place to place because consumers have different buying behaviors that are frequently influenced by the environment, they are living in. The researchers should conduct this research in additional cities in the future because all of the respondents in this study live in Karachi. This study examined several variables, including SMS ad perception, SMS ad value, attitude toward SMS ads, and purchase intention to better understand how SMS advertising affects consumer purchase intention. However, there are still additional variables that should have an impact on consumer purchase intention like the content of SMS advertising in a variety of other ways. Since we have just conducted quantitative research, they can also work on qualitative research projects like interviews, observations, and open-ended questionnaires. We have done this research in the general context of in future researcher should target particular industries to get more accuracy in their results.

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