RESEARCH ARTICLE

Factors Influencing the Customer's Purchase Decision for Various Telecom Services-The Case of Select Districts of Punjab

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Abstract

The one thing that is growing hand by hand with Indian population is the number of mobile service users. In fact by 2015 it is estimated that there will be more mobile phones then the people in India. Henceforth the need arises to meet the demands and preferences of this huge market segment. This study will try to study the customer preferences and the satisfaction level towards various telecom services providers in Punjab along with the factors influencing the purchase decisions of customers while buying a telecom service connection in Punjab. A sample of 300 respondents from three districts of Punjab participated in the survey. Some of the research techniques used in the study includes chi-square and factor analysis.

Keywords: Customer *Preferences, Customer Satisfaction, Customer buying decision, Factor analysis, Mobile service providers.*

Introduction

There Indian telecommunication services have witnessed an exponential growth over the last few years. Third largest in the world and the second largest among the emerging economies of Asia, it has proved its mettle time and again. The Indian customers' craze for mobile services has touched new heights. In its recent statement issued, Telecom Regulatory Authority of India (TRAI) has revealed that the country's mobile subscriber base has increased from 893.84 million in December 2011 to 903.73 million in January 2012, growing by 1.11 per cent. This tremendous growth could not have been possible without aggressive government policies, emerging new technologies and companies right understanding of customer preferences. The mobile service provider companies have been able to gain the maximum fruit out of this rainfall of telecom service customers. However, the credit must go to these companies as well for creating a demand for their service through aggressive advertising campaigns. Understanding the needs and preferences of the customers before offering them the product or service has been the essence of right marketing which directly links to the customer satisfaction. Hence, a link has to be established between asking the preferences from the customers and gauging their satisfaction level from the offering afterwards. This study will highlight the various factors responsible for influencing the purchase decisions of customers while buying a telecom service connection in Punjab and also an effort has been made to study the customer preferences and the satisfaction level towards various telecom services providers in Punjab.

Review of Literature

Rust and Oliver [1] stated that service and product quality in general always lies in the minds of the consumers depending on individual buying capacity, buying behavior, demand, taste, and fashion criteria and obviously the competitive markets that provide significant differentiation strategies. Therefore, it seems a downright necessity for the mobile telecommunication service provider to communicate directly with the potential consumers for measuring possible quality attributes. Kashyap [2] in his study felt that rural market is looking up along with urban market. The media revolution in the last few years has resulted in a sort of rural urban integration. Kollmann [3] concluded that Price plays a vital role in telecommunication market especially for the mobile telecommunication service providers It includes not only the buying price but also the call and rental charges. Trehan and Singh [4] in a comparative study on urban and rural consumer behaviour, observed that urban consumer behaviour is significantly

different from rural counterpart in considering brand image, guarantee, warranty, credit availability, foreign collaboration, latest technology and after sales service but found similarity in their behaviour in considering durability and price while making purchase decision for colour television. They noted that there was not significant difference between the urban and rural people regarding time of their purchase. In rural areas, 51 percent purchased as and when needed and 12 percent after harvest. Wal et al. [5] stressed that quality reflects the extent to which a product or service meets or exceeds consumers' expectations.In his study Khanna [6] gave a detailed picture of marketing strategies undertaken by the leading mobile service operators in India to enter a rural market with company of our concern included. Kim et al. [7] estimated consumer-stated preferences for future multi-use converged mobile terminals and demonstrated that consumers preferred a keyboard and a medium-sized display over the availability of diverse applications and high-quality Internet services. Foster [8] listed various strategies a company should follow to retain the momentum it has gained from its launch campaign especially in a rural market. Aggressive post-launch marketing strategies play a critical role in the success of company. Munnukka [9] indicated that a significant and positive relationship exists between customers' price perceptions and their purchase intentions, and that the formation of price perceptions is significantly influenced by satisfaction with pricing and services.

Research Objectives

The study has been conducted to various factors responsible for influencing the purchase decisions of customers while buying a telecom service connection in Punjab. The specific objectives of the study are:

- To study the customer preferences and the satisfaction level towards various telecom services providers in Punjab
- To identify the various factors responsible for influencing the purchase decisions of customers while buying a telecom service connection in Punjab

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 3 cities of Punjab, a sample of Rural and Urban respondents were selected from the districts of Jalandhar, Ludhiana and Amritsar. The survey was carried out on 250 respondents. However, 29

Questionnaires were found to be incorrect or irrelevant, so a total of 50 questionnaires were deliberately rejected. Hence, the study sample was reduced to 200 respondents. The data was collected personally (and via emails) in the months of March 2012 to June 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 telecom service providers and the various factors influencing the purchase decisions for the telecom services. The data has been analysed by using statistical software SPSS, meticulously. In addition to tabular analysis, the data collected was subjected to exploratory factor analysis.

Personal Characteristics of the Respondents

Most of the respondents were of 26-35 years of age (55%) followed by above 46 years(19%). There were about 55% respondents belonging to rural background and 45% were from urban background (Table 7). There were 111 married respondents out of total 200 respondents. It can be seen from the table 1 that there were almost equal number of males and females participating in the survey with male percentage of 51 %. About 32% of the respondents were having Services as their main occupation followed by 26% of business persons. The set of respondents chosen for the study happened to be well educated with 40% of the respondents being graduates and 27% being post graduates. Most of the respondents (31.5%) falls in the monthly income slab of Rs.20,000 to Rs.30,000 followed by 26% of Rs.10,000 to Rs.20,000 slab.

Customer Preferences Regarding Type of Telecom Service

The respondents were asked to give their preference for prepaid or postpaid type of service. The responses were analyzed on various demographic characteristics of the respondents as shown in the table 1.

H0 (1): There is no significant difference in the preferences of service type by different age groups. It can be seen that Most of the young customers (72.7%) prefer prepaid connection. This may be due to the fact that most youngsters do not want to disclose the exact usage of their mobile connections to their parents. For middle age group categories the users are more or less equally divided. A slight trend is formed which

shows that as the age increases the customer preference shift from prepaid service to postpaid service, however the chi-square (p) value is not significant, which shows that there is no significant difference in the preferences of service type by different age groups.

H0 (2): There is no significant difference in the preferences of service type 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 preferences of service type by rural and urban customers. It is seen that rural customers prefer prepaid services and urban customers prefer postpaid service. This can be attributed to the fact that rural customers are unaware of the billing procedures and they prefer to give money and get their phone recharged on the spot.

H0 (3): There is no significant difference in the preferences of service type by gender. The chi square (p) value being not significant, null hypothesis is accepted. Hence, there is no significant difference in the preferences of service type by gender. It can be seen that both males and females have roughly the equal preferences of the service type.

H0 (4): There is no significant difference in the preferences of service type by education. The chi square (p) values do not show any trend between the education and the preference of service type by the respondents. However it can be seen that educated respondents tend to go for Postpaid connections. This can be attributed to the fact that educated customers are more aware about the various postpaid schemes and discounts.

H0 (5): There is no significant difference in the preferences of service type by income. The chi square value (p) is significant at 5% significance level, hence Null hypothesis is rejected. This shows that there is a significant difference in the preferences of service type by Income. It can be seen that higher income group respondents prefer postpaid connection and lower income group respondents prefer prepaid connection. This is self explained by the fact that the higher income group can afford to talk more and hence spend more on their talk time.

H0 (6): There is no significant difference in the preferences of service type by occupation. The chi square (p) values do not show any trend between the occupation and the preference of service type by the respondents. However it can be seen that those in agriculture prefer prepaid connections as compared to Business and service class which tend to go for postpaid connections.

Customer Satisfaction towards Various Telecom Service Providers

The respondents were asked to give their satisfaction level on 5 point likert scale for the currently used telecom service. 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 (Table 2)

H0 (7): 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 significant at 5% level, hence null hypothesis is rejected. This shows that there is a significant difference in the satisfaction level of respondents by different age groups. It can be seen that with increase in age the satisfaction level increases. This can be attributed to the fact that young customers have more expectations and demands from their service providers as compared to older customers.

H0 (8): 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 then the urban customers. This can be attributed to the fact that rural customers being less aware are less demanding from their mobile service provider as compared to urban customers.

H0 (9): 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. It can be seen that both males and females have almost the equal satisfaction levels.

H0 (10): 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 then their counterparts.

Table 1: Customer preferences regarding type of telecom service

Demographics	Prepaid No.	%	Postpaid No.	%	Chi -square
Age					
15-25	16	72.7	06	27.2	df=3
26-35	52	47.2	58	52.7	chi-square=18.141
36-45	11	36.6	19	63.3	p=0.000
Above 46	15	39.4	23	60.5	
Residential Background					df=1
Rural	78	70.9	32	29.0	chi-square=12.412
Urban	36	40.0	54	60.0	p=0.213*
Gender					
Male	56	54.9	46	45.0	df=1
Female	43	43.8	55	56.1	chi-square=21.294
					p=0.000
Education					
Post Graduation	24	44.4	30	55.6	df=3
Graduation	33	41.2	47	58.7	chi-square=26.143
Secondary	29	64.4	16	35.5	p=0.001
Matric or below	18	85.7	03	14.2	
Monthly Income					
Under Rs.10000	22	57.8	16	42.1	df=3
Rs.10000-Rs.20000	23	44.2	29	55.7	chi-square=33.343
Rs.20000-Rs.30000	21	33.3	42	66.6	p=0.120*
More than Rs.30000	16	34.0	31	66.0	
Occupation					
Agriculture	16	84.2	03	15.7	df=5
Business	18	34.6	34	65.4	chi-square=37.130
Service	22	34.4	42	65.6	p=0.000
Student	21	65.6	11	34.4	
Housewife	09	27.2	24	72.7	

* Significant at 5% Level

Table 2: Customer satisfaction and dissatisfaction matrix

Demographics	Satisfaction No.	%	Dissatisfaction No.	%	Chi Square
Age					
15-25	06	27.2	16	72.7	df=3
26-35	59	53.6	51	46.3	chi-square=18.231
36-45	21	70.0	09	30.0	p=0.313*
Above 46	30	78.9	08	21.0	
Residential Background					df=1
Rural	87	79.0	23	20.9	chi-square=17.002
Urban	36	40.0	54	60.0	p=0.452*
Gender					
Male	57	55.8	45	44.1	df=1
Female	48	48.9	50	51.0	chi-square=19.034
					p=0.000
Education					
Post Graduation	28	51.8	26	48.1	df=3
Graduation	48	60.0	32	40.0	chi-square=16.141
Secondary	26	57.7	19	42.3	p=0.000
Matric or below	16	76.1	05	23.9	
Monthly Income					
Under Rs.10000	23	60.6	15	39.4	df=3
Rs.10000-Rs.20000	29	55.8	23	44.2	chi-square=13.980
Rs.20000-Rs.30000	19	30.2	44	69.8	p=0.000
More than Rs.30000	21	44.7	26	55.3	

Occupation					
Agriculture	17	89.4	02	10.6	df=5
Business	19	36.5	33	63.5	chi-square=17.341
Service	33	51.5	31	48.5	p=0.000
Student	15	46.8	17	53.2	
Housewife	21	63.6	12	46.4	
Telecom Service Provider					
Airtel					
Idea	31	55.3	25	44.6	56 (28.0%)
Aircel	28	71.7	11	28.2	39 (19.5%)
Reliance	16	76.1	05	23.8	21 (10.5%)
Vodafone	19	76.0	06	24.0	25 (12.5%)
BSNL	37	88.0	05	11.9	42 (21.0%)
	11	64.7	06	35.2	17 (08.5%)

* Significant at 5% Level

H0 (11): There is no significant difference in the satisfaction level of respondents by income. The chi square (p) value being not significant, null hypothesis is accepted. This shows that there is no significant difference in the satisfaction levels of the respondents of different income groups. However, it can be seen that higher income group respondents are less satisfied then the lower income group customers.

H0 (12) : There is no significant difference in the satisfaction level of respondents by occupation.The chi square (p) value do not show any trend between the occupation and the preference of service type by the respondents. However it can be seen that those in agriculture are more satisfied than the Business and service class which have some sort of dissatisfaction from their service providers.

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 telecom service connection in Punjab, the responses obtain were put to factor analysis and the result so obtain were subject to Kaiser- Meyer- Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The approximate chi-square value is 765.102 with df 220, which is significant at 0.002 level (Table 3).The value of KMO statistics (0.822) is also large (> 0.5). Hence, all factors are not considered equally important by the customers while buying a telecom connection. An eigen value represents the amount of various associated with

the factors. From table 4, it is evident that the first three variables represent the 76.982 % of variance. Therefore, only these three factors with the variance greater than 1.0 are retained and the other factors are not included in the model. Thus, from eigen values in table 5, we extract only 3 factors from the 13 variables.

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.

Price Consciousness

It is the most significant factor with 29.230 percent of total variance explained. 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 mobile service which has low call charges, discounted SMS charges and low roaming tariffs. The mobile service providers due to tough competition are unwillingly giving price offs on their calls along with many attractive free-offs so that larger masses could be attracted.

Value added Services

It is the second most significant factor with 25.190 percent of total variance explained. The customers being more aware and educated these days demand for the various kinds of value added services. The most sought after VAS these days is embedded facebook in the mobile. Some service providers are even offering free VAS to attract more customer base.

Technical Aspect

It is the third most significant factor with 22.562 percent of total variance explained. The least

Table 3 : KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.822
Bartlett's Test of Sphericity	Approx. Chi-Square	765.102
	Degree of Freedom	220
	Significance	.002

Table 4: Total variance explained

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.103	29.230	29.230	3.103	29.230	29.230	3.103	28.782	28.782
2	2.723	25.190	54.420	2.723	25.190	54.420	2.714	23.450	52.232
3	1.101	22.562	76.982	1.101	22.562	76.982	1.118	21.223	73.455
4	0.890	10.231	87.213						
5	0.811	4.458	91.671						
6	0.789	2.160	93.831						
7	0.674	1.153	94.984						
8	0.611	1.096	96.080						
9	0.556	1.020	97.100						
10	0.489	0.998	98.098						
11	0.390	0.851	98.949						
12	0.278	0.826	99.775						
13	0.217	0.225	100.00						

Table 5 :Rotated component matrix

		Component		
S.No.	Statements	1	2	3
1	I want a telecom connection with low call charges	.814	.732	.686
2	I want a telecom connection with low SMS charges	.634	.612	.589
3	I want a telecom connection which has wide network coverage	.391	.443	.588
4	I want a telecom connection which offers 3G services	.328	.498	.410
5	I want a telecom connection which has a long list of value added services	.406	.534	.424
6	I want a telecom connection with low STD rates	.536	.515	.407
7	I want a telecom connection which offer good voice clarity	.335	.303	.401
8	I want a telecom connection which gives offers fast internet facility at lesser prices	.390	.448	.302
9	I want a telecom connection that charges less for roaming	.660	.570	.346
10	I want a telecom connection that gives me fixed free talk time per month	.510	.419	.342
11	I want a telecom connection which is facebook enabled	.321	.529	.281
12	I want a telecom connection which has low call drop rate	.419	.440	.533
13	I want a telecom connection which has good customer care service	.495	.431	.619

Principal Component Analysis under the rotation method (Varimax with Kaiser Normalization), rotation converged in 21 iterations. The following three components (Table 6) may be extracted: Component 1: Factor 1,2,6,9,10 (Price consciousness),Component 2:Factor 4,5,8,11 (Value Added Services),Component 3:Factor 3,7,12,13 (Technical aspects)The rotated component matrix suggests presence of the Three interrelated factors.

Table 6: Naming of factors

Factor No.	Name of Dimension	Item No.	Variables	Factor loading
F1	Price consciousness	1	I want a telecom connection with low call charges	.814
		2	I want a telecom connection with low SMS charges	.634
		6	I want a telecom connection with low STD rates	.536
		9	I want a telecom connection that charges less for roaming	.660
		10	I want a telecom connection that gives me fixed free talk time per month	.510

F2	Value added services	4	I want a telecom connection which offers 3G services	.536
		5	I want a telecom connection which has a long list of value added services	.435
		8	I want a telecom connection which gives offers fast internet facility at lesser prices	.448
		11	I want a telecom connection which is facebook enabled	.529
F3		3	I want a telecom connection which has wide network coverage	.588
	Technical aspects	7	I want a telecom connection which offer good voice clarity	.401
		12	I want a telecom connection which has low call drop rate	.533
		13	I want a telecom connection which has good customer care service	.619

important factor as per the respondents was Voice clarity, availability of Network coverage and good customer service. This can be explained that the customer expects these attributes to be a part of the standard service. The respondents believe that this is the minimum standard of service which has to be provided by their service providers, henceforth they have not chosen the factors related to technical aspect.

Conclusions

It was seen in the study that most of the young customers prefer prepaid connection over postpaid connections. This may be due to the fact that most youngsters do not want to disclose the exact usage of their mobile connections to their parents. However, the p value was not found to be significant, which shows that there is no significant difference in the preferences of service type by different age groups. As far as Residential background is concerned there is a significant difference in the preferences of service type by rural and urban customers. It was seen that rural customers prefer prepaid services and urban customers prefer postpaid service. This can be attributed to the fact that rural customers are unaware of the billing procedures and they prefer to give money and get their phone recharged on the spot. For gender, education and occupation there was found to be no significant relationship with customer preferences. However, It was seen that the higher income group respondents prefer postpaid connection and lower income group respondents prefer prepaid connection. As far as customer satisfaction is concerned the p values found a significant difference in the satisfaction level of respondents by different age groups as well as residential background. This can be attributed to the fact that young customers have more expectations and demands from their service providers as compared to older customers. It was seen that rural customers are more satisfied then the urban customers. This can be attributed to the fact that rural customers being less aware are less demanding from their mobile service provider as compared to urban customers. For gender, education, income levels and occupation, there was no significant difference found for satisfaction. The results for factor analysis concluded that three factors mostly influence the purchase decisions of customers while purchasing a mobile service connection. These factors include Price Consciousness; value added services and technical aspects. It was seen that the respondents were willing to buy a mobile service which has low call charges, discounted SMS charges and low roaming tariffs. The customers being more aware and educated these days demand for the various kinds of value added services. It was also seen that the least important factor as per the respondents was Voice clarity, availability of Network coverage and good customer service. This can be explained that the customer expects these attributes to be a part of the standard service.

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ANNEXURE

Personal characteristics of respondents

	Frequency	Percentage
Age		
15-25	22	11.0
26-35	110	55.0
36-45	30	15.0
Above 46	38	19.0
Gender		
Male	102	51.0
Female	98	49.0
Occupation		
Agriculture	19	9.5
Business	52	26.0
Service	64	32.0
Student	32	16.0
Housewife	33	16.5
Education		
Post Graduation	54	27.0
Graduation	80	40.0
Secondary	45	22.5
Matric or below	21	10.5
Monthly Income		
Below Rs.10,000	38	19.0
Rs.10,000-20,000	52	26.0
Rs.20,000-30,000	63	31.5
Above Rs.30,000	47	23.5
Residential Background		
Rural	110	55.0
Urban	90	45.0
Marital Status		
Single	89	44.5
Married	111	55.5