Influence of Product's Price on Consumers' willingness to Purchase Chinese Mobile Phones: Controlling the Effect of Product Quality & Design

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Abstract

India is a large consumer market of Chinese mobile phones like OnePlus, Xiaomi, Huawei, Vivo Nex, Honor and Oppo. In order to study the market of fast growing Chinese mobile phones, this research has attempted to assess the willingness of Indian consumers to purchase. The researchers have used hierarchical regression technique to assess the strength and direction of relationship between Product Price with consumer's willingness to purchase in presence of product quality and product design. The survey method was used to collect the primary data by using judgemental sampling technique. Total 250 respondents were approached, whereas only 150 questionnaires were found suitable for the study. The result revealed that, in presence of product quality and product design, product price was statistically significant in explaining the variation of dependent variable i.e. consumer willingness to purchase. Finally the study has drawn managerial implications and has suggested the future research directions.

Keywords: Product Price; Consumer willingness to purchase; Product Quality; Product Design; Chinese Mobile.

INTRODUCTION

India is one of the biggest consumer markets for mobile phones. One of the important reasons is large young population. Understanding the

capability of large consumer market, many overseas mobile phones manufacturers are looking Indian market to initiate manufacturing and selling enthusiastically (IDC, 2018). It is interesting to mention that on one side many mobile

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manufacturing companies are waiting to enter India, whereas on the other side existing companies are fighting with each other through better promotional strategies. In recent past huge number of Chinese mobile manufacturing companies have entered Indian market and have started showing their dominance (Wang, 2017). Chinese companies are not only selling their products in India, but are also manufacturing in India (Wang, 2017). They are the mass manufacturer of mobile phones and other products. Chinese mobile manufacturers are focusing on R&D, in order to improve the mobile quality and design. Growing demand is giving them the path for mass manufacturing, which is resulting in reduced price. Chinese companies after understanding the demographic dividend of India have initiated the manufacturing of mobile phones and are providing the employment opportunities to the vast population. Due to tough competition in international market, and the threat of losing the customers, no company is ready to compromise with the product quality, design, and product's price. Hence China is focusing on quality and design through R&D and Price through mass manufacturing, six-sigma and reduction in waste

Earlier researchers have worked empirically on the quality, design, and price of the products, to show the relationship with consumer willingness to purchase. Gupta, & Singh, (2017) have worked on the relationship of product quality and design on consumer willingness to purchase in respect to Xiaomi mobiles. But none of the study was undertaken to check the relationship of product price with consumer purchase willingness to purchase after controlling the effect of product quality and design focusing the study on Chinese mobiles.

It is interesting to mention that China and India shares hatred with each other due to rising economic, political and military dominance in Asia (Akdogan et al., 2012). Every time after the geopolitical issues, the expert comments, if the dispute between both the economies continues for

long, the Chinese mobile phones may lose the market due to animosity. Many Indian and overseas phones are also delivering similar or better quality and design, but their sales is continuously declining in India ("Decline in Smartphone sales", 2018). The decreasing demand of Indian and other overseas phones and increasing demand of Chinese mobile phones drags a question, what is inducing Indian consumers to buy Chinese mobiles? Even after the many disputes between both the nations, Indian consumers are regularly buying Chinese mobile phones. The above explanation explicates the gap existing between actual and expected scenario.

Hence this study aims to assess the Influence of product's price on consumers' willingness to purchase Chinese mobile phones, controlling the effect of product quality & design. The research has drawn the results, that product price significantly Influences the consumer willingness to purchase, while controlling the effect of product quality and product design. Thereafter researcher has drawn the managerial implication for the marketers of India and China.

LITERATURE REVIEW:

1. Product Quality and Consumer willingness to purchase:

Nobody can deny the relationship between Product quality and consumer willingness to purchase. The relationship were found natural (Balabanis, G. and A. Diamantopoulos, 2004). When the consumer is satisfied with the product and gives the satisfactory reaction after using, then it is assumed that the product maintains good quality, if similar views will continue, it will definitely add some value to brand equity. UNIDO, (2006), viewed that the "good quality product has the capacity to meet the customer's needs and desired prospects". Product quality has always been on priority to consumers. Wang and Chen, (2004) found that product quality was important factor to determine the consumer willingness to purchase. They also asserted in their study that product quality positively affected and

explained the significant variation of willingness to purchase. Sarwar et al., (2013) studied Malaysian consumer's perception towards Chinese products. In spite of having hatred towards Chinese products, product quality of Chinese products was found significant in explaining the variation of consumer willingness to purchase. Other studies (Kirmani & Baumgartner, 2000; Khattak et al., 2011; Mostafa, 2010) have also empirically tested the relationship of product quality and consumer willingness to purchase and have shown the positive relationship in between the quality and willingness.

In view of the studies conducted in past based on the variables like product quality and willingness to purchase, focused on other products, made in different countries including China, this study observes the gap and focuses to study the mobile phones of China, hence below mentioned hypotheses is being proposed:

H1: There is a direct and positive relationship between Product quality and Consumer willingness to purchase.

2. Product Design and Consumer willingness to purchase:

Consumers are also attracted towards the products to purchase the mobile phone on the basis of attractive design. Product design is always an important factor of consumer's willingness to purchase. Bloch, (1995) in his research mentioned that the consumers of all the cultures, gets happy after finding an attractive design of the products. Attractive design always attracts them to purchase (Nussbaum, 1998). The design of the product has always been used as a strategic tool to satisfy consumer (Berkowitz, 1987; Nussbaum, 1998). Veryzer, (1993) empirically checked the relationship of design and willingness to purchase and observed that design of particular product does positively Influences the consumer willingness to purchase. The design of product induces the sales and increases the profit margin. Improvement in product

design through R&D increases the consumers' willingness to purchase particular products (Goodrich, 1994; Roy, 1994). Burke and Jones, (2000) studied the influence of product design and packaging on consumer's deliberation to purchase and found that both the independent variables have the significant influence on the willingness to purchase.

In view of the review of literature on the variables like product design and willingness to purchase, centered on products of other category of other nations, the researchers observes the gap and focuses to propose below mentioned hypotheses to study the China made mobile phones:

H2: There is a direct and positive relationship between Product design and Consumer willingness to purchase.

3. Product Price and Consumer willingness to purchase:

Price of a product is always an important variable in developing the will of a customer to purchase. Therefore it has been studied by many researchers on different product categories and phones. Products manufactured in China are 30-35% less in price as compared to products manufactured in any other parts of world; hence they are more influencing in developing consumer willingness to purchase (Engardio, et al., 2004). Understanding the role of price of product in developing the willingness of a consumer to purchase the products, Malaysian firms are using low pricing strategy to gain market share in local market against foreign firms (Noor, 2005). Kukar-Kinney et al., (2012) found in his study that the consumer is not very much interested to purchase the products due to high price. This show that high price has negative relationship with willingness to purchase. Sarwar et al., (2013), have drawn a conclusion through their research that price of products and consumer's preference to purchase Chinese products have a strong and significant relationship. They have argued that the products

imported from China, are cost effective as compared to products manufactured in other parts of the world. Norouzi, and Moghaddasi, (2012) have confirmed that there are several factors which influences the consumer willingness to purchase the Chinese products and the price of the product is one of them.

In observance of the literature, centered on product price and willingness to purchase, it was found that the past researches were focused on some other product category manufactured in other economic boundaries. After reviewing the literature, the researchers observed the gap to consider the proposition and to frame below mentioned hypotheses for study:

H3: There is a direct and positive relationship between Product price and Consumer willingness to purchase.

STATEMENT OF PROBLEM

Chinese mobile phones are dominating the Indian market. It is interesting to mention that China and India shares hatred with each other due to rising economic, political and military dominance in Asia (Akdogan et al., 2012). Despite Indian consumer's massive apprehension towards Chinese products, most of the time, a large number of Indian consumers gets attracted towards Chinese mobile phones. The reasons are product quality, product design, and Product price ("Why Chinese mobile phones are so popular", 2018). The attraction towards Chinese mobile phones is not only limited to few customers, but a huge Indian population is buying, using and are satisfied ("Smartphone sales in India", 2017). Many Indian and overseas phones are also delivering similar or better quality and design in comparison to Chinese mobiles, but their sales is continuously declining in India ("Decline in smartphone sales", 2018). The decreasing demand of Indian and other overseas phones and increasing demand of Chinese phones are raising a question, "what is inducing Indian consumers to buy Chinese

mobiles?" Every time after the geopolitical issue, the experts comments, if the dispute between both the economies will persist and continue, the Chinese mobile phones will lose the market, but despite the disputes with China, Indian consumers are extensively buying Chinese mobile phones. The above explanation explicates the gap existing between actual and expected scenario.

Hence researcher undertakes to work on "influence of Product's Price on Consumers' Willingness to Purchase Chinese Mobile Phones: Controlling the Effect of Product Quality & Design"

RESEARCH METHODOLOGY

The research in consideration is based on descriptive research design. The variables of the study are explored from the existing literature and the behavior of the respondents is observed and described without influencing it in any way by using descriptive research design. The scientific disciplines, especially social science and psychology, uses descriptive research design method to obtain a general overview.

In this research work, researcher has used 4 variables i.e., product quality, product design, product price and consumer willingness to purchase. Consumer willingness to purchase was used as dependent variable and the other three variables were used as the independent variable. The research was aimed to assess the willingness of Varanasi (Hindu holy city of India) consumers to purchase Chinese mobile phones. The consumers, purchased the Chinese mobile phones in past, were considered as the respondents to collect the data for the study. Due to non availability of authentic list of consumers, (sampling frame in this product category) who purchased the Chinese mobile phones is past, the researchers used Non-probability Judgmental sampling technique (Zikmund, Babin, Carr, & Griffin, 2013) to collect the data. The researchers developed and structured the questionnaire containing 12 questions of all four variables in two

segments to collect the data. First segment had two demographic questions (Gender, Age), another segment had total 10 questions. The questionnaire contained the two statements each for Product quality, and Product Design, whereas and Product Price and Consumer willingness to purchase the Chinese mobile phones had three statements each. All the statements were adapted and modified from previous literature as follows, Product quality (Kirmani and Baumgartner, 2000; Murthy et al., 2006; Dawar and Parker, 1994; Gupta & Singh, 2017), Product design (Holbrook, 1980; Bamossy et al., 1983; Hekkert, 1995; Muller, 2001; Belk, 1988; Landon, 1974; Creuson and Schoormans, 2005; Gupta & Singh, 2017), Product Price (Kukar-Kinney et al., 2012; Engardio et al., 2004; Sarwar, et, al., 2013) Consumer willingness to purchase (Bruce and Whitehead, 1988; Ajzen, 1991; Kim and Pysarchik, 2000; Lew and Sulaiman, 2014; Gupta & Singh, 2017). The researchers have used survey method to collect data from the respondents through a questionnaire on seven point likert scale where strongly agree was coded 7, agree was coded 6, some what agree was coded 5, neither agree nor disagree was coded 4, some what disagree was coded 3, disagree was coded 2, whereas strongly disagree was coded 1 (Vagias, 2006).

Researchers had distributed the questionnaire to 230 respondents, but after following the data cleaning process, only 150 questionnaires were found suitable for the study. The 80 questionnaires were rejected due to either half-filled or unengaged responses.

This research work was conducted on the responses received from 150 consumers of Chinese mobile phones. The research has used the hierarchical regression technique to test the statistical relationship between the variables. The hierarchical regression technique requires minimum $(50 + 8k)$ where k = number of independent variables (Green, 1991).

DATA ANALYSIS AND RESULTS

1. Demographic Profile:

150 questionnaires collected from the respondents were analyzed. Out of total 150 respondents, 56.66 % (85) were male, and 43.33 % (65) were female. 70 respondents belonged to a group of 18-25 yrs age group, whereas 50 were from 26-35 yrs age group and 30 were from 36-45 yrs age group.

2. Reliability Analysis:

Researchers had measured the internal consistency of the questionnaire using Cronbach Alpha (α) (Cronbach, 1951). The questionnaire had 10 statements based on the variables considered for the study. The 2 statements were developed for Product Quality and Product Design each, whereas 3 statements for each variable like Product Price and Consumer willingness to purchase were developed. Reliability statistics was applied to assess the internal consistency of each construct.

Table 1: Reliability Statistics

Constructs	Cronbach's Alpha	N of Items
Product Quality	0.964	2
Product Design	0.976	2
Product Price	0.796	3
Consumer Willingness to Purchase	0.835	3

The reliability statistics i.e., internal consistency for each construct was found above the acceptable level i.e., > 0.7 (Nunnally, 1978). On the basis of the results

of reliability statistics (Table 1) the conclusion has been drawn that the value of all construct is showing a good level of internal consistency.

3. Regression Model:

The aim of the research was to assess the Influence of product price on consumers' willingness to purchase the Chinese mobile phones, controlling the effect of product quality & design. It is interesting to mention that the earlier researchers have demonstrated that Product quality and Product design significantly predicts the Consumer willingness to purchase. After finding the gap in existing literature, the

researchers, instead of considering all three variables as independent variables, have controlled the effect of two independent variables, i.e., Product Quality and Product Design and aimed to assess the Influence of Product Price on Consumer willingness to purchase the Chinese mobile Phones. The researchers to assess the Influence have used hierarchical regression technique so as to ensure the actual predictability or contribution through Product price.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.720 ^a	.518	.512	1.292	.518	79.039	2	147	.000
2	.820 ^b	.672	.665	1.070	.154	68.340	1	146	.000

a. Predictors: (Constant), Product Design, Product Quality

b. Predictors: (Constant), Product Design, Product Quality, Product Price

Therefore in Model 1, Product quality and Product Design was used as independent variables and Consumer willingness to purchase as dependent variable. In Model 2, the effect of Product Quality and Product Design were controlled and only the effect of Product Price was measured on consumer willingness to purchase (Table 2).

In Model 1, R² value (Coefficient of determination) was 51.8% using two independent variables (product quality, product design) is predicting the consumer willingness to purchase Chinese mobile phones. In other words, this model explains 51.8% variation of consumer willingness to purchase.

In Model 2, R² value (Coefficient of determination) was 67.2% using two controlled variables (product quality and product design) and one independent variable (product price) in predicting consumer willingness to purchase. In other words, this model explains 67.2% (cumulative) variation of consumer willingness to purchase Chinese mobile phones.

It is attention-grabbing to mention that even after controlling the effect of product quality and product design in model 2; it was found that only product price explains the 15.4% variation of consumer willingness to purchase.

4. Statistical Significance of Model:

The table 3 (ANOVA) represents the overall model fitness for both the models, at significance level 0.000 ($p < 0.01$). At the same time in Model 1, out of total variation i.e. 509.573 of dependent variable, model is explaining 264.038 parts. The independent variables i.e., product quality and product design in Model 1, explains the Influence on willingness to purchase, $F(2, 147) = 79.039$, $p < 0.001$. The researcher have drawn the conclusion that the model is a good fit for the given set of data.

Model 2, out of total variation i.e. 509.573 of dependent variable, is explaining the 342.325 part. In Model 2, the researchers have controlled the

variables like product quality and product design and one independent variable i.e. product price to explain the consumer willingness to purchase, F (3,

146) = 99.611, $p < 0.001$. In conclusion it could be said that the model is a good fit for the given set of data.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	264.038	2	132.019	79.039	.000 ^b
	Residual	245.535	147	1.670		
	Total	509.573	149			
2	Regression	342.325	3	114.108	99.611	.000 ^c
	Residual	167.249	146	1.146		
	Total	509.573	149			

a. Dependent Variable: willingness to purchase

b. Predictors: (Constant), Product Design, Product Quality

c. Predictors: (Constant), Product Design, Product Quality, Product Price

5. Estimated Model:

In Model 1, regression equation predicts consumer willingness to purchase through two independent variables (product quality, product design).

Willingness to purchase = $8.170 + (0.377 * \text{product quality}) + (0.477 * \text{product design}) + \text{error}$. This equation could be used to forecast for the purpose of predictability (Table 4).

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.170	.800		10.214	.000
	Product Quality	.377	.057	.412	6.610	.000
	Product Design	.477	.066	.451	7.238	.000
2	(Constant)	2.302	.971		2.371	.019
	Product Quality	.272	.049	.297	5.556	.000
	Product Design	.348	.057	.328	6.120	.000
	Product Price	.461	.056	.439	8.267	.000

a. Dependent Variable: willingness to purchase

In Model 2, regression equation predicts the consumer willingness to purchase by controlling the two variables (product quality, product design) through one independent variable.

Willingness to purchase = $2.302 + (0.272 * \text{product quality}) + (0.348 * \text{product design}) + (0.461 * \text{product price}) + \text{error}$. This equation could be used to forecast for the purpose of predictability (Table 4).

RESULTS

In both the models, the independent variables were significantly predicting the dependent variable. The Model 1 (Table 4), explains that product quality (Std. Beta = 0.412; $t = 6.610$; $p < 0.001$), and product design (Std. Beta = 0.451; $t = 7.238$; $p < 0.001$) are statistically significant in predicting consumer willingness to purchase (Hair et al., 2010).

The Model 2 (Table 4), explains that product quality (Std. Beta = 0.297; $t = 5.556$; $p < 0.001$), product design (Std. Beta = 0.328; $t = 6.102$; $p < 0.001$), product price (Std. Beta = 0.439; $t = 8.267$; $p < 0.001$) are statistically significant in predicting the consumer willingness to purchase (Hair et al., 2010).

Through the results it can be confirmed that there is a statistical significant relation between product quality and consumer willingness to purchase (H1 approved); product design and consumer willingness to purchase (H2 approved). Whereas by controlling the effect of product quality and product design, the variable product price also stands significant in explaining consumer willingness to purchase (H3 approved).

Hence through findings it could be confirmed that all the variables significantly contributes in explaining the consumer willingness to purchase. But even after controlling the effects of product quality and product design, product price is significantly explaining the variation of consumer willingness to purchase. The researcher through the results are in position to say that higher importance should be given to product price of Chinese mobiles as this will substantially lead to increase in consumer willingness to purchase.

MANAGERIAL IMPLICATIONS

This research work was undertaken to measure the Influence of product price on consumer willingness to purchase. Though many researches were conducted in past but none was focused to assess the

Influence of product price on consumer willingness to purchase the Chinese mobile phones, while controlling the effect of product quality and product design. This research work is an important breakthrough for Chinese manufacturers and Indian marketers as it gives the trend changing implications. The empirically tested work conducted on Chinese mobile phones positively shows the importance of price factor in shaping the consumer willingness to purchase. The price is an important factor in giving the competitive edge to Chinese mobile companies. Other mobile manufacturing companies of the world face the threat from the Chinese manufacturer due to price component. Recently, in an noticeable shift to answer the competitively-priced Chinese Smartphone brands, Samsung has introduced 4 new-fangled Smartphone in Galaxy "A" and "J" series with "Infinity Display" (Bhagabati, 2018). China has truly mastered the skill of reducing the price of super-high-end devices. Fierce rivalry in the Smartphone market has driven down the prices of mobiles to rock bottom. ZTE or Huawei, has hammered the Apple to the Force Touch punch down (Bailey, 2016). Through the literature discussed above, it can be said, though manufacturers of Chinese mobile phones are already having the expertise of using best technology and keeping the price of the product in budget, but as the other companies of the world in order to remain in competition are continuously reducing the price and introducing the new phones in competition, Chinese mobile phone companies may turn into laggard. Hence the Chinese mobile phone companies needs to continually work on reducing down the price of the mobile phones in order to maintain the Indian consumers' willingness to purchase.

Marketers need to understand that product quality and product design are also significantly shaping the mind of consumers. Most of the respondents of this research were mainly youth, i.e., 70 respondents (Age of 18-25); 50 respondents (Age of 26-35) and 30 respondents of (Age of 36-45). India is large country, comprised of mainly youth. Chinese mobile phone manufacturers and marketers must keep in mind

that majority of consumers who intend to purchase mobile phones frequently, are young, and believes to have good quality and design in the best price. On the basis of the characteristics of the consumers of age group 18-25, it can be said that either consumers are dependent on their family or have just started earning. Consumer, either dependent on their family or as the new earner, is price conscious. These consumers have liking for more quality-entertaining features. Product design is always an important consideration of the youth. Hence, it can be suggested that, the Chinese mobile manufacturing companies needs to focus on the quality for all the features mainly entertainment feature and design along with product price in budget in order to develop and maintain the willingness of the young Indian consumers to purchase Chinese mobile phones.

The age group of 26-35 and 36-45, has different characteristics. If focus on the earning trends of the Indian consumers of this age group, then it can be commented that Indian young consumers starts earning at the age of 30 years. The young population of 26-35 yrs age group is in the process of establishing themselves, and moves to lower middle income level from lower income level. At this age they think to establish themselves, hence takes purchase decision as a cognitive consumer. Being the cognitive customer they want better quality and design. Whereas the young population of 36-45 yrs age group have more responsibilities towards their family (children) than before. By this time the expenditure per month increases many-fold. Though the consumers are in transition to move from lower middle income level to upper middle income level, but due to their increasing responsibilities, they remain price conscious and the liking for quality gets strengthened, at the same time their liking for design may reduce due to their engagement in other responsible acts. The avenues for their disposable income keep rising if not at the maximum level. This implicates and substantiates the finding of the study that marketers need to focus more on pricing along with design and quality.

The research study was undertaken in Varanasi, where large number of consumer belongs to either middle class or lower middle class. The sample population, i.e., large consumer base of Varanasi represents India. The character and nature of the young population of India is similar to the young population of Varanasi itself. Therefore the marketer needs to emulate the results of this study not only to Varanasi or other holy cities of India, but to the entire India including tier 1, 2, 3, and 4 cities of India. This recommendation is being given to handle the large young population of India, who represent the middle and lower middle income group. The Chinese mobile phone manufacturing companies are counseled to focus mainly on product price then product design then the product quality.

CONCLUSION

Most of the previous researches demonstrated that product quality, product design, and product price significantly predicts consumer willingness to purchase. This study was aimed to understand, does the product price significantly Influence the consumer willingness to purchase Chinese mobile phones by controlling the effect of product quality, and product design? The results of this study illustrates that product price have significant Influence on consumer willingness to purchase after the controlled effect of product quality and product design. After getting the results, the researchers have drawn the implications for Chinese and Indian managers. The implications were drawn according the likings of the respondents of different age groups. The Chinese mobile manufacturing companies should focus on the quality of the features, mainly entertainment feature and design along with product price in order to develop the willingness of Indian consumers of 18-25 yrs age to purchase Chinese mobile phones. Implicating and substantiating the finding it was suggested to manufacturing companies of Chinese mobile phones, to focus more on product price along with product quality and product design in case of 26-35 yrs age group.

In the sequence of the studies, focused to assess the willingness of the Indian consumers, the product quality and product design variable can be considered as independent variable and willingness to purchase as the dependent variable. Product price can be considered as mediating variable. Research based on same variables can be conducted on Chinese and other country made mobile phones.

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