

Customer Satisfaction and Factors Influencing the Purchase Decisions of Notebook Computers in Punjab

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Abstract- *A laptop is a personal computer for mobile use. With the growth of personal computers in early 1980s, a need was felt to develop a computer which can be carried to mobile locations. Today it has emerged as one of the most significant tool for communication and networking and not to mention its utility for official work. The inflow of many manufacturers at considerable lower prices have made it possible in India to afford a Laptop virtually by anybody. Indian market is spread across both sides of the spectrum with large masses available at higher end and lower end with wide variety of taste and preferences. Henceforth the need arises to meet the demands and preferences of this huge market segment. This study will highlight the various factors responsible for influencing the purchase decisions of customers while buying a Notebook computer in Punjab and also an effort has been made to study the customer satisfaction level towards Notebook computers in Punjab. A sample of 200 respondents from four districts of Punjab participated in the survey. Some of the research techniques used in the study includes Factor analysis.*

Keywords- *Customer Satisfaction; Customer Purchase decision; Notebook computers; Laptop computers; Factor analysis*

1. INTRODUCTION

In this era of competition, understanding the consumer is a necessity for marketers. The technology driven products such as Notebook Computers are more prone to frequent changes in customer preferences, given the changes in factors like demographics and lifestyles. These changes can become great business opportunities for alert marketers and threats for marketers who fail to adapt. The inflow of many manufacturers at considerable lower prices have made it possible in India to afford a Laptop virtually by anybody. Indian market is spread across both sides of the spectrum with large masses available at higher end and lower end with wide variety of taste and preferences. Henceforth the need arises to meet the demands and preferences of this huge market segment. This study will highlight the various factors responsible for influencing the purchase decisions of customers while buying a Notebook computer in Punjab and also an effort has been made to study the customer satisfaction level towards Notebook computers in Punjab.

2. REVIEW OF LITERATURE

A rich literature has been developed over time, mostly in the foreign countries with regard to its importance. In spite of the research in the various areas and applications of the gap was felt between the studies of this concept. Some of the studies researched includes: Dash (2002) states that the Notebook Computers will succeed because they accommodate the human factors of collaboration better than any previous iteration of computer hardware. McCloskey (2002) found that though Tablet hardware and software have been available since 2002, however despite predictions that they “should be a boon for distance

educators” their uptake has been slow due to the considerably higher purchasing costs of Tablet PCs compared to laptop computers, and a lack of understanding of how the Tablet PC may be used effectively in teaching and learning. Mainka (2007) records positive feedback from academics, where staff began to engage with educational technologies as a result of professional development that focused on their needs. Laurillard (2009) states the need to “drive the technology towards what learners need” and although Tablet PC technology has not been specifically designed for an educational need, this should not stop practitioners carrying out significant scholarly work that above all, shows the potential tablet technology has for pedagogic innovation. Mckenzie and Franke (2009) reviewed 144 papers on the use of Tablet PCs in education, in order to gain an overview of how tablets are used in a university context and to explore the impact on the learning experience.

3. RESEARCH OBJECTIVES

The study has been conducted to identify the customer preferences towards various Notebook computer brands in Punjab.

The specific objectives of the study are:

- To study the customer satisfaction level towards various brands of Notebook computers in Punjab
- To identify the various factors responsible for influencing the purchase decisions of customers while buying a Notebook computer in Punjab

4. DATABASE AND METHODOLOGY

The research is primarily descriptive in nature. The data was collected in the form of questionnaires. The study has

been conducted in 4 cities of Punjab, a sample of Rural and Urban respondents were selected from the districts of Jalandhar, Ludhiana, Patiala and Amritsar. The survey was carried out on 200 respondents. The data was collected personally (and via emails) in the months of October 2012 to December 2012. The questionnaire was pretested in order to identify possible problems in terms of clarity and accuracy. Thus, several changes were made in order to improve the presentation of the items, based on comments and feedback. Apart from demographic-related questions, five-point Likert scale was used for all the questions concerning customer's satisfaction towards various brands of Laptop computers and the various factors influencing the purchase decisions for the mobile phone handsets. The data has been analyzed by using statistical software SPSS, meticulously. In addition to tabular analysis, the data collected was subjected to exploratory factor analysis.

4.1 Personal Characteristics of the Respondents

Most of the respondents were of 15-30 years of age (60%) followed by 31-45 years (26%). There were about 41% respondents belonging to rural background and 59% were from urban background. There were 110 married and 90 single respondents out of total 200 respondents. It can be seen from the table 1 that there were 128 males (64%) and 72 Females (36%) that participated in the survey. The set of respondents chosen for the study happened to be well educated with 66% of the respondents being graduates and post graduates. Most of the respondents (61%) falls in the monthly income slab of Rs.10,000 to Rs.30,000. Table 2 reflects the estimated budget for purchase of a Notebook computer by the respondents of Punjab. 35% of the respondents lies in the range of Rs.20,000 to Rs.30,000 and 25.5% of the respondents lies in the range of Rs.30,000 to Rs.40,000. The percentage reduces considerably for lower end and higher end prices. Table 3 indicates the various brands of Notebooks owned by the respondents. The statistics obtained shows a stiff competition in the market with Sony leading marginally at 21.5 % followed closely by Lenovo at 19%. The Compaq at 11% is least preferred in Punjab as per the respondents. Table 4 indicates the years of experience of the respondents in using the computers. About 58 % of the respondents have been using the computers from 4 years and only 13% of the respondents use it from more than 6 years.

4.2 Customer Satisfaction towards Notebook Computers

The respondents were asked to give their satisfaction level on 5 point likert scale for the currently used mobile phone. The first 2 categories of Highly satisfied and satisfied were clubbed under "Satisfaction" and other 3 categories of Neutral, Dissatisfied and Highly Dissatisfied were clubbed under "Dissatisfaction". The responses were analyzed on various demographic characteristics of the respondents.

4.2.1 Hypothesis Development – Customer Satisfaction

H0 (1) : There is no significant difference in the satisfaction level of respondents by different age groups

It can be seen that chi square (p) value is not significant, hence null hypothesis is accepted. This shows that there is no significant difference in the satisfaction level of respondents by different age groups. However it was seen that as the age increases the respondents dissatisfaction towards their Notebook computers decreases. This can be attributed to the fact that young customers have more expectations and demands from their computers as compared to older customers. (Table 7)

H0 (2) : There is no significant difference in the satisfaction level of respondents by residential background

As far as Residential background is concerned the chi square (p) value is significant. Hence there is a significant difference in the satisfaction levels of rural and urban customers. It is seen that rural customers are more satisfied than the urban customers. This can be attributed to the fact that rural customers being less aware are less demanding from their computers as compared to urban customers.

H0 (3) : There is no significant difference in the satisfaction level of respondents by Gender

The chi square (p) value being not significant, null hypothesis is accepted. Hence, there is no significant difference in the satisfaction levels of male and females.

H0 (4) : There is no significant difference in the satisfaction level of respondents by Education

The chi square (p) value do not show any trend between the education and the satisfaction level of respondents. However it can be seen that less educated respondents are more satisfied than the more educated respondents.

H0 (5) : There is no significant difference in the satisfaction level of respondents by Income

The chi square (p) value is significant at 5% significance level, null hypothesis is rejected. This shows that there is a significant difference in the satisfaction levels of the respondents of different income groups. It was seen that higher income group respondents are less satisfied from their computers than the lower income group customers.

4.3 Factors influencing the purchase decisions of customers

The factor analysis was applied on the responses provided by respondents. Factor analysis is a good way of identifying latent or underlying factors from an array of seemingly important variables. In a more general way, factor analysis is a set of techniques, which, by analyzing correlations between variables, reduces their number into fewer factors, which explain much of the original data, more economically. (Malhotra, 2002). In the present study, the factor analysis was applied in order to identify the various factors responsible for influencing the purchase decisions of customers while buying a mobile phone in Punjab, the responses obtained were put to factor analysis and the result so obtained were subject to Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The approximate chi-square value is 823.231 with df 210, which is significant at 0.001 level (Table 6). The value of KMO statistics (0.934) is also

large (> 0.5). Hence, all factors are not considered equally

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.934
Bartlett's Test of Sphericity	Approx. Chi-Square	823.231
	Degree of Freedom	210
	Significance	.001

important by the customers while buying a telecom connection. An eigen value represents the amount of various associated with the factors. From table 7, it is evident that the first four variables represent the 59.101 % of variance. Therefore, only these four factors with the variance greater than 1.0 are retained and the other factors

are not included in the model. Thus, we extract only 4 factors from the 14 variables present.

Extraction Method: Principal Component Analysis

Factor loadings are simple correlations between the variables and factors. The most commonly used method is the Varimax rotation procedure. This is an orthogonal method of rotation that minimizes the number of variables with high loadings of a factor, thereby enhancing the interpretability of the factors. Orthogonal rotations results in factors that are uncorrelated.

Table 7: Total Variance explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.892	20.226	20.226	5.892	20.226	20.226	5.892	21.892	21.898
2	3.784	18.132	38.358	3.784	18.132	38.358	3.784	19.091	41.167
3	2.562	10.840	49.198	2.562	10.840	49.198	2.562	10.363	52.192
4	1.231	9.903	59.101	1.231	9.903	59.101	1.231	9.305	60.342
5	.913	8.882	67.983						
6	.842	7.647	75.630						
7	.763	6.823	82.453						
8	.678	4.843	87.296						
9	.356	3.451	90.747						
10	.216	2.862	93.609						
11	.203	1.905	95.514						
12	.198	1.895	97.409						
13	.167	1.468	98.877						
14	.125	1.123	100.00						

Table 8: Rotated Component Matrix

S. No.	Statements	1	2	3	4
1	I consider price as the most important factor while purchasing a Notebook Computer	.765	.554	.358	.423
2	I need a big storage memory or hard disk	.357	.678	.490	.320
3	I like to purchase the Notebook Computer in discount offers/schemes	.612	.256	.384	.490
4	I prefer a Notebook Computer with good aesthetic look	.289	.382	.595	.436
5	I prefer a Notebook Computer with Good color of outer body	.391	.444	.491	.219
6	I like to purchase a Notebook Computer which gives me the best value for my money	.463	.348	.274	.372
7	I like to store games and songs, so need more space on drives	.289	.396	.267	.153
8	I prefer a Notebook Computer of a good branded company	.635	.584	.445	.713
9	I need a sporty and stylish looking computer	.287	.473	.603	.204
10	I need extra peripheral devices free with my device	.359	.134	.245	.293
11	I like to have more speed of internet so I need enough memory	.308	.440	.390	.301
12	I do not agree that a costlier Notebook Computer enhances one's prestige, I prefer a low cost Notebook Computer	.507	.416	.243	.411
13	I need a speedy and multipurpose device so need an advanced processor	.395	.401	.343	.342
14	I prefer a Notebook Computer endorsed by a renowned personality	.155	.139	.237	.378

Table 9: Naming of Factors

Factor No.	Name of Dimension	Item No.	Variables	Factor loading
F1	Price consciousness	1	I consider price as the most important factor while purchasing a Notebook Computer	.765
		3	I like to purchase the Notebook Computer in discount offers/schemes	.612
		6	I like to purchase a Notebook Computer which gives me the best value for my money	.463
		10	I need extra peripheral devices free with my device	.359
		12	I do not agree that a costlier Notebook Computer enhances one's prestige, I prefer a low cost Notebook Computer	.507
F2	Memory and Processor	2	I need a big storage memory or hard disk	.678
		7	I like to store games and songs, so need more space on drives	.396
		11	I like to have more speed of internet so I need enough memory	.440
		13	I need a speedy and multipurpose device so need an advanced processor	.401
F3	Aesthetics	4	I prefer a Notebook Computer with good aesthetic look	.595
		5	I prefer a Notebook Computer with Good color of outer body	.491
		9	I need a sporty and stylish looking computer	.603
F4	Brand Image	8	I prefer a Notebook Computer of a good branded company	.713
		14	I prefer a Notebook Computer endorsed by a renowned personality	.378

Price Consciousness : It is the most significant factor with 20.226 percent of total variance explained. This explain the psychology of typical Indian customer who gives utmost importance to price than the other factors. The respondents were willing to buy a Notebook computer in discount offers and schemes. Further some respondents unlike many others do not consider computer as a status symbol and hence did not want to spend much on its purchase. **Memory and Processor :** It is the second most significant factor with 18.132 percent of total variance explained. The customers being more aware and educated these days demand for the advanced memory and processor options. **Aesthetics :** It is the third most significant factor with 10.840 percent of total variance explained. The respondents look for the aesthetic looks of the computer, the color of the body among many other features while purchasing a Notebook computer. **Brand Image:** It is the fourth most significant factor with 9.903 percent of total variance explained. There are respondents who generally trust a branded company and like to purchase those Notebooks without much enquiry. The

trusted brands like Samsung and Sony have a advantage over others when it comes to the brand recalling by the customers while purchasing a Notebook Computer.

5. CONCLUSIONS

It was seen that most of the respondents purchases a notebook computer with the price ranging between Rs.20,000 to Rs.30,000 and the percentage reduces considerably for lower end and higher end prices. The statistics obtained about the market share of the various Notebook brands in Punjab shows a stiff competition in the market with Sony leading marginally followed closely by Lenovo. The Compaq was least preferred in Punjab as per the respondents. Most of the respondents have been using the computers from 4 years and a very less percentage of the respondents use it from more than 6 years.As far as satisfaction levels of the respondents were concerned it was seen that there was no significant difference in the satisfaction level of respondents by different age groups. However it was seen that as the age increases the respondents dissatisfaction towards their computers decreases. This can be attributed to the fact that young

customers have more expectations and demands from their computers as compared to older customers. It was seen that rural customers are more satisfied than the urban customers. This can be attributed to the fact that rural customers being less aware are less demanding from their computers as compared to urban customers. As far as satisfaction level by gender, education and occupation is concerned there was no significant difference found in the satisfaction levels. The results of the factor analysis concluded that following four factors were significant in influencing the purchase behavior of mobile phones: Price Consciousness, Memory and Processor, Aesthetics and Brand Image. Price Consciousness was considered to be the most significant factor. This explains the psychology of typical Indian customer who gives utmost importance to price than the other factors. The respondents were willing to buy a Notebook computer in discount offers and schemes. Further some respondents unlike many others do not consider computer as a status symbol and hence did not want to spend much on its purchase. Memory and Processor was the second most significant factor. The customers being more aware and educated these days demand for the advanced memory and processor options. Aesthetics was the third most significant factor. The respondents look for the aesthetic looks of the computer, the color of the body among many other features while purchasing a Notebook computer. Brand Image was found to be the fourth most significant factor. There are respondents who generally trust a branded company and like to purchase those Notebooks without much enquiry.

The trusted brands like Samsung and Sony have an advantage over others when it comes to the brand recalling by the customers while purchasing a Notebook Computer.

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ANNEXURE

Table 1: Personal characteristics of Respondents

	Frequency	Percentage
Age		
15-30	120	60
31-45	52	26
46-60	30	15
Above 60	26	13
Gender		
Male	128	64
Female	72	36
Education		
Post Graduation	75	38
Graduation	56	28
Secondary	33	17
Matric or below	36	18
Monthly Income		
Below Rs.10,000	38	19
Rs.10,000-20,000	57	29
Rs.20,000-30,000	63	32
Above Rs.30,000	42	21
Residential Background		

Rural	82	41
Urban	118	59
Marital Status		
Single	90	45
Married	110	55

Table 2: Budget for Notebook Computer purchase

Budget (In Rs.)	No. of respondents	Percentage
< 20,000	46	23.0
20,000 to 30,000	69	34.5
30,000 to 40,000	51	25.5
>40,000	34	17.0

Table 3: Brand of Notebook Computers owned

Brand owned	No. of respondents	Percentage
Samsung	28	14.0
Sony	43	21.5
Compaq	22	11.0
HP	36	18.0
Lenovo	38	19.0
Dell	29	14.5
Others	04	02.0

Table 4: Years of experience in using Computers

Years of experience in using mobile handsets	No. of Respondents	Percentage
1-2 years	64	32.0
2-4 years	52	26.0
4-6 years	58	29.0
More than 6 years	26	13.0

Table 5: Customer Satisfaction and Dissatisfaction towards various Notebook Computers

Demographics	Satisfaction No.	Dissatisfaction No.	Chi Square
Age			
15-30	42	52	df=3 chi-square=09.654 p=0.000
31-45	27	15	
46-60	25	11	
Above 60	24	04	
Residential Background			
Rural	54	15	df=1 chi-square=11.563 p=0.445*
Urban	58	67	
Gender			
Male	65	45	df=1 chi-square=10.984
Female	47	37	

			p=0.000
Education			
Post Graduation	64	29	df=3
Graduation	34	43	chi-square=13.897
Secondary	12	06	p=0.002
Matric or below	02	04	
Monthly Income			
Under Rs.10000	11	10	df=3
Rs.10000-Rs.20000	51	12	chi-square=10.783
Rs.20000-Rs.30000	41	32	p=0.389*
More than Rs.30000	09	28	

* Significant at 5% Level