MARKETING STIMULI AND PURCHASE BEHAVIOR OF CUSTOMERS FOR SMART PHONES: A CLOSER LOOK AT CONSUMER INVOLVEMENT

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A R T I C L E I N F O	A B S T R A C T
Article History: Received: 14 Mar 2020 Revised: 21 May 2020 Accepted: 10 Jul 2020 Available Online: 15 Sep 2020 *Keywords:* Marketing stimuli, Consumer involvement, and Purchase behavior. *JEL Classification:* M31, Z33	The study has used the claims of S-O-R model regarding consumer behavior and investigates the impact of marketing stimuli on purchase behavior of Smartphone users, to add value in the concept; researcher has conceptualized the consumer involvement as a mediator between the relationships. A sample of 318 Smartphone users responded through convenient sampling technique. The findings of the research unfold that marketing stimuli has positive impact on both consumer involvement and purchase behavior. Whereas consumer involvement does mediate the relationship between marketing stimuli and purchase behavior. The major contribution of this research is that it provides deep insight into use of marketing stimuli in studying consumer purchase behavior. Further studies should prioritize the dimensions of marketing stimuli with respect to their impact on consumer involvement and purchase behavior.

1.   INTRODUCTION

Smart phone use has been drastically increased during the past decade, which is not only giving the opportunities to the customers to enjoy this tremendous creation but also allowed businesses to flourish in mobile phone industry. To be competent enough in smartphone industry, one must understand marketing mix elements and what impact they create on customer's purchase intent. In this research the impact of marketing stimuli on consumer's purchase intention is observed whereas, consumer involvement has been considered as a mediating variable. This study is conducted by using Stimulus-Organism-Response (SOR) Model. Smart phones are the combination of vital and essential technologies i.e. email, location tracking, digital camera, digital content, television, music, radio, infrared, Bluetooth, documentation system, social networks, dictionary, encyclopedia and many more (Simplice Asongu, 2015). Mobile phone usage has been increased drastically all around the globe. According to (Alastair Holmes, Angela Byrne, & Jennifer Rowley, 2013), the active mobile phone subscriptions increase the whole world population. Researches in this context perceive that increase in mobile phone usage can lead to mobile phone addiction among the users (Clem Tisdell, 2017).

This increase in smartphone usage is giving new opportunities to the manufacturers and businesses to startup successfully in mobile phone industry (Antonio Ghezzi, Raffaello Balocco, & Andrea Rangone, 2016). The reason behind the purchases of smartphones has increasingly become important topic in both, industrial area as well as in academia. Researches shows that mobile phone companies and retailers will be making a good profit by the end of this year (Giachetti & Marchi, 2017). This research has helped to understand the importance of marketing mix elements like product features, brand name and price, and clarify that how these elements impact consumer's purchase behavior. The factors that influence consumers to make mobile phone purchase are very complex and cannot be measured as a single factor (Ruiz Díaz, 2017a). There are different factors which motivate different consumers and thus it is very important to study combination of inputs to figure out the true measurement. The product features, brand name and price has been taken as the inputs of Stimulus, while Consumer involvement is taken as input of Organism and consumer purchase behavior is taken as input of Response.

2.   LITERATURE REVIEW

2.1   Marketing Stimuli

Marketing stimuli refers to the external marketing elements, having triggering and motivating impact on consumer's purchase behavior. These external marketing elements can be, product, price, processes, people, physical

evidence and promotion, these external factors are the initiatives in the creation or developing the successful businesses, these factors are the most crucial to be discussed and used while developing a new product as these are factors, if handled carefully help businesses to enjoy competitive advantage. Marketing stimuli is the most important and initial step to take into account while marketing a product, it consists of four major elements, those are, product, price, place and promotion (Martin, Javalgi, & Cavusgil, 2017). These four factors combine together make marketing stimuli, usually referred as marketing mix elements. The marketing stimuli can be intrapersonal (within people) or intrapersonal (between people) (Martin et al., 2017). Product features are the attributes of the products that help to attract most of the customers and satisfy their needs and demands, giving them sense of belongingness by owning that product (Kekolahti, Kilkki, Hämmäinen, & Riikonen, 2016). Product features or attributes plays an important role in gaining good value market of that specific product. The brand name is an important element to make a new product successful and competitive (Rubio, Villaseñor, & Yagüe, 2017). In the present study the price is taken as the major dimension of marketing stimuli, this dimension is carried out and its impact and consumer purchase behavior has been observed in the present study.

H$_1$: Marketing stimuli has significant positive impact of on purchase behavior.

2.2 Consumer Involvement

Consumer involvement can be defined as a state of mind that triggers consumer to recognize product/service and make purchase behavior (Joshi & Rahman, 2017). Involvement is the physical and mental effort that consumer experience while making purchase decision, involvement creates an urge within the consumers to think about specific product or service and do cognitive thinking, checking the substitutes before making any purchase behavior. Consumer involvement creates relevance or personal importance within a product. Involvement is highly cognitive in nature, it motivates the consumer to think about, research on product, before making any purchase.

H$_2$: Marketing stimulus has significant positive impact of on consumer involvement.

H$_3$: Consumer involvement has significant positive impact on Purchase behavior.

This research has focus on studying relationship between marketing stimulus and purchase behavior in smartphones, mediated by consumer involvement. Hypotheses have been developed related to marketing stimuli in relation to purchase behavior and consumer involvement.

H$_4$: The relationship between marketing stimuli and purchase behavior is mediated by consumer involvement.

2.3 SOR Model

The present study is the measurement of SOR Model for the smartphone industry. Marketing stimuli will be dealt as (S), in which the external factors that can influence the consumers' purchase behavior will be measured. The external factors for the marketing stimuli that have been taken under consideration in the present study are; product features, brand name and product price. Consumer's involvement is measured as Organism of SOR Model that has been taken as mediating variable in the present study. Consumer purchase behavior is taken as Response that is observed as a dependent variable in the present study.

2.4 Theoretical Framework

The underpinning theoretical framework of this study is framed under SOR Model proposed by Meherban and Russel in 1974. This is a simple model that exhibits, that stimulation and human behavior are linked by an organism component. The functionalities and structures that influence this component are biological (sense organs, nervous system, and physical system) and psychological (learning, motivation, satisfaction, emotion, perception).
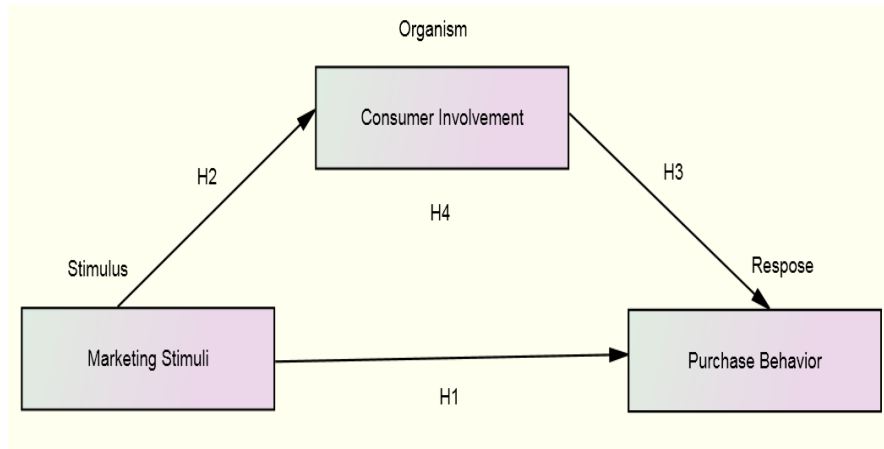
Fig. 1. Theoretical Framework

3. METHODOLOGY

3.1 Research Design

The present research is quantitative in its approach and follows positivism paradigm. The research design of this study is hypothesis testing, type of investigation is correlational and data collected as cross sectional.

Table 1. Sources of Scales

Constructs	Placement of Construct	Source	Total number of Items
Marketing Stimuli a. Brand Name b. Product Feature c. Price	Independent variable	Rio, Vazquez and Iglesias (2001), MARCO Cheong and Park (2005)	13
Consumer Involvement	Mediating variable	Traylor and Joseph (1984)	6
Purchase Behavior	Dependent Variable	Ding Hooi Ting et al. (2011)	6

3.2 Measurements

The instrument utilized for the collection of data is a structured questionnaire that contained structured and close-ended questions. The questionnaire has two different sections. Section 'A' comprising of the demographics such as gender, age, experience, and education. Section 'B' is comprised of the questions. All questions in the questionnaire are adapted from previous studies. The five point likert scale is used. The scale from 1 (strongly disagree) to 5 (strongly agree).

4. RESULTS AND FINDINGS

4.1 Assumptions of Multivariate Analysis

Prior to in depth analysis, data was checked for the assumptions of multivariate analysis i.e. normality, missing values, outliers and multicollinearity. To verify the normality of data, QQ plots of all the variables were drawn and were found to be normally distributed. Moreover, all items in the scale were critically evaluated for Skewness and Kurtosis and were found to be within the acceptable range of -1 to +1 and -2 to +2. In order to check if the data set was free from outliers, a careful examination of frequencies and was performed also plot box technique was used to gauge the outliers, few cases with extreme outliers were deleted from the data. Overall, there were no missing values in the valid responses.
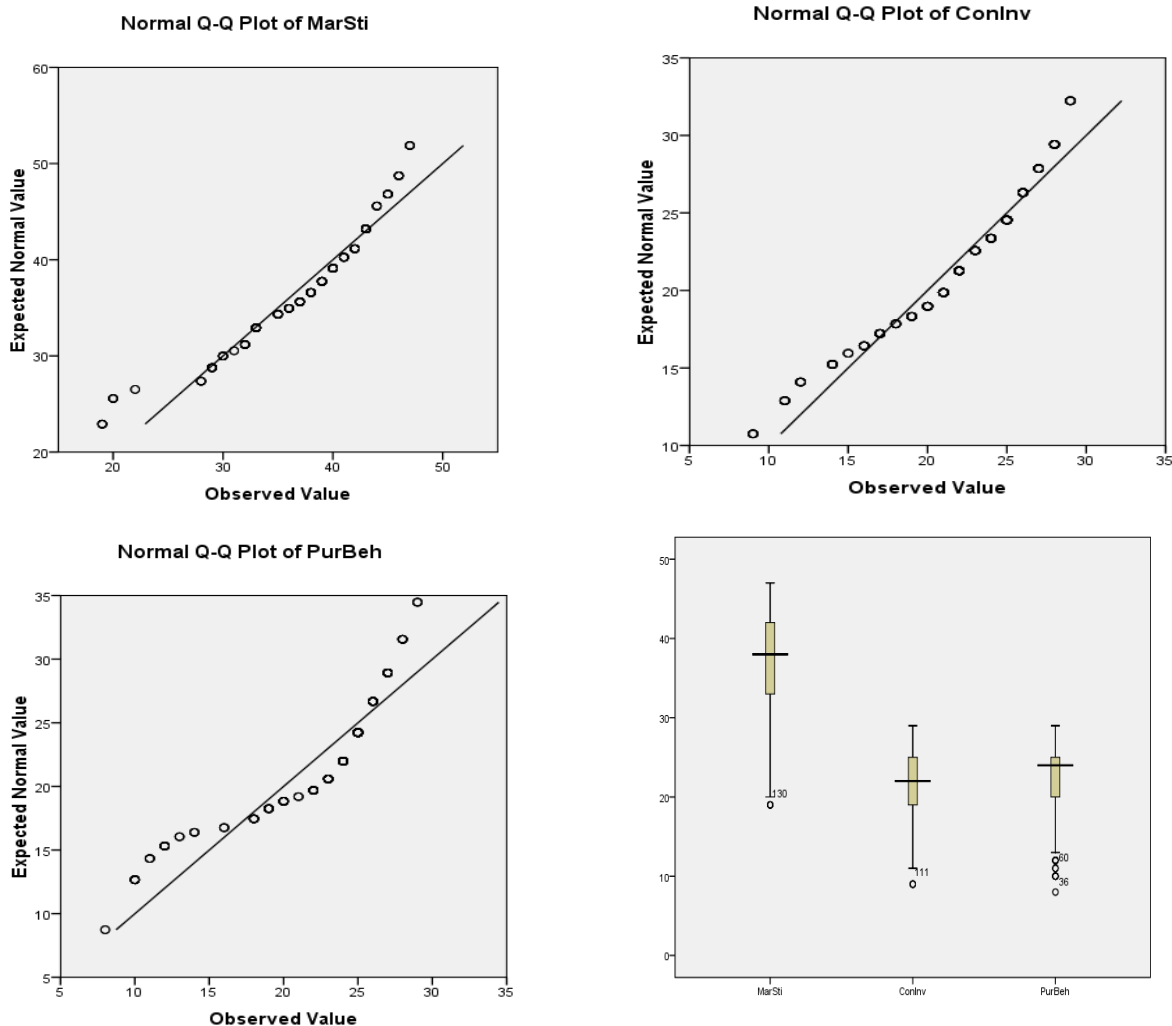
Fig. 2. QQ Plots and Plot Boxes

Correlation has been used to check the multicollinearity of among the constructs. The values of correlation determine the level of relationship among constructs. the value of correlation coefficient ≥ 0.1 shows small correlations, similarly ≥ 0.3 shows medium and a value of 0.5 is considered as large correlation.

In order to check multicollinearity, the variables were subject to the correlation test. Correlation of 0.1 as small, 0.3 as medium and 0.5 as large correlation, the correlations only among the items of the same constructs were large. In view of the above, it can be established that the basic assumptions of the normality were not violated.

Table 2. Interrelations

Constructs	MS	CI	PB
MS	1	.58**	.57**
CI	-	1	.64**
PB	-	-	1

*Notes: Notes: MS= Marketing Stimuli; CI= Consumer Involvement; PB= Purchase Behavior; α = Cronbach's alpha; CR = Composite reliability; NFI = Normed fit index; CFI; ** Correlation significant at 0.01 levels (2-tailed); †√ (AVE) Values in the Diagonal*

Table 2 shows the correlation between variables, correlations help to identify that whether there is any significant relationship between variables or not. As it can be seen in the Table 6 that MS and CI are positively correlated ($r = .58$), MS and PB are positively correlated with each other ($r = .57$), CI is positively correlated with PB ($r = .64$), all correlations are significant at 0.01 level.

4.2 Measurement Model (Measure Validation)

4.2.1 *Reliability and Unidimensionality*

The validation of the items of each latent variable is a mandatory step before analyzing the path model of the study. In 2004, Ping stated that the items should always be unidimensional. They should have only one principal construct. Reliability of the items measures if the items are error free and validity that the items are error free and validity demonstrates that items are measuring what was expected to measure. After the confirming the unidimensionality the CFA of the items was tested using AMOS 20.0.

Table 3. Latent Constructs, Dimensions and Indicators

Name of Constructs	Underlying Dimensions	Name of Parcels	Aggregated Items
Marketing Stimuli (Exogenous variable)	1. Product Features	PF	PF1+PF2+PF3+PF4+PF5
	2. Brand Name	BN	BN1+BN2+BN3+BN4
	3. Product Price	PP	PP1+PP2+PP3+PP4+PP5
Consumer Involvement (Endogenous variable)	None	CI1	CI1+CI2+CI3
		CI2	CI4+CI5+CI6
Purchase Behavior (Endogenous variable)	None	PP1	PP1+PP2+PP3
		PP2	PP4+PP5+PP6

To perform CFA in AMOS a path diagram is necessary to be constructed whether the CFA is being done for individual construct or the nested model (Dastgeer, Rehman, & Rehman, 2012). AMOS can run a variable with a single item but there should be at-least 3 indicators. However for possibility closer to ideal 5 to 7 items were recommended (Reisinger & Mavondo, 2007). Results of the CFA using the sample covariance matrix as an input confirmed that each indicator loaded significantly on its respective underlying concept. Reliability of the constructs was assessed through Cronbach alpha and Composite Reliability (CR) (Fornell & Larcker, 1981). The results as reported show that the Cronbach alpha value and CR of all the latent constructs are more than the recommended value of 0.7.

Table 4. Reliability and Convergent Validity (N=318)

Constructs	Items	Reliability	Convergent Validity	
		Cronbach alpha (α) Coefficients	Normed Fit Indices (NFI)	Factor Loadings (min-max)
MS	13	0.83	0.90	0.50-0.77
CI	6	0.79	0.95	0.73-0.80
PB	6	0.88	0.95	0.84-0.89

Notes: MS= Marketing Stimuli; CI= Consumer Involvement; PB= Purchase Behavior; α = Cronbach's alpha; CR = NFI = Normed fit index; CFI
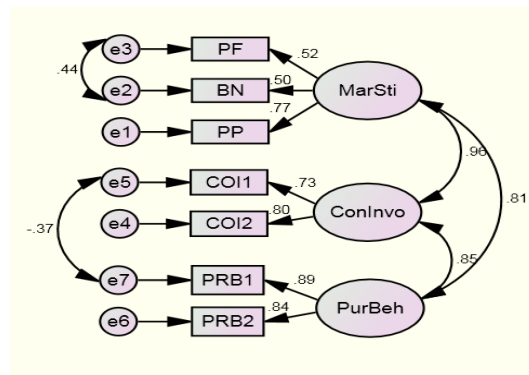

Fig. 4. Nested CFA of Constructs

Convergent validity is identified as the degree to which multiple attempts to measure the same concept are in agreement (Bagozzi & Phillips, 1982). Convergent validity is measured by using three different approaches. The first approach to measure convergent validity, as suggested by (Ahire, Golhar, & Waller, 1996), is to calculate the Bentler–Bonett Normed Fit Index (NFI). NFI values of all the variables were found to be more than 0.94, which is above the threshold of 0.90. The second approach suggests that the variables should have significant factor loadings on their respective latent relationships (Sila & Ebrahimpour, 2005).

Table 5. Nested Confirmatory Factor Analysis Results (N=318)

	Indicators	Initial Fit Indices		Modifications		Final Fit Indices		Factor Loadings
	PF	χ^2	91.30	Items Removed		χ^2	17.88	0.76
	BN	*df*	11	None		*df*	9	0.50
Nested	PP	χ^2 / df	8.30			χ^2 / df	1.98	0.52
Model	CI1	GFI	0.92	Covariance		GFI	0.98	0.72
	CI2	NFI	0.90		MI	NFI	0.98	0.80
	PB1	CFI	0.91	$e_2 \leftrightarrow e_3$	50.11	CFI	0.99	0.89
	PB2	RMSEA	.015	$e_5 \leftrightarrow e_7$	13.55	RMSEA	0.05	0.84

Notes: Notes: *PF= Product Features; BN= Brand Name;; PP= Product Price; CI= Consumer Involvement; PB= Purchase Behavior; χ^2= Chi square; df= degree of freedom; χ^2 / df = Chi square ratio; GFI= Goodness of fit index; NFI = Normed fit index; CFI; RMSEA- Root mean square error approximation*

Table 5 shows the indicators, the square of the construct before modifications was 91.30, degree of freedom 11, the ration of χ^2 and degree of freedom was 8.30, Goodness of fit index is 0.92, Normed fit index 0.90, CFI is 0.91 and RMSEA is 0.15 that is less than 0.5. After modification, there was the 50% of difference due to error; the error was covariate as it has capability of covariate. There were 13.55% of differences due to error 2 that was covariate. The $\chi^{2=}$17.88 was after modification whereas degree of freedom is 9 which are also improved, ratio of χ^2 and degree of freedom is 1.98, GFI is 0.98, NFI 0.98, CFI is 0.99 and the value of RMSEA is 0.05 which is also improved.

4.3 Descriptive of Demographics

In this section of research, results of descriptive analysis, reliability tests results to find out the reliability of data and findings of correlation and regressions are interpreted and concluded.

Table 6. Descriptive of Study Variables (N=318)

Constructs	Min	Max	Mean	SD	Skewness	Kurtosis
MS	21.00	65.00	48.86	8.74	-.73	.28
CI	6.00	30.00	24.41	4.90	-.88	.95
PB	6.00	30.00	24.41	4.90	-1.00	1.88

Notes: *MS= Marketing Stimuli; CI= Consumer Involvement; PB= Purchase Behavior; SD= Standard deviation*

Above table shows minimum, maximum, mean, standard deviation, skewness and kurtosis of the data used in the study. By analyzing mean value it can be interpreted that most of the answers were on positive side. The minimum value shows the minimum response that is 21.00 and maximum value shows the maximum response i.e. 65.00 for marketing stimuli. The mean of marketing stimuli is 48.86 which show that most of the respondents fall in agree zone. SD of marketing stimuli is 8.74. The value of skewness and kurtosis of marketing stimuli came out to be -.73 and .28 respectively. The minimum value shows the minimum response that is 6 and maximum value shows the maximum response i.e. 30 for consumer involvement. The mean of consumer involvement is 24.41 which shows that the response was between agree The SD of consumer involvement is 4.90 shows that most of the responses lies around mean with variation of +ive and –ive 4.90. The value of skewness and kurtosis of consumer involvement came out to be -.88 and .95 respectively.

The minimum value shows the minimum response i.e. 6.00 and maximum value shows the maximum response i.e. 30 for purchase behavior. The mean of purchase behavior is 24.41 and SD is 4.90The value of skewness and kurtosis of purchase behavior came out to be -1 and 1.88 respectively. All values are defined variable values in the term of their aggregate form.

4.4 Hypotheses Testing

4.4.1 Direct Effects

We fitted two structural models (direct and indirect effect models) to test the hypotheses. In order to evaluate the fit of the two structural models numerous goodness-of-fit indices were used as suggested in the SEM literature e.g. (Bentler, 1992); (Hu & Bentler, 1999); (Marsh, Balla, & McDonald, 1988); Ping, 2004; Sila & Ebrahimpour, 2005; (Venkatraman, 1989) such as χ^2 / df; GFI, NFI, CFI, and RMSEA. In direct-effect model we estimated the direct path from MS to PB and CI to PB. In this model, no path stems from MS to CI (mediator variable). In an indirect model, we connected the path between MS to CI, this procedure to test mediation was based on a guidelines provided by (Shrout & Bolger, 2002) for testing mediation in SEM.

Table 7. Results of Structural Equation Analysis for Two Competing Models

The relationships between variables	Direct effect model			Indirect effect model		
	β	S.E		β	S.E	
MS→ CI	Not applicable			0.95***	0.08	Significant
MS→ PB	0.72***	0.09	Significant	0.42	0.56	Insignificant
CI→ PB	0.68***	0.09	Significant	0.40	0.73	Significant
χ^2		227.04			34.00	
Df		12			10	
χ^2 / df ratio		18.92			3	
GFI		0.86			0.97	
NFI		0.77			0.96	
CFI		0.78			0.97	
RSMEA		0.23			0.05	
R² (CI)	Not applicable			0.58		
R² (PB)		0.60			0.67	

*Notes: ***p < 0.001; * *p < 0.05*

We evaluated the direct effect model (without the path from MS to CI) with that indirect effect model (with the path from MS to CI). The direct effect model shows fit indices i.e. $\chi^2 = 227.04$, $df = 12$, $\chi^2 / df = 18.92$, GFI= 0.86, NFI= 0.77, CFI= 0.78 and RMSEA= 0.23. Indirect effect model that includes path from MS to CI (mediating variable) demonstrated fit indices i.e. $\chi^2 = 34.00$, $df = 10$, $\chi^2 / df = 3$, GFI= 0.97, NFI= 0.96, CFI= 0.97 and RMSEA = 0.05 and it suggests improvement in fit indices over the direct effect model. The indirect effect model clearly established the role of CI (mediating variable) in explaining the hypothesized relationships.
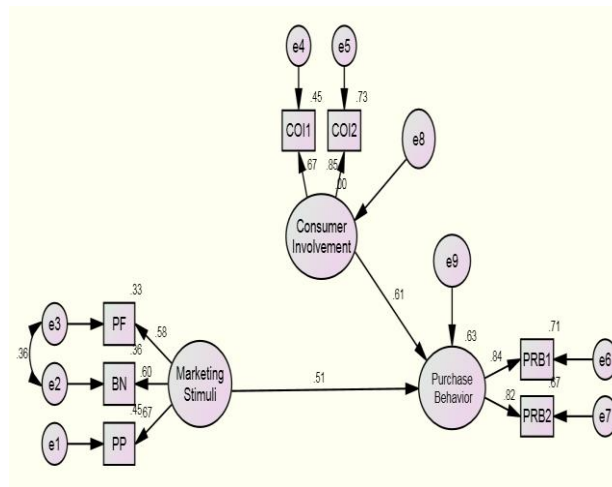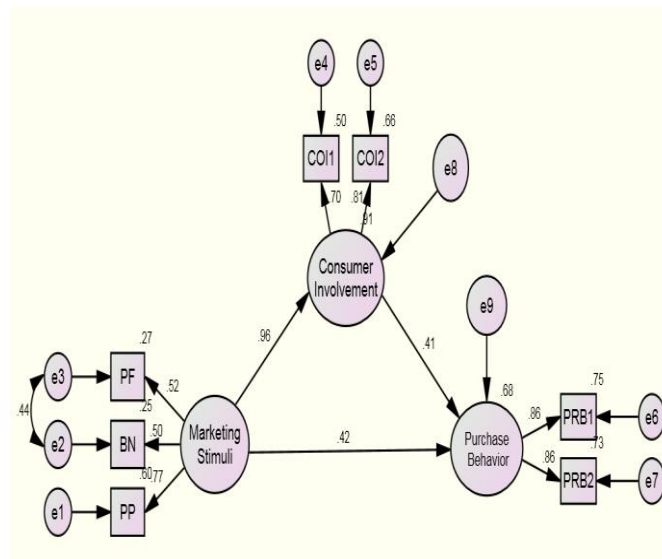

Fig. 5. Direct Effect Model

Fig. 6.   Indirect Effect Model

Table 8.   Recommence of Hypotheses

	Hypotheses	Results
H₁	Marketing stimuli has significant positive impact of on purchase behavior	Accepted
H₂	Marketing stimulus has significant positive impact of on consumer involvement	Accepted
H₃	Consumer involvement has significant positive impact on Purchase behavior	Accepted
H₄	The relationship between marketing stimuli and purchase behavior is mediated by consumer involvement	Accepted

5.   DISCUSSION

In this study, the objective of the study was to observe the impact of marketing stimuli on consumer purchase behavior in smart phone context, and to study the role of consumer involvement that was taken as mediating variable in present study. This study is carried out by using Stimulus Organism Response model that was theorized by Russel and Mehrbain in 1974 and this model has been widely used by researchers to study consumer behavior in order to make contributions among marketing industries as well as in academics. Four hypothesis were postulated, H_1; Marketing stimuli has significant positive impact of on purchase behavior, that indicates the direct relationship between marketing stimuli and purchase behavior was accepted and showed that there is significant effect of marketing stimuli on consumer purchase behavior among mobile phone users in Pakistan. Second hypothesis H_2; Third hypothesis H_3; Consumer involvement has significant positive impact on Purchase behavior. This hypothesis observed the relationship or impact of consumer involvement on consumer purchase behavior of mobile phone.

Fourth hypothesis H_4; The relationship between marketing stimuli and purchase behavior is mediated by consumer involvement. This hypothesis observed the mediating role of consumer involvement between marketing stimuli and consumer purchase behavior, this hypothesis was also accepted in the present study and concluded that the consumer involvement has a significant mediating effect on marketing stimuli and consumer purchase behavior. This study will help the marketers to learn about the marketing mix elements and the role they play to influence customers, marketers will also get to understand that how consumers' perceptions, assumptions and beliefs let them to involve with specific product and then they act accordingly and make certain purchase. Study will also contributes in academics in guiding researchers to learn about marketing stimuli and its impact on consumer purchase behavior and consumer involvement with regard to S-O-R model, so that they will be able to test the study with different variables in different circumstances and with different population.

6.   CONCLUSION

The study intended to measure the impact of Marketing Stimuli on Consumer Purchase behavior with the mediating variable Consumer Involvement. The results show that there was a significant impact of marketing stimuli on consumer purchase behavior and whereas consumer involvement does mediate the relationship between

Independent and Dependent variable. The present study has concluded that there is significant and positive impact of marketing stimuli on consumer purchase behavior and consumer involvement does mediates the relationship between marketing stimuli and purchase behavior. This conclusion has been carried out by measuring variables using SEM technique with the tool Amos and instrument questionnaire. All the results that have been concluded in present study are factual based and tested properly.

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