Perceived Usefulness of Mobile and Mobile Advertising: Understanding Relationship through Structural Approach

Marium Mateen Khan[1], Noman Mahmood[2] and Tariq Jalees[3]

Abstract

Objective of this research paper is to understand if mobile and mobile advertising is perceived to be useful by the consumers in the persuasive communication process. Usage of mobile devices and mobile advertising by marketers and advertisers alike is increasing to reach out to their respective target audiences (Jung, Sung, & Wei-Na, 2013). Questionnaires were distributed online amongst the respondents using Google forms. Validity and reliability of the adopted scales were ascertained. Descriptive analysis was done to establish the normality of the data and correlation analysis was carried out to depict the uniqueness and distinguishability of the construct. To reach to final conclusions about the research objective data was analyzed using Structural Equation Modeling (SEM). The results show that user friendliness creates consumer perception about the mobile and mobile advertising as being useful for the consumer. While the other hypothesis regarding operational ease and consumer perception was rejected.

Keywords: Perceived Usefulness, Mobile Advertising, User Friendliness, Operational Ease, SMS Advertising

1. Introduction

Marketers' interests of using mobile devices to break through the advertising clutter are increasing, the study of consumer acceptance of mobile advertising is in its infancy. Although research on mobile advertising has been initiated recently (e.g., Barwise and Strong 2002; Muk 2007; Okazaki, Katsukura, and Nishiyama 2007; Tsang, Ho, and Liang 2004), work in this area is fairly limited and little progress has been made in understanding how the consumer accepts mobile advertising.

Mobile penetration rate is continuously increasing worldwide and Pakistan is no exception. According to PTA, (2016), the teledensity for May 2016 was 71.16%, while the total annual subscribers for five major cellular networks were 133,477,666. As of July 2015, there are 14.6 million 3G and 4G users in Pakistan (Baloch, 2015). Hence increasing the base of individuals at whom mobile advertising can be targeted at. Mobile advertising is a mode of advertising in which advertisements are floated amongst the consumers through SMS (Yang, 2007). A smart phone is a hand held device that typically has an operating system and a touch screen and is able to perform many of the functions performed by a computer such as use of internet for sending and receiving files, to check, send and receive emails along with other multimedia items etc. (Oxford Dictionary, 2016). 77% of the smart phone users fall in the age group of 21 to 30 years of age (Pakistan Advertisers Society, 2014). The increasing accessibility and penetration of cellular devices throughout the country has provided a new platform to the marketers to communicate their messages to a wider audience using interactive means such as mobile advertising. Hence there is a crucial need to understand the dynamics of mobile advertising in order to gauge its effectiveness for the marketers and its value for the consumers for whom the message is intended for (Jung et al., 2013).

According to the statistics of Pakistan Advertisers Society, (2014) smart phones' popularity is increasing which has provided the marketers with an opportunity to capitalize on it through the use of effective advertising and marketing campaigns. Jung et al., (2013) gave reasons for the use of mobile/smartphone as a medium to convey the messages to the consumers by saying that firstly, mobile phone is always near the owner and owners are frequently checking their mobile phones for messages, calls etc. secondly the growing accessibility of the internet has also enabled the consumers to download different applications on the go, hence increasing consumer exposure of brands and lastly, due to GPS (Global Positioning System), location based advertising has become a possibility for the advertising to target relevant and personalized messages to the target consumers.

[1] PhD Scholar & Marketing Faculty, Institute of Business Management, marium.mateen@iobm.edu.pk
[2] PhD Scholar & Entrepreneurship Faculty, Institute of Business Management, noman.mehmood@iobm.edu.pk
[3] Associate Professor & HoD Marketing, PAF-KIET, tariqj@pafkiet.edu.pk

The mobile phone penetration, users of mobile phone falling in the age group of 21-30 and the potential benefits of using mobile advertising for the marketers are apparent from the above literature, however, the researches done on mobile phone advertising and its adoption are limited and even in those researches the acceptability rate of mobile advertising is observed to be low, and consumers' attitude towards mobile advertising is observed to be negative as a whole (Jung et al., 2013). This research focuses on finding out the consumer attitude towards mobile advertising in the Pakistani context and how the attitude of Pakistani consumers is different or similar to the consumers in other parts of the world.

Objective of this research paper is to understand if mobile and mobile advertising is perceived to be useful by the consumers in the persuasive communication process. Usage of mobile devices and mobile advertising by marketers and advertisers alike is increasing to reach out to their respective target audiences (Jung et al., 2013).

2. Literature Review

2.1 User Friendliness

Ünal, Ercis, & Keser, (2011), in their study found that attitudes towards mobile advertisements become positive if the intended advertisements are user friendly, informative, reliable, entertaining, sent to the consumers after getting permission and are personalized according to the consumer's likings. On the other hand the attitude turns negative towards the advertisements if the advertisements lack user friendliness; in such cases consumers perceive advertisements as irritating, uninformative and lacking to provide any value to the consumer. Furthermore, they suggested that the advertisements should provide the consumers with incentives in order to grab their attention and to convert their negative attitude to a positive attitude, hence increasing purchase intention. Similarly, Tsang, Ho, & Liang, (2004), observed that consumers' attitude and acceptance of mobile advertisement is negative if prior consent has not been obtained from them by the marketers.

Xu, (2006), identified three factors that affect consumer attitudes towards mobile advertising. Those factors include: credibility, personalization and entertainment. Similarly, consumer attitudes and consumer intentions have a direct relation with each other. Consumer attitude becomes favorable towards mobile advertisements if the messages being sent to them are personalized. Furthermore, the three factors identified can be summed up into a single category of user friendly device/features.

Acceptance of mobile advertising and perceived usefulness is also dependent upon cultural aspects. Muk, (2007), in his study analyzed the cultural differences and mobile advertisement acceptance between the American and Taiwanese consumers. It was observed in his study that the American consumers' acceptance of mobile advertisements is solely based on attitudinal considerations while Taiwanese consumers' acceptance for mobile advertisements is majorly affected by social norms with attitudinal factors as a part as well.

2.2 Perceived Usefulness

Perceived usefulness was defined by Davis, (1989) as the degree, level or extent to which, a person believes that through the use of a particular device or system his or her job performance will be improved. On the other hand, perceived ease of use, was defined as a person's belief regarding the degree, level, or extent to which using a particular system or device would require minimum effort or will be free of effort.

Wright, (1975) explained that when consumers have to make a decision they most often base it on cost vs. benefit analysis. This form of analysis was done in the time when internet was not available (Shanmugam, Savarimuthu, & Wen, 2014). Kim, Chan, & Gupta, (2007) analyzed that consumers go through a cognitive and affective evaluation process while considering the purchase of a product and is called as hedonistic benefits. According to Lee, (2009) consumer's intention to use a certain aspect, feature or service is directly proportional to his perceived benefit and usefulness for him. Similarly, in Laforet & Li, (2005) opinion a barrier comes in the adoption of an activity if a consumer perceives that a product or service's lacks usefulness or benefit for him.

According to Wu & Wang, (2005) in case of mobile commerce consumers' perceived usefulness of mobile devices resulted in their attitude being favorable towards the device and influenced acceptance. If

consumers perceive that the mobile devices are providing them with relevant information then their attitude and acceptability towards that device and technology increases.

2.3 Operational Ease (Relative Advantage)

Rogers, (2003) defined relative advantage as the degree, level or extent, an innovation (idea, product or service) is seen and perceived as better by the consumers in comparison to an earlier innovative idea. Rogers, (2003) further says that, when we talk about mobile advertising, the importance and significance of relative advantages can be explained through many incentive based campaigns along with advanced technological features of the mobile phones used by the marketers and advertisers.

Awareness of location through GPS along with new advanced technological features including multimedia, application downloads, email sending and receiving etc. are also included in the relative advantage and are different from financial rewards being provided to the consumers. The different features of the mobile phone provide these devices with an ability which enables consumers and advertisers both to send and receive relevant messages. Advertisers through location tracking can send geographically relevant messages to consumers present in a certain locality; provide them with nearest store locations using maps etc. (Wu & Wang, 2005).

2.4 Control Over Device (Mobility/Convenience)

For mobile phone users three aspects hold quite high significance, namely; mobility, immediacy, and instrumentality. Mobility is defined as the elimination of the need to line up or carry change (coins for inserting in public phones), crediting this elimination to the use of mobile phones, immediacy defined as immediate or on the spot access to mobile phone regardless of the users' location, lastly instrumentality is defined as the use of mobile phone for different transactions for business purpose, e.g. buying something online from an E-commerce website, or paying utility bills, submitting fees using ones mobile phone (Leung & Wei, 2000).

Advantages of mobile advertising were suggested by Michael & Salter, (2006), they categorized SMS (Short Message Service) advertising as an important tool of communication for the advertisers. They were of the opinion that mobile advertising provides the consumers with convenience of being able to see and read advertising messages at any time and place. They gave an example of receiving a message while an individual is in a meeting, or if the mobile phone is turned off at any time of the day. The SMS sent by the advertisers can be received by the consumer after the mobile phone has been turned on and the consumer can see that message at his/her convenience.

Most significant advantage a mobile phone provides its users with, is of mobility and convenience. Mobile devices are small, light in weight and can be carried anywhere. Furthermore, the consumers can receive or use mobile advertising at any place at any given time. They can redeem the coupons and offers by the advertisers at any time, since the coupon is stored in their mobile phones (Leung & Wei, 2000).

2.5 Easy Features

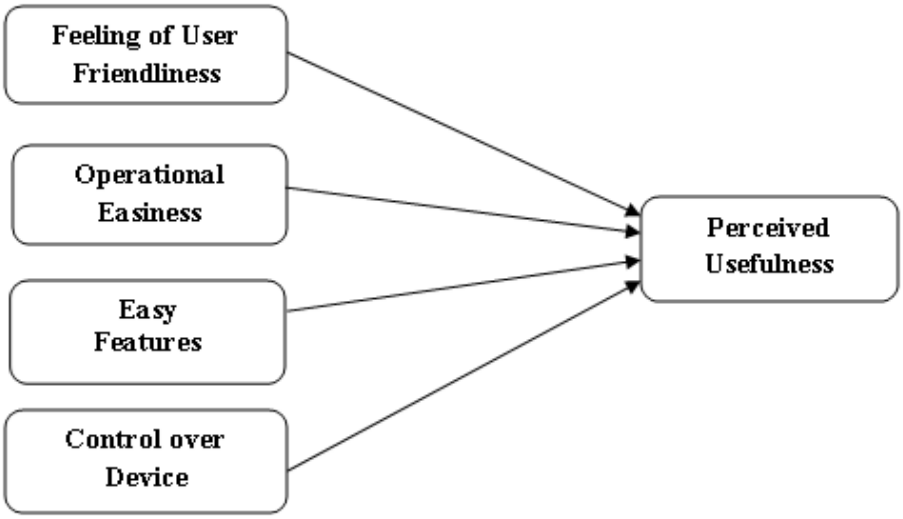
Features including; Multimedia Messaging Service (MMS) and Short Messaging Service (SMS) are now widely being used by marketers and advertisers to communicate with the consumers. MMS is similar to SMS, however the difference between the two lies in the form of content supported by them. SMS supports text messages while MMS supports photos, audios, videos and graphics primarily. The two messaging forms differ in their average size as well; MMS are much larger in comparison to SMS messages. The size difference is primarily due to the dynamic nature of the content sent through MMS services. Thus the advertisers are provided with an opportunity to enhance consumer experience using the additional tools by the MMS. Advertisers can provide consumers with ringtones, songs, video clips or wallpapers related to a brand or of a celebrity endorser of a brand through MMS (Michael & Salter, 2006). MMS can also be used as an interactive medium of communication between the consumer and the advertiser, enabled through the presence of cameras in almost all the mobile phone. Advertisers can start a campaign in which the consumer can employ multimedia features and service of their mobile phones to win coupons of their favorite brands. Such campaigns also play a role in word of mouth marketing of a brand. According to Stroud, (2006) MMS and SMS services are more appealing to the young consumers who want quick specialized information within their reach at any given time of the day. Advertisers and

marketers can use specialized advertising messages to communicate their campaign messages to the younger audience.

Increased usage of multimedia is observed in Asia and Europe for marketing and advertising campaigns (Kim & Jun, 2008). Tsang et al., (2004) found that consumers prefer entertainment and it can be used to convert consumer attitude favorable towards mobile advertising. Furthermore, they found that consumer's attitude is strongly affected by the form rather than the content of the message while the consumer is considering adopting mobile advertising. They give credit to the developing technologies that have given rise towards the development of multimedia services including video clips, games, moving images (GIFS) etc. to make the messages sent to the consumers more attractive.

3. Conceptual Framework

Figure 1: Conceptual Framework



Proposed Conceptual Framework

3.1 User Friendliness and Perceived Usefulness

When devices are perceived to be less difficult to handle and use, the adoption of innovation increases and consumer perceives the device to be useful having values (Rogers, 2003). Consumers' perception about the usefulness of a technology is one of the predictors of consumer attitude towards a certain technology. Furthermore, if that technology is perceived as easy to use and providing value to the users without much effort, then consumer attitude turns to favorable towards that technology (Davis, 1989).

3.2 Operational Use (Relative Advantage) and Perceived Usefulness

Those consumers who agree to receive advertisements on their mobiles can receive an incentive from the marketers and advertisers in the form of subsidized rates for mobile services like internet, text messages, call rates, ring tones, application downloads, directory assistance, GPS, maps along with mobile coupons for various brands being advertised through mobile advertising. Researches done in the past have also revealed that incentive based mobile advertising is more effective and has a significant impact on converting consumers' negative attitude to favorable attitude towards mobile advertising (Jung et al., 2013).

3.3 Control over Device (Mobility) and Perceived Usefulness

Mobile phones provide its users with real time product information immediately regardless of users' location and time, this ease of information access at any time and place falls under the category of mobility and convenience, hence mobility and convenience also play a significant role in shaping consumer attitude towards mobile advertising and its acceptance (Jun & Lee, 2007).

3.4 Easy Features and Perceived Usefulness

Oh & Xu, (2003) observed that more favorable attitudes are created amongst the consumers through the use of easy features that include location based multimedia and text advertising messages. It also increases the probability of reuse of mobile advertising again by the consumers. They also found empirical evidence that showed significant impact on consumer purchase behavior through the use of multimedia.

3.5 Hypotheses

H_1: Feeling of user friendliness (FU) has a positive effect on perceived usefulness
H_2: Operational Ease (OE) has a positive effect on perceived usefulness
H_3: Easy Features (EF) has a positive effect on perceived usefulness
H_4: Control over device (COD) has a positive effect on perceived usefulness

4. Methodology

4.1 Sampling Technique and Sample Size

The data was collect from smart phone users. Convenience sampling was used to collect the data. Questionnaire was made on Google Forms and was circulated through social media amongst the respondents. Based upon the conceptual model of our study, the required sample size was of 109 respondents.

4.2 Sample Size Justification

The sample size of 109 was selected for this research having an Effect Size *w* = 0.35, α err prob = 0.05, Power (1 – β) = 0.88, Df = 3, Actual Power = 0.88024 was calculated using G*Power software under the χ^2 – Goodness-of-Fit test, which suffices the medium statistical power standards provided by Cohen, (1988). This sample is sufficient to conduct structural equation modeling (SEM) for regression analysis as it suffices the medium range for sample size requirement for linear multiple regression analysis (Cohen, 1988; Cunningham & McCrum-Gardner, 2007).

4.3 Post Hoc Test Justification

After the Goodness-of-Fit model fitting, a post hoc analysis under the χ^2 Goodness-of-Fit test on G*Power was computed on the collected sample of 112 (Effect Size w = 0.35, under the χ^2 Goodness-of-Fit test, Df = 1), that gave the statistical power (1-β err prob) = 0.9594281, which surpasses the large statistical power standards provided by Cohen, (1988). A separate post hoc analysis was also conducted under F-test, linear multiple regress: Fixed model, R^2 deviation from zero, in G*Power software on the basis of squared multiple correlation = 0.29 (derived from AMOS through applying SEM calculation) that gave statistical power = 0.9999929, based on the sample of 112 (having Effect Size w = 0.4084507, α = err prob = 0.05, Predictors = 2), which suffices the large statistical power standards provided by (Cohen, 1988). After the post hoc test was conducted two variables were dropped to achieve goodness of the model.

4.4 Statistica Justification

Based upon the conceptual model of the study, the required sample size of 109 (Effect Size w = 0.35, α err prob = 0.05, Power (1-β err prob = 0.88, Df = 3, Actual Power = 0.8802422) was computed on G*Power software under the χ^2 Goodness-of-Fit test, which suffices the medium statistical power standards provided by Cohen, (1988). This sample is also sufficient to carry out structural equation modelling (SEM) for regression analysis as it suffices the medium limit for sample size requirement for linear multiple regression analysis provided by Cohen, (1988). However, the sample size requirement of 112 (H0: R >= R0, H1: R <= R0, where R is 0.05 (Good fit) and R0 is 0.10 (Poor fit), α err prob = 0.05, Df = 47, Power = 0.8010) was computed on Statsoft Statistica software under Structural Equation Modeling: Sample size calculation, which suffices the model fitting standards provided by Hermida, Luchman, Nicolaides, & Wilcox, (2015) and statistical power standards provided by Cohen, (1988).

Lastly Post hoc power analysis under Statsoft Statistica software under Structural Equation Modeling: Power Calculation was computed on the collected sample of 112 (H1: R <= R0, where R is 0.000 (Good Fit) and R0 is 0.326 (unacceptable fit), α err prob = 0.05, Df = 9) that gave the statistical power (1-β err prob) = 1.000, which surpasses the large statistical power standards provided by Cohen, (1988) and model fitting standards provided by Hermida et al., (2015).

4.5 Scale

The scale used was adopted from Venkatesh & Davis, (2000) study and modified according to our research scope. Reliability and validity was check for the responses received. Cronbach alpha for the complete scale for this study was 0.864 which is good to accept (Leech, Barrett, & Morgan, 2005). Scale was based on 7 point Likert scale.

5. Results and Discussion

5.1 Reliability, Descriptive Analysis and Correlation Matrix

Table No.1: Reliability, Descriptive Analysis and Correlation Matrix (N= 112)

Variable	A	M(SD)	Skew	Kurt	1	2	3	4	5
User Friendliness (IV)	0.70	5.41(1.12)	-0.30	-0.59	-				
Operational Ease (IV)	0.74	5.84(1.10)	-1.20	2.04	0.53	-			
Easy Features (IV)	0.71	5.65(1.22)	-0.93	0.33	0.46	0.58	-		
Control over Device (IV)	0.77	5.25(1.36)	-0.95	0.88	0.44	0.61	0.60	-	
Perception (DV)	0.82	5.31(1.17)	-0.88	0.91	0.43	0.47	0.41	0.43	-

Table 1, shows the normality and reliability of the data. Table-1 also shows the correlation amongst the constructs. Since all the values of skewness and kurtosis fall between the prescribed accepted limit of ± 1.5 (Hair, Black, Babin, & Anderson, 2013), we can say that normal tendency is observed in the data. The reliabilities for all the constructs is above 0.69 which is quite satisfactory (Jalees & Rehman, 2014). Similarly, all the variables show factor loading greater than 0.40 which indicated the existence of convergent validity (Shammout, 2007). Convergent validity was additionally checked using correlation analysis (Hair et al., 2013), which was done by taking the correlation of all the constructs (Jalees & Rehman, 2014). Table – 1 comprises of the summarized results. Results indicate that user friendliness, operational ease, easy features, control over device and perception are positively associated with each other.

5.2 Discriminant Validity

Table No.2: Discriminant Validity

Constructs	UF	OE	EF	CoD	PERC
UF	0.87				
OE	0.53	0.89			
EF	0.46	0.58	0.87		
CoD	0.44	0.61	0.6	0.90	
PERC	0.43	0.47	0.41	0.43	0.81

Table 2 shows that square rate of variance explained (in horizontal line) is greater than square of each pair of correlation indicating that the data fulfill discriminant validity requirements (Hair Jr et al., 2015; Thomas, Silverman, & Nelson, 2015).

5.3 Confirmatory Factor Analysis (CFA)

CFA is used to test the items and factors on theory, hence it is a accepted test for the purpose of testing theories (Hair et al., 2013). Table – 3 shows the summarized results of CFA.

Table No. 3: Individual Model Fit Results after Individual Regression on SEM

	χ^2	χ^2/df	HOELTER	NFI	CFI	GFI	AGFI	IFI	TLI	RMSEA	PCLOSE
CoDIV	4.427	1.476	196 (.05)	0.949	0.982	0.980	0.935	0.983	0.964	0.065	0.328
EFIV	4.789	1.596	182 (.05)	0.933	0.973	0.979	0.931	0.974	0.945	0.073	0.292
OEIV	1.759	0.586	494 (.05)	0.979	0.999	0.992	0.973	0.999	0.999	0.000	0.718
UFIV	0.814	0.271	1066 (.05)	0.991	0.999	0.996	0.988	0.999	0.999	0.000	0.892
Criteria	Low	< 5.0	> 200(.05)	> 0.90	> 0.95	> 0.9	> 0.50	> 0.95	> 0.95	< 0.05	> 0.50

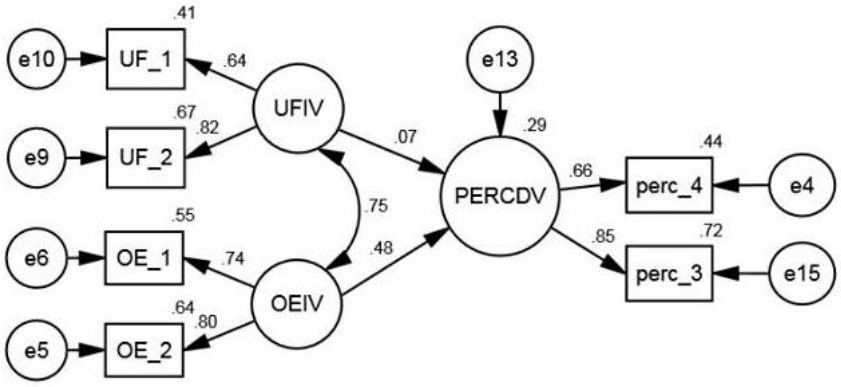
Note: CoD = Control over Device, EF = Easy Features, OE = Operational Ease, UF = User Friendliness, IV = Independent Variable

CoD and EFIV were dropped after individual SEM results because of poor RMSEA, PCLOSE and HOELTER. Overall SEM was conducted with OEIV (operational ease) and UFIV (user friendliness).

5.4 Overall SEM Model

Overall SEM model comprises of two exogenous models including; operational ease and user friendliness and one endogenous model perceived usefulness of mobiles and mobile advertising. Figure – 2 shows the overall SEM model.

Figure 2: Latent Model of Perceived Usefulness of Mobile and Mobile Advertising



In Figure – 2 overall SEM model is shown. For each observed variable, factor loading is at least 0.40, therefore it meets the minimum criteria for factor loading. The standardized residuals for all constructs were below ±2.58 (Hair et al., 2013). Moreover, Goodness-of-Fit indexes are within the prescribed limits. The indexes are discussed in the subsequent paragraph.

The chi-square value (absolute fit indices) was significant (χ^2= 8.247, *df* = 1.62, *p* < .05). The CMIN/df (Relative χ^2/df) was 0.916 < 5. The RMSEA = 0.000 < 0.05, which meets both the absolute of Goodness-of-Fit and badness-of-fit criteria. The HOELTER was 228(0.05) > 200(0.05), NFI = 0.957 > 0.90; CFI = 0.999 > 0.95; GFI = 0.975 > 0.90; AGFI = 0.942 > 0.50; IFI = 0.999 > 0.95; TLI = 0.999 > 0.95 and PCLOSE = 0.701 > 0.50 meet the incremental fit index criteria. The CFA results indicate that the overall exogenous model is a good fit. Table – 3 shows the summarized results of overall model SEM.

Table No. 4: Overall Model Fit Results after Overall Regression on SEM

	χ^2	χ^2/df	HOELTER	NFI	CFI	GFI	AGFI	IFI	TLI	RMSEA	PCLOSE
Overall	8.247	0.916	228 (.05)	0.957	0.999	0.975	0.942	0.999	0.999	0.000	0.701
Criteria	Low	< 5.0	> 200 (.05)	> 0.90	> 0.95	> 0.9	> 0.50	> 0.95	> 0.95	< 0.05	> 0.50

Table No.5: Overall Regression Results on SEM

I-Variable	Relationship	D-Variable	SRW	SE	CR	P (<0.05)	FT Reject/Reject
UFIV	→	PercIV	0.068	.270	0.299	0.765	Reject
OEIV	→	PercIV	0.484	.288	1.990	0.047	FTReject

Table No.9: Correlation Results on SEM

I-Variable	Relationship	I-Variable	ESTIMATE	SE	CR	P (<0.05)	FTReject/Reject
OEIV	↔	UFIV	0.749 (74.9%)	0.088	8.547	0.000	FTReject

OE has a positive effect on perceived usefulness of mobile and mobile advertising and it was accepted having a significance of 0.047 < 0.05. Therefore, the hypothesis; OE has a positive effect was accepted.

The above (Table – 5) discussed SEM model shows that after two variables were dropped, the researchers were left with only two hypotheses based on the remaining three variables. Out of the

remaining two hypotheses only one hypothesis was supported while the other was rejected. The relationship between operational ease (M= 5.84, SD= 1.10) and perceived usefulness (M= 5.31, SD= 1.17) of mobile and mobile advertising was supported (SRW = 0.484, CR = 1.990, p = 0.047 < 0.05). The relationship between user friendliness and perceived usefulness of mobile and mobile advertising was not supported (SWR = 0.068, CR = 0.299, p = 0.765 > 0.05), here the critical ratio is also less than 1.96.

6. Discussion and Conclusion

Consumers have reduced the time they used to spend on traditional media such as watching the television, listening to the radio or reading a newspaper and have shifted their focus away from the traditional medium to the internet. Furthermore the consumers increased their focus on the internet by four fold and on mobile devices by tenfold (Vollmer & Precourt, 2008). Hence, it is not possible for the marketers to capture consumer attention by only using traditional modes of communication. It is becoming more challenging for the marketers to engage their target audience and to convince the consumers to opt for their products and services.

This study has intended to provide an understanding of consumers' perceived usefulness of mobile and mobile advertising. The empirical findings revealed that consumers' perception about Operational Ease has a positive effect on perceived usefulness of mobile and mobile advertising. While the other hypothesis about the relationship between user friendliness and perceived usefulness of mobile and mobile advertising was not supported (Table-5). The results provide a bases that operational ease of a mobile phone facilitates in turning a positive perception of consumers towards mobile advertising.

The results further revealed that the consumers when exposed to push advertising become irritated and tend to avoid those messages. Consumer consider such messages as invasion of personal space and privacy. Hence, the hypothesis about operational ease having a positive effect on consumers' perceived usefulness of mobile and mobile advertising (SRW = 0.484, CR = 1.990, p = 0.047 < 0.05) was supported. Operational ease provides consumers with the ability to use the information provided by the marketers and advertisers on the spot and search for deals regarding the information provided to them by using their smartphones. Furthermore, they can use applications (apps) available to them to block any message that they find unfavorable (Shavitt, Vargas, & Lowrey, 2004).

Marketers and advertisers can attract the consumers by providing them with control over messages that they receive. The consumers are bombarded with so many advertisements and information messages in their daily lives, however the consumers are only eager to receive and view messages that are important and relevant for them on their mobile phones. Therefore, the marketers and advertisers should employ pull marketing strategies instead of push marketing strategies in order to make their messages acceptable for the consumers (Unni & Harmon, 2007). Furthermore, the marketers and advertisers can use pull type mobile advertising campaigns through the use of MMS, Bluetooth, live videos updating on social media using the internet 3G and 4G services to create consumer interactivity with the brands in real time.

6.1 Limitations and Future Research

First limitation for this study was that only smartphone users who were exposed to mobile advertising were taken as sample population. Although, the selected sample population provides accurate information regarding the acceptability of mobile advertising, however it limits the generalizability of this study. Secondly, convenience sampling limits the generalizability of this research study. Thirdly, the data was collected from the young consumers who had past experience of mobile advertising. And lastly, socio-psychological factors were not included in the conceptual framework and can be used in the future research.

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