Product Related Factors Affecting Consumer Online Buying Decision

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ABSTRACT

This research paper attempts to examine product related important issues in the fast growing electronic commerce based business environment and its relationship with consumer online buying decisions. Product related issues will cover huge product assortment offered by E-tail companies along with option of branded products which are not available at every traditional retail stores in marketplace. Quality of product offered by e-tailors and their relationship with consumer online buying will also be a dimension to be assessed in this research paper. This will further include good packing of product to ensure delivery of ordered product in same state as expected by the buyer. Detailed specification of the offered product which helps in easy comparison of product with other similar category products will also be examined under the issues related to product. All above mentioned product related factors will be assessed for their relationship with consumer online buying decision. All these factors will be individually and jointly assessed towards consumer online buying decision with the help of primary data collected for the respective purpose.

Key words : Marketing Mix, e-retailing, consumer buying decision, electronic goods

INTRODUCTION

"Marketing mix tools are classified into four broad groups, called the four Ps of marketing: product, price, place and promotion. In order to deliver on its value proposition, the firm must first create a need-satisfying market offering (product). It must decide how much it will charge for the offer (price) and how it will make the offer available to the target customers (place). It must communicate with target customers about the offers and persuade them of its merits (promotion)" (Kotler et al. 2008)

Product, Price, Place & Promotion are jointly termed as Marketing Mix. This phenomenon was accepted by scholars for a long time period in both the offerings; products and services. Later, In case of marketing of services three additional P's have been accepted i.e. Process, People and Physical Evidence. Therefore this combination of seven P's is called as Service Marketing Mix Components. Service marketing mix is relevant in case of e-tail businesses because e-tail companies are offering services regarding home delivery of products. In electronic commerce based business environment all the seven terms have their special and unique importance. This research paper focuses first 'P' i.e. product and its related issues along with their influence on consumer online buying decision. As a whole, this research paper examines the important factors related to product offered by e-tail websites including availability of vast product assortment range, availability of branded products, quality of products, suitable packing of the delivered products and detail

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specification of the products available of websites.

Significance of all above mentioned product related fundamental factors will be examined and decision will be made towards important parameters related to product so that such important parameters can be given due attention by the e-tailors and the researchers for further research work. This research paper aims to analyse various demographic factors related to consumers and their effect on importance given by them to various product related issues. For example it will be identified that any specific features is liked by which age group, income group and gender most.

REVIEW OF LITERATURE

In year 1948, James Culliton while describing business executives used the term 'mixer ingredients'. This term was further explained by incorporating important elements by Neil H. Borden in year 1965 (Borden, 1965). Borden included marketing mix of manufacturers by including product planning, pricing, branding, channels of distribution, personal selling, wholesale and retail segment of the trade, advertising, promotion, packaging, display, servicing, physical handling, fact finding and analysis. He has also specified four market's forces that rule the mixing of marketing elements; they are behaviour of consumers, traders, competitors and the government. McCarthy (1964) refined this further and defined the term marketing mix as a combination of all of the factors at a marketing managers command to satisfy the target market. According to Ronald E. Goldsmith (1999) 4Ps were first formulated by McCarthy (1964) to describe the main tasks of marketing managers. It carries decision about product, price, place and promotion.

According to Jonathan Ivy (2008), marketing mix is a set of controllable marketing tools that an institution uses to produce the response it wants from its various target markets. Marketing mix elements proposed by McCarthy were further enriched by Booms and Bitner (1981) by adding three additional factors namely people, processes and physical evidence in case of Service Marketing. This concept indicates that the model given by McCarthy (1964) might lead to too restricted focus on the internal variables. This does not include some other important variables as a part of marketing system (Bennet, 1997). According to Gronroos, suitable mix of traditional marketing mix (4P's) can improve a firm's competitive position in its industry (Gronroos, 1994). 4Ps remain the fundamental component of the marketing mix, even in presence of few shortages.

Baker & Hart (2008) appreciated the logic of 4Ps as a marketer needs to deliver a products, price and promote them and finally distribute them to the places where the customer can purchase them. Regarding first 'P' (Product) of Marketing Mix, Dogra & Ghuman (2008) associated features, packaging, product quality and range related to the product. According to Kotler (Kotler et al. 2008), product includes combination of goods and services a company offers to the target customers. Belohlavek argues that a product satisfies the client's needs. The usefulness of the product bears a relationship with its benefits measured both objectively and subjectively. The product's usage value is fundamental while taking buying decision (Belohlavek, 2008). A company should offer unique products for fulfilling customer needs, wants and values for maintaining a competitive approach. Maintaining the product uniqueness is difficult for a company because the products can be copied by competitors. The company may also compete on price, distribution, or promotion in order to compete if the product is of comparable quality (Rea & Kerzner, 1997). Product variety or product assortment refers to number of different products offered to the customers (Pine et al.1995). This includes different product features, packaging and channels of distribution (Scavarda et al., 2009). Product variety strategy results in sales and profit growth along with meeting more specific demands of different customer segments (Berry & Cooper, 1999).

OBJECTIVES

1. To study the effect of vast range of product choices offered by e-tail companies on consumer online buying decisions
2. To study the effect of quality of products offered by e-tail companies on consumer online buying decisions
3. To study the effect of availability of branded products on e-tail websites on consumer online buying decision
4. To study the effect of good packing of ordered product on consumer online buying decision
5. To study the effect of availability of detailed specifications of products on consumer online buying decision

HYPOTHESIS

On the basis of above mentioned objectives following hypothesis holds well:

H_{01}: Availability of good quality products on e-tail websites does not significantly affect consumer online buying decision

H_{02}: Availability of vast range of product choices on e-tail websites does not significantly affect consumer online buying decision

H_{03}: Availability of branded products on e-tail websites does not significantly affect consumer online buying decision

H_{04}: Availability of good packing of ordered product does not significantly affect consumer online buying decision

H_{05}: Availability of detailed specifications of products on e-tail websites does not significantly affect consumer online buying decision

RESEARCH METHODOLOGY

1. Data Collection

Data was collected by distributing a structured undisguised questionnaire to respondents of different age groups in two Indian cities (Jabalpur and Bhopal) of state Madhya Pradesh Total 427 questionnaires were distributed, out of which after editing 400 appropriately filled questionnaires were used for the purpose of study. Sample units were selected on the basis of one common characteristic respondent would have purchased any product using internet, at least once in last twelve months. Data collection has been done in three month time period, from October, 2015 to December 2015.

2. Data Analysis Methodology

For data analysis Regression analysis was used for ascertaining relationship of product related independent variables and dependent variable of consumer online buying decision. This was understood in form of possible regression equation. But prior to that Scale Reliability Analysis, Kaiser-Meyer-Olkin Measure of Sampling Adequacy, Bartlett's Test of Sphericity and correlation analysis were used.

3. Scale Reliability

Next in the research methodology sequence reliability of the scale was important. Most popular statistical tool for such analysis is Cronbach's Alpha. Below mentioned Table-1 discloses test values. This value is 0.826 which is a comfortably acceptable value. Besides this Table-2, which is Item-Total Statistics Table, tells that by deleting which factor this test value can be further increased. In this table almost all the factors are in acceptable range and by deleting any factor no significant increase in reliability can be achieved.

Table-1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.825	5

Table-2: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Product Assortment	9.92	12.314	.705	.601	.765
Product Quality	9.58	12.815	.722	.588	.761
Product Brand	9.50	13.013	.642	.473	.785
Product Packing	10.37	14.528	.558	.371	.808
Product Specification	10.39	14.544	.486	.312	.828

4. Sample Adequacy And Sphericity:

For ensuring adequacy of sample 'Kaiser-Meyer-Olkin measure of sampling adequacy' test was executed on the respondent's data (Table-3). This test has delivered value 0.788. Any value above 0.7 is acceptable therefore it can be said that sample size is sufficient enough to determine a result. Moreover 'Bertlett's Test of Sphericity' was also executed to understand the nature of data. For passing out this test significance should be less than 0.05. In the below mentioned table significance can be seen which is almost nil. This statistical tool tests the Sphericity of the sample data.

Table-3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.788	
Bartlett's Test of Sphericity	Approx. Chi-Square	801.594
	df	10
	Sig.	.000

ANALYSIS & RESULTS

As topic explored the effect of product related factors on consumer online buying decision in case of electronic goods, therefore product related important factors were identified after brainstorming with several prominent professors of Marketing subject and senior marketing professionals. As an outcome five important product related factors were identified while buying from e-tail website. Factors are product assortment (product choices), product quality, product brand, product packing and availability of detailed specification about the product on e-tail website. Researcher has asked questions regarding above mentioned five factors to the respondents. Respondents were also asked about their demographic information besides below mentioned questions on five factors:

I am confident that while buying electronic goods from internet, it provides me:

Vast range of product choices	1-Strongly Disagree	2- Disagree	3- Not sure	4-Agree	5-Strongly Agree
Good quality products	1	2	3	4	5
Branded products	1	2	3	4	5
Good Packing of product	1	2	3	4	5
Detailed specifications of products on website	1	2	3	4	5
Will you purchase elecronic product from Internet in near future	Yes	No			

1. DEMOGRAPHIC ANALYSIS:

Respondents were also asked about their demographic information. Classification of such information is given in below mentioned table.

Table-4: Male or Female

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	236	59.0	59.0	59.0
	Female	164	41.0	41.0	100.0
	Total	400	100.0	100.0	

Table-5: Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25yrs	142	35.5	35.5	35.5
	26-35 yrs	144	36.0	36.0	71.5
	Above 35 yrs	114	28.5	28.5	100.0
	Total	400	100.0	100.0	

Table-6: Income (yearly)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Upto 250000	82	20.5	20.5	20.5
	250000-500000	168	42.0	42.0	62.5
	500000-1000000	132	33.0	33.0	95.5
	Above 1000000	18	4.5	4.5	100.0
	Total	400	100.0	100.0	

By looking at the above mentioned three tables (Table-4, 5, 6) details regarding nature of respondents can be understood. There were 236 males (59%) and 164 females (41%) in the study. 142 respondents approximately 36%) were less than 25 years of age, 144 respondents (36%) were between 25 and 36 years of age and 114 respondents (approximately 28%) were above 36 years of age. Regarding income 82 respondents (approximately 21%) had yearly incomes less than two lakh fifty thousand, 168 respondents (42%) had income between two lakh fifty thousand and five lakh. 132 respondents (33%) had income ranging from five lakh to ten lakh and 18 respondents (approximately 4%) had incomes above ten lakhs.

2. DESCRIPTIVE STATISTICS

Besides demographic information respondents were asked questions about above mentioned six areas. First five questions were about their opinion towards various 'Product' related factors and sixth question is related to consumer's possible future behaviour that if they will purchase electronic goods using e-tail website in near future. Description about five product related factors is available in below mentioned Table-7. These five factors related questions were answered on the basis of five point Likert scale. Table-7 explains mean values and standard deviation of these factors. It can be understood with these mean values that first three factors (product assortment, quality and brand) have

comparatively higher level of mean values and rest two factors (Product packing and product related detailed specification) are showing lesser mean values.

Table-7: Descriptive Statistics

	N	Mean	Std. Deviation
Product Assortment	400	2.52	1.258
Product Quality	400	2.86	1.156
Product Brand	400	2.94	1.217
Product Packing	400	2.07	1.055
Product Specification	400	2.05	1.149
Valid N (listwise)	400		

3. CORRELATION

Afterward correlation test was executed which measures the correlations among product related factors among them and correlation with possible consumer online buying in near future. I all the situations significance is almost 0.000 which state that data groups are not same. This table further demonstrates good correlation (above 0.5) among first three factors (Product assortment, quality and brand) and weak correlation (below 0.5) in rest of the two factors (product packing and product specifications). Next correlation between consumer online buying decision in near future and first three factors showcases strong correlation whereas last two factors are establishing weak correlation. As an outcome of this table it can be calculated that among five factors first three factors (Product assortment, quality and brand) should form part of further study and rest two factors should be avoided as they are not having strong relationship with the dependent variable of consumer online buying propensity in near future.

Table-8: Correlations

		Product Assortment	Product Quality	Product Brand	Product Packing	Product Specification	Customer will purchase in near future
Product	Pearson Correlation	1	.727**	.652**	.405**	.360**	.815**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	400	400	400	400	400	400
Product	Pearson Correlation	.727**	1	.610**	.469**	.375**	.803**
Quality	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	400	400	400	400	400	400
Product	Pearson Correlation	.652**	.610**	1	.382**	.336**	.658**
Brand	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	400	400	400	400	400	400
Product	Pearson Correlation	.405**	.469**	.382**	1	.530**	.443**
Packing	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	400	400	400	400	400	400
Product	Pearson Correlation	.360**	.375**	.336**	.530**	1	.397**
Specification	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	400	400	400	400	400	400

		Product Assortment	Product Quality	Product Brand	Product Packing	Product Specification	Customer will purchase in near future
Customer will purchase in near future	Pearson Correlation	.815**	.803**	.658**	.443**	.397**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	400	400	400	400	400	400

***. Correlation is significant at the 0.01 level (2-tailed).*

4. REGRESSION

Correlation is used for understanding relationship among factors whereas regression is used to understand the nature of such relationship. Regression test was applied for better understanding of relationship among dependent and independent factors. Table-9 states that Adjusted R Square value as 0.765 which is interpreted that below mentioned independent factors based model is predicting the relationship correctly upto 76%. Further Table-10 of ANOVA confirms this relationship by demonstrating favourable statistical values (F 432.891 and Sign 0.000).

Table-9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875a	.766	.765	.236

a. Predictors: (Constant), Product Brand, Product Quality, Product Assortment

Table-10: ANOVAb

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72.219	3	24.073	432.891	.000a
	Residual	22.021	396	.056		
	Total	94.240	399			

a. Predictors: (Constant), Product Brand, Product Quality, Product Assortment
b. Dependent Variable: Customer will purchase in near future

Below mention Table-11 showed the values of Coefficients. This Regression table presents the specific relationship between dependent variable and independent variables (three factors). These table values are undoubtedly acceptable as significance values are 0.000. Further table states that consumer purchase propensity in near future is related to three factors by adjusting a specific constant (-0.681) and taking care of beta values. Therefore consumer online buying equal's constant plus beta-1 value (0.169) multiplied with product assortment value plus beta-2 value (0.173) multiplied with product brand related value plus beta-3 value (0.049) multiplied with product brand related value.

This can also be presented in numerical format in the following manner:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots. + \beta_n X_n + \varepsilon$$

This regression equation helps in understanding the relationship among various variable that for Y (consumer online buying of electrical goods in near future) most importantly depends upon product assortment and product quality and comparatively less dependent upon product brand as its beta value is 0.049.

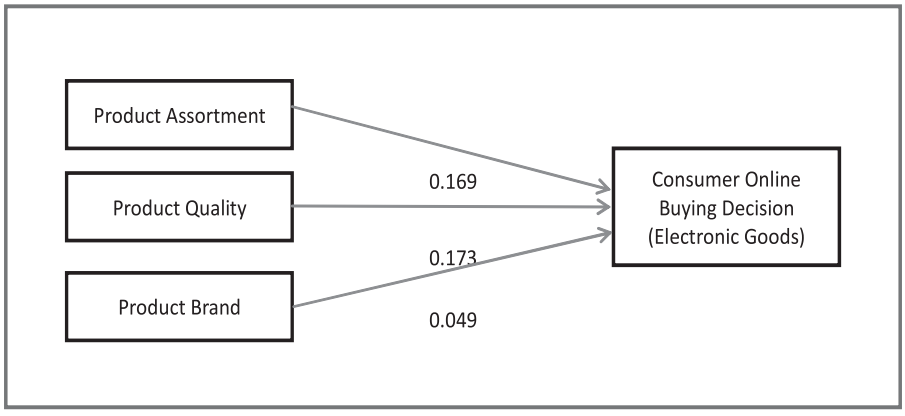
Table-11: Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-.681	.034		-19.869	.000
	Product Assortment	.169	.015	.438	11.419	.000
	Product Quality	.173	.015	.411	11.202	.000
	Product Brand	.049	.013	.122	3.663	.000

a. Dependent Variable: Customer will purchase in near future

This relationship can also be presented in pictorial manner in the below mentioned Table-12.

Table-12: Product related Factors affecting Consumer Online Buying Decision



DISCUSSION AND CONCLUSION

Perreault and McCarthy (2002) discussed about the importance of product quality in consumer buying decision. This becomes true in case of consumer buying through internet as well. Kotler and Armstrong (2014) said that Branding helps both consumers and sellers in variety of ways. On the basis of brand names consumers will be able to easily identify and purchase a product that benefits them. As per analysis in this paper, this can be experienced that Product brand is significantly important dimension for consumer buying. Simonson (1999) has focused on importance of product assortments and concluded that increase in product assortment leads to more consumers buying in retail businesses. In the present study this finding has again been established. Kongsompong (2006) stated about importance and utility of packing in consumer buying but as per available data of present product packing has not been given importance by respondents. Zan et. al. (2015) stated the importance of product description and customer review in buying process in online business environment. Again in the present study detail description of products had not been given due importance by respondents. Regarding above mentioned five hypotheses it can be concluded that first three Null hypotheses have been proved wrong as first three factors Product assortment, Product quality and Product brand significantly and positively affect consumer online buying decision. Therefore Alternate hypothesis is accepted in first three cases. Whereas fourth and fifth Null hypothesis holds good and accepted as product packing and product description on e-tail websites is not affecting consumer's online buying decisions significantly.

SUMMARY & MANAGERIAL IMPLICATIONS

On the basis of above mentioned data analysis it can be concluded that features related to product important role in consumer online buying decision. Especially vast range of product assortment offered by online marketers along with availability of branded products on their website and product quality has been given priority among other features which help the buyer to take favourable online buying decision. Moreover good packing of product and detailed product description on e-tail website has not been given due importance by customers in their buying decision. Therefore in further studies it is recommended to make use of three product related factors: Large product assortment, availability of branded products and good quality of product in case of sale of electronic goods through internet. Moreover e-tail websites and companies may also focus on the above mentioned three factors in case of sale of electronic good through their websites, in coming future.

LIMITATIONS OF THE STUDY AND SCOPE FOR FUTURE RESEARCH

Findings of the present study are exclusively related to sale of electronic goods therefore it carries a limitation of less applicability in case of sale of other products and services. Moreover all the variables are related to Product features and exclude other factors of marketing mix like price, promotion, place, process, people and physical evidence. So while taking any decision it is suggestive that other factors should also be considered.

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