

Chapter - 6

CUSTOMER SATISFACTION AND LOYALTY OF MOBILE NETWORK SERVICES-AN ANALYSIS

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The main aim of this chapter is to analyze the level of satisfaction of the customers of various mobile network as well as the factors influencing the customer satisfaction and loyalty. Therefore the researcher subsequently applied t-test, factor analysis, cluster analysis, Analysis of variance and regression methods to exact the perception of customers satisfaction and loyalty towards mobile network services in Kancheepuram district. This chapter also establishes the relationship between brand switching behaviour and customer satisfaction and loyalty in the back drop of mobile network services.

PERCEPTION OF CUSTOMERS ON SATISFACTION LEVEL

The level of satisfaction the customers received from using Mobile networks is segregated and obtained through Likert's five point scale which ranges from strongly agree to strongly disagree. The application of t-test for the customer satisfaction and loyalty is presented below.

T-TEST FOR CUSTOMER SATISFACTION AND LOYALTY OF MOBILE NETWORK

The various reasons expressing the customers satisfaction and loyalty by using the Mobile network is identified through 18 statements (see appendix) is discussed in this context, a parametric t-test has been applied and the following results are obtained. The mechanism of the t-test indicates that the computed mean is compared with the hypothesised mean value 3. The significant positive and negative t-test values indicate the level of satisfaction the customer possesses by using the Mobile network. The significant t-value can be taken to interpret the undecided opinion of the respondent

Table 6.1**One-Sample Statistics for customer satisfaction**

	N	Mean	Std. Deviation	Std. Error Mean
Brand Knowledge	534	4.5843	.82194	.03640
Connectivity/Coverage	534	4.5176	.65044	.02880
Voice Clarity	534	4.1961	.80323	.03557
VAS (Value Added Services)	534	3.9294	.94387	.04180
Availability of Plans as per require	534	3.6922	1.01140	.04479
Advertisement	534	3.7725	1.05601	.04676
Tariff (charge/all/charges)	534	3.6275	1.03686	.04591
Roaming and ISD call charges	534	3.7294	1.14616	.05075
The SMS rate cutter	534	3.9235	1.06748	.04727
The SMS call rate of Re.1 per message on important occasion	534	3.7980	.95292	.04220
Usage of Latest technology in plans	534	4.0549	.85772	.03798
Efficiency of 3G services	534	3.9059	.89912	.03981
Bill payment method	534	3.9706	.93034	.04120
Billing periodic process	534	3.9941	1.05356	.04665
Customer grievance mechanism	534	3.9451	1.00340	.04443
Number portability	534	3.8627	1.00137	.04434
Periodic announcement of new plans	534	3.9667	.97557	.04320
Popular ring tone and their services charges	534	3.9137	1.12150	.04966

From the above table, it is found that all the mean values of the 18 variables ranging from 3.69 to 4.58 with their respective standard deviation as shown in the above table.

Table 6.2

One-Sample Test for customer satisfaction

	Test Value = .3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
	Lower	Upper	Lower	Upper	Lower	Upper
Brand Knowledge	117.713	533	.000	4.28431	4.2128	4.3558
Connectivity/Coverage	146.437	533	.000	4.21765	4.1611	4.2742
Voice Clarity	109.541	533	.000	3.89608	3.8262	3.9660
VAS (Value Added Services)	86.838	533	.000	3.62941	3.5473	3.7115
Availability of Plans as per require	75.742	533	.000	3.39216	3.3042	3.4801
Advertisement	74.262	533	.000	3.47255	3.3807	3.5644
Tariff (charge/all/charges)	72.473	533	.000	3.32745	3.2372	3.4177
Roaming and ISD call charges	67.571	533	.000	3.42941	3.3297	3.5291
The SMS rate cutter	76.658	533	.000	3.62353	3.5307	3.7164
The SMS call rate of Re.1 per message on important occasion	82.900	533	.000	3.49804	3.4151	3.5809
Usage of Latest technology in plans	98.864	533	.000	3.75490	3.6803	3.8295
Efficiency of 3G services	90.569	533	.000	3.60588	3.5277	3.6841
Bill payment method	89.100	533	.000	3.67059	3.5897	3.7515
Billing periodic process	79.184	533	.000	3.69412	3.6025	3.7858
Customer grievance mechanism	82.039	533	.000	3.64510	3.5578	3.7324
Number portability	80.348	533	.000	3.56275	3.4756	3.6499
Periodic announcement of new plans	84.879	533	.000	3.66667	3.5818	3.7515
Popular ring tone and their services charges	72.768	533	.000	3.61373	3.5162	3.7113

From the above table it is found that all the t-test values of the 21 variables mentioned in the above table namely 117.75, 146.44, 109.54, 86.83, 75.74, 74.262, 72.473, 67.571, 76.658, 82.900, 98.864, 90.569, 89.100, 79.184, 82.039, 80.348, 84.879 and 72.768 are statistically significant at 5% level and therefore it is concluded that the customers using Mobile network expressed more satisfaction the brand name, coverage, voice clarity and application of latest technology in plans. The customer's expressed moderate satisfaction towards value added services, availability of plans, Mobile advertisement and the tariff charges roaming and ISD call charges. It is further analysed that the customers also expressed moderate satisfaction towards the SMS call charges, 3G services, payment methods adopted, customer grievances mechanism. Therefore the customers also expressed their satisfaction moderately towards the number portability facilities, periodic announcement of new plans and popular ring tones and services charges charge by the Mobile network.

FACTOR ANALYSIS

Factor analysis has been applied to analyze the variables by identifying common and unique sets variance allowing the researcher to summarize and reduce the data to be described by a much smaller number of variables than the original. In this study, the researcher has taken all elements of customer satisfaction and loyalty of Mobile network. Factor analysis by the principal component method is applied on all 18 variables of brand switching reasons. The following results are obtained for the classification of the factors.

Table 6.3

KMO and Bartlett's Test for customer satisfaction

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.763
Bartlett's Test of Sphericity	Approx. Chi-Square	1395.824
	Df	153
	Sig.	.000

From the above table it is found that KMO measure of sampling adequacy is 0.763, Bartlett's Test of Sphericity with approximated chi-square value 1395.824 are statistically significant at 5 percent level. This indicates all the eighteen variables are normally distributed and suitable for data reduction.

Table 6.4

Communalities for customer satisfaction

	Initial	Extraction
Brand Knowledge	1.000	.644
Connectivity/Coverage	1.000	.518
Voice Clarity	1.000	.512
VAS (Value Added Services)	1.000	.635
Availability of Plans as per require	1.000	.634
Advertisement	1.000	.423
Tariff (charge/all/charges)	1.000	.607
Roaming and ISD call charges	1.000	.288
The SMS rate cutter	1.000	.701
The SMS call rate of Re.1 per message on important occasion	1.000	.514
Usage of Latest technology in plans	1.000	.516
Efficiency of 3G services	1.000	.708
Bill payment method	1.000	.567
Billing periodic process	1.000	.523
Customer grievance mechanism	1.000	.627
Number portability	1.000	.508
Periodic announcement of new plans	1.000	.489
Popular ring tone and their services charges	1.000	.604

Extraction Method: Principal Component Analysis.

From the above table it is found that eighteen variables of customer satisfaction and loyalty factors exhibit the variance 0.288 to 0.644. This implies these six variables establish considerable variance 28.8% to 64.4%. This variance range is

statistically significant at 5% level and the segmentation process can be done for these eighteen variables

Table 6.5

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.629	20.162	20.162	2.072	11.510	11.510
2	1.597	8.872	29.034	1.732	9.625	21.135
3	1.414	7.856	36.890	1.622	9.011	30.146
4	1.230	6.832	43.722	1.587	8.818	38.964
5	1.101	6.118	49.840	1.508	8.378	47.341
6	1.047	5.817	55.657	1.497	8.316	55.657
7	.930	5.167	60.825			
8	.924	5.134	65.959			
9	.823	4.573	70.532			
10	.733	4.073	74.605			
11	.719	3.993	78.598			
12	.661	3.675	82.273			
13	.622	3.453	85.726			
14	.578	3.212	88.939			
15	.576	3.199	92.137			
16	.501	2.781	94.919			
17	.469	2.607	97.526			
18	.445	2.474	100.000			

Extraction Method: Principal Component Analysis.

It is analysed from the total variance table having eighteen variables being reduced into six predominant factors with individual variances 11.510, 9.625, 9.011, 8.818, 8.378, 8.316 and the total variance 55.657%. This shows that the eighteen variables of customers satisfaction and loyalty factors are reduced into six predominant factors to represent their respective underlying variables. The following information clearly explains the variable loadings in each factor.

Table 6.6

Rotated Component Matrix(a) – customers satisfaction

	Component					
	1	2	3	4	5	6
Customer grievance mechanism	.751					
Number portability	.711					
Periodic announcement of new plans	.602					
Popular ring tone and their services charges	.723					
Brand Knowledge		.671				
Connectivity/Coverage		.584				
Voice Clarity		.771				
Advertisement			.544			
Tariff (charge/all/charges)			.490			
Roaming and ISD call charges			.808			
VAS (Value Added Services)				.590		
Availability of Plans as per required				.546		
The SMS rate cutter					.440	
The SMS call rate of Re.1 per message on important occasion					.762	
Usage of Latest technology in plans					.658	
Efficiency of 3G services						.641
Bill payment method						.767
Billing periodic process						.749

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 6 iterations.

From the above table it is found that the first factor comprises of four variables namely:

Customer grievance mechanism (0.751)

Number portability (0.711)

Periodic announcement of new plans (0.602)

Popular ring tone and their service charges (0.723)

Therefore this factor is called as **Add-on services**

The second factor comprises of three variables namely:

Brand Knowledge (0.671)

Connectivity/Coverage (0.584)

Voice Clarity (0.771)

Therefore this factor is called as **Clarity satisfaction**

The third factor comprises of three variables namely:

Advertisement (0.544)

Tariff (charge/call/charges) (0.490)

Roaming and ISD call charges (0.808)

Therefore this factor is called as **Service Cost**

The Fourth factor comprises of two variables namely:

VAS (Value added services) (0.590)

Availability of Plans as per required (0.546)

Therefore this factor is called as **advanced service**

The Fifth factor comprises of three variables namely

The SMS rate cutter (0.440)

The SMS call rate of Re.1 per message (0.762)

Usage of latest technology in plans (0.658)

Therefore this factor is called as **Innovative technology**

The Sixth factor comprises of three variables namely

Efficiency of 3G services (0.641)

Bill payment method (0.767)

Billing periodic process (0.749)

Therefore this factor is called as **Perfect billing**

CLASSIFICATION OF CUSTOMERS OF MOBILE NETWORK BASED ON THE CUSTOMER SATISFACTION

In this section the perceptual differences of customer satisfaction and loyalty of the customers using mobile network in Chennai are identified through k-means cluster analysis. It classifies the sample units into heterogeneous groups and their nature of heterogeneity is anatomically analyzed. The total average scores of the six factors of customer satisfaction and loyalty in using Mobile network classify the sample unit in the following way.

Table 6.7

Final Cluster Centers

	Cluster		
	1	2	3
Add-on services	-.13940 (M)	-.49934 (W)	.84939(S)
Clarity satisfaction	1.59722 (S)	-.35130(W)	-.18953(M)
Service cost	.38433 (S)	-.02585(W)	-.13782(M)
Advanced service	.22258(M)	-.52211(W)	.71711(S)
Innovative technology	.01575(M)	-.04507(W)	.06351(S)
Perfect billing	-.79671(W)	.07853(M)	.24649(S)

Table 6.8

Number of Cases in each Cluster

Cluster	Disloyal customers	82.000	15.36
	Moderate customers	276.000	51.69
	Loyal customers	176.000	32.95
Valid		534.000	100.0

The first cluster comprises of 82 customers (15.36%) are highly satisfied towards the network coverage, easy connectivity with clear voice, tariff and roaming charges and advertisement. They expressed moderate satisfaction towards periodic announcement of new plans, popular ring tones and customer grievances mechanism and are dissatisfied with bill payment methods and its periodic process and 3G services. Therefore this cluster of customers is called **“Disloyal customers”**

The second cluster comprises of 276 customers (51.69%) are moderately satisfied towards billing payment methods, its periodic process and 3G services. They expressed dissatisfaction towards net work coverage, voice clarity, periodic announcements, roaming and service charges, Value added services and advertisements. They expect Mobile network to improve in their services. Therefore this cluster of customers is called **“Moderate customers.”**

The third cluster consists of 176 customers (32.95%) expressed high satisfaction towards add-on services, advanced service, Innovative technology and Perfect billing and moderately expressed satisfaction towards clarity satisfaction and service cost. Therefore this cluster of customers is called **“Loyal customers”**

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND MOBILE NETWORK MOBILE DETAILS

Factor analysis by principal component method derived the factors of customer satisfaction and loyalty of customers using Mobile network. These factors

are considered as the basis to classify the customers into heterogeneous groups. Therefore it is essential to establish the associations between the clusters of customer satisfaction and loyalty and mobile network.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND NUMBER OF YEARS USING MOBILE NETWORK

The association between clusters of brand switching reasons and the number of years using Mobile by the customers is verified in the following table.

Table 6.9

Crosstab for number of years using Mobile

			Number of years using Mobile			Total
			Less than 1 year	1year	2 years	
Customer satisfaction	Disloyal customers	Count	22	45	15	82
		% within Customer satisfaction	26.9%	55.1%	17.9%	100.0%
	Moderate customers	Count	57	116	103	276
		% within Customer satisfaction	20.8%	42.0%	37.1%	100.0%
	Loyal customers	Count	59	69	48	176
		% within Customer satisfaction	33.3%	39.3%	27.4%	100.0%
Total		Count	138	230	166	534
		% within Customer satisfaction	25.9%	43.1%	31.0%	100.0%

From the above table, it is found that 55.1% of disloyal customers are more satisfied in using mobile network since one year, 20.8% of Moderate customers are using Mobile network less than 1 year and 27.4% of loyal customers expressed

moderate satisfaction and are using mobile network since two years. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.10

Chi-Square Tests for number of years using Mobile

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.679(a)	4	.001
Likelihood Ratio	17.975	4	.001
Linear-by-Linear Association	.441	1	.507
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.19.

From the above table, it is found that Pearson chi-square statistics =0.001, $p = .001$ are statistically significant at 5% level. It can be concluded that there is a deep association between the customer satisfaction and loyalty and the number of years using Mobile network. As, the Mobile service providers enhance the quality of service, so that the customer adheres to the same company for a longer period of time.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND CUSTOMERS AVAILING VALUE ADDED SERVICES

The association between clusters of customer satisfaction and loyalty and availing value added services by the customers is verified in the following table.

Table 6.11

Crosstab – Value added services

			Value added Services					Total
			Rarely	Often	Frequently	Regularly	Not regularly	
Customer satisfaction	Disloyal customers	Count	16	23	27	5	10	82
		% within Customer satisfaction	19.2%	28.2%	33.3%	6.4%	12.8%	100.0%
	Moderate customers	Count	59	69	79	45	24	276
		% within Customer satisfaction	21.2%	25.0%	28.8%	16.3%	8.7%	100.0%
	Loyal customers	Count	22	61	56	30	8	176
		% within Customer satisfaction	12.5%	34.5%	31.5%	16.7%	4.8%	100.0%
Total		Count	97	153	162	80	42	534
		% within Customer satisfaction	18.0%	28.6%	30.4%	14.9%	8.0%	100.0%

From the above table, it is found that 33.3% of Disloyal customers using value added services in Mobile network frequently expressed more satisfaction, 25% of Moderate customers expressed satisfaction in using value add services often and 21.2% of customers from the same group also expressed satisfaction by using value added service rarely. 31.5% of loyal customers expressed satisfaction in using regularly the value added services and 4.8% in the same group do not use it regularly. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.12

Chi-Square Tests – Value added services

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.247(a)	8	.028
Likelihood Ratio	18.493	8	.018
Linear-by-Linear Association	.006	1	.939
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.27.

From the above table, it is found that Pearson chi-square statistics =0.028, $p = .018$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customers satisfaction and loyalty and usage of Value Added services by the customer using Mobile network.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND OPINION ON THE CURRENT SERVICE PROVIDER

The association between clusters of customer satisfaction and loyalty and the customers opinion on the service provider is verified in the following table.

Table 6.13

Crosstab – Opinion on the current service provider

			Satisfaction of current service provider		Total
			Yes	No	
Customer satisfaction	Disloyal customers	Count	64	18	82
		% within Customer satisfaction	78.2%	21.8%	100.0%
	Moderate customers	Count	228	48	276
		% within Customer satisfaction	82.6%	17.4%	100.0%
	Loyal customers	Count	118	58	176
		% within Customer satisfaction	67.3%	32.7%	100.0%
Total		Count	410	124	534
		% within Customer satisfaction	76.9%	23.1%	100.0%

From the above table, it is found that 78.2% disloyal customers are satisfied towards their current service provider where 21.8% in the same group expressed dissatisfaction. It is further analysed that 17.4% of the Moderate customers also express dissatisfaction whereas, 67.3% of loyal customers expressed satisfaction over the same. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.14

Chi-Square Tests - Opinion on the current service provider

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.632(a)	2	.001
Likelihood Ratio	13.276	2	.001
Linear-by-Linear Association	7.195	1	.007
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.05.

From the above table, it is found that Pearson chi-square statistics =0.001, $p = .001$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customers satisfaction and loyalty and opinion on the current service provider who offer best transmission services and devices support to the customers using Mobile network.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND PURPOSE OF USING MOBILE SERVICES

The association between clusters of customer satisfaction and loyalty and the purpose of using the mobile services is verified in the following table.

Table 6.15

Crosstab – purpose of using mobile services

			Purpose of using Mobile services				Total
			Business	Office	Personal	Others	
Customer satisfaction	Disloyal customers	Count	36	13	24	9	82
		% within Customer satisfaction	43.6%	15.4%	29.5%	11.5%	100.0%
	Moderate customers	Count	70	70	99	37	276
		% within Customer satisfaction	25.4%	25.4%	36.0%	13.3%	100.0%
	Loyal customers	Count	59	47	54	15	176
		% within Customer satisfaction	33.9%	26.8%	30.7%	8.5%	100.0%
Total		Count	165	130	177	61	534
		% within Customer satisfaction	31.0%	24.3%	33.1%	11.6%	100.0%

From the above table, it is found that 43.6% of disloyal customers are satisfied in using Mobile network for their business purposes. 36% of Moderate customers are satisfied in using the Mobile service for their personal purpose whereas, 26.8% of loyal customers expressed satisfaction in using for their office purpose. 8.9% of the customers in the same group expressed satisfaction in using for other purposes. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.16

Chi-Square Tests - purpose of using mobile services

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.266(a)	6	.039
Likelihood Ratio	13.411	6	.037
Linear-by-Linear Association	.139	1	.710
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.02.

From the above table, it is found that Pearson chi-square statistics =0.039, $p = .037$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and the purpose of using the mobile services by the customer due to its good network and other added advantages.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND THE TYPE OF NETWORK CUSTOMER PREFERS

The association between clusters of customer satisfaction and loyalty and the type of network the customer prefers is verified in the following table.

Table 6.17

Crosstab –Type of network customer prefers

			Type of network customer prefers					Total
			Mobile	Tata Docomo	Reliance	Vodafone	Others	
Customer satisfaction	Disloyal customers	Count	31	24	15	7	5	82
		% within Customer satisfaction	37.2%	29.5%	17.9%	9.0%	6.4%	100.0%
	Moderate customers	Count	112	70	37	43	14	276
		% within Customer satisfaction	40.5%	25.4%	13.3%	15.5%	5.3%	100.0%
	Loyal customers	Count	59	52	32	8	25	176
		% within Customer satisfaction	33.3%	29.8%	18.5%	4.2%	14.3%	100.0%
Total		Count	202	146	84	58	44	534
		% within Customer satisfaction	37.6%	27.5%	15.7%	10.8%	8.4%	100.0%

From the above table, it is found that 37.2% of disloyal customers are satisfied in using Mobile brands and 9% in the same group expressed satisfied in using Vodafone network. 25.4% of Moderate customers are satisfied in using the Tata docomo whereas, 18.5% of loyal customers expressed satisfaction in using Reliance and 14.3% in the same group expressed satisfaction in using other brands. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.18

Chi-Square Tests - Type of network customer prefers

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.187(a)	8	.001
Likelihood Ratio	27.967	8	.000
Linear-by-Linear Association	1.578	1	.209
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.58.

From the above table, it is found that Pearson chi-square statistics =0.001, $p = .000$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customers satisfaction and loyalty and the type of network customer prefers. As many of the customers prefer Mobile services when compared to other brands because they have a professional touch in service and technology and solve customer grievances immediately.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND THE PERCENTAGE OF SATISFACTION IN USING MOBILE SERVICE

The association between clusters of customer satisfaction and loyalty and percentage of overall satisfaction in using Mobile services is verified in the following table.

Table 6.19

Crosstab – Percentage of satisfaction in using Mobile service

			Percentage of satisfaction in using Mobile service					Total
			50% to 60%	60% to 70%	70% to 80%	80% to 90%	90% to 100%	
Customer satisfaction	Disloyal customers	Count	10	45	22	4	1	82
		% within Customer satisfaction	11.5%	55.1%	26.9%	5.1%	1.3%	100.0%
	Moderate customers	Count	35	97	66	59	19	276
		% within Customer satisfaction	12.9%	35.2%	23.9%	21.2%	6.8%	100.0%
	Loyal customers	Count	35	75	18	29	19	176
		% within Customer satisfaction	19.6%	42.9%	10.1%	16.7%	10.7%	100.0%
Total		Count	80	217	106	92	39	534
		% within Customer satisfaction	14.9%	40.8%	19.8%	17.3%	7.3%	100.0%

From the above table, it is found that 55.1% of Disloyal customers expressed 60% to 70% satisfaction in using Mobile brands and 23.9% of Moderate customers are satisfied upto 70% to 80% and 19.6% of loyal customers expressed 50% to 60% satisfaction and 10.7% in the same group expressed 90% to 100% satisfaction in using the Mobile services. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.20

Chi-Square Tests - Percentage of satisfaction in using Mobile service

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.866(a)	8	.000
Likelihood Ratio	42.891	8	.000
Linear-by-Linear Association	.838	1	.360
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.66.

From the above table, it is found that Pearson chi-square statistics =0.000, $p = .000$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and the percentage of satisfaction derived in using Mobile services as the main reason being best network coverage.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND PERSONS INFLUENCED FOR MOBILE NETWORK SERVICES

The association between clusters of customer satisfaction and loyalty and persons influenced to use Mobile services is verified in the following table.

Table 6.21

Crosstab – Influence for Mobile network services

			influenced to use Mobile services					Total
			Family	Friends	Relatives	Media	Others	
Customer satisfaction	Disloyal customers	Count	21	24	28	3	6	82
		% within Customer satisfaction	25.6%	29.5%	34.6%	2.6%	7.7%	100.0%
	Moderate customers	Count	69	62	93	46	6	276
		% within Customer satisfaction	25.0%	22.3%	33.7%	16.7%	2.3%	100.0%
	Loyal customers	Count	50	41	38	16	31	176
		% within Customer satisfaction	28.6%	23.2%	21.4%	8.9%	17.9%	100.0%
Total		Count	140	127	159	65	43	534
		% within Customer satisfaction	26.3%	23.7%	29.8%	12.0%	8.2%	100.0%

From the above table, it is found that 34.6% of Disloyal customers are influenced by their relatives as they are satisfied in using Mobile network 7.7% from the same group have been influenced by others. 25% of Moderate customers are influenced by their family members as they are satisfied in using the mobile services. 23.2% of loyal customers are influenced by friends and 8.9% are influenced by media as they are satisfied by the services rendered by the Mobile network. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.22

Chi-Square Tests - Influence for Mobile network services

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.995(a)	8	.000
Likelihood Ratio	52.448	8	.000
Linear-by-Linear Association	2.955	1	.086
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.42.

From the above table, it is found that Pearson chi-square statistics =0.000, $p = .000$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and influence from family, friends, relatives, and media for using Mobile services since everyone using this brand have more confident and reliability on product.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND OFFER PREFERRED BY CUSTOMERS IN MOBILE

The association between clusters of customer satisfaction and loyalty and offer preferred by the customers persons of Mobile services is verified in the following table.

Table 6.23

Crosstab– Offer preferred

			Offers preferred				Total
			Full talk time	Rate cutter	Life time incoming call	SMS booster	
Customer satisfaction	Disloyal customers	Count	38	19	21	4	82
		% within Customer satisfaction	46.2%	23.1%	25.6%	5.1%	100.0%
	Moderate customers	Count	110	74	78	14	276
		% within Customer satisfaction	39.8%	26.9%	28.4%	4.9%	100.0%
	Loyal customers	Count	57	41	47	31	176
		% within Customer satisfaction	32.1%	23.2%	26.8%	17.9%	100.0%
Total		Count	205	134	146	49	534
		% within Customer satisfaction	38.2%	25.1%	27.5%	9.2%	100.0%

From the above table, it is found that 46.2% of Disloyal customers are satisfied with the full talk time offers and 5.1% of the customers in the same group are satisfied with SMS booster. 26.9% of the Moderate customers are satisfied with the rate cutter and 26.8% of the loyal customers are satisfied with life time incoming call offers. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.24

Chi-Square Tests - Offer preferred

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.288(a)	6	.000
Likelihood Ratio	22.706	6	.001
Linear-by-Linear Association	11.554	1	.001
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.19.

From the above table, it is found that Pearson chi-square statistics =0.000, $p = .001$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and offered preferred by the customers using Mobile services. As in this competitive world, mobile companies in order to retain their existing customers and attract new customers, provide more offers suitable to the customers preferences that provide them satisfaction and do not make them switch over to other brands easily.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND FACTORS CONSIDERED WHILE PURCHASING MOBILE NETWORK

The association between clusters of customer satisfaction and loyalty and factors considered while purchasing Mobile services is verified in the following table.

Table 6.25

Crosstab – Factors considered while purchasing Mobile services

			Factors considered while purchasing Mobile services				Total
			Money	Services	Network Coverage	Any others	
Customer satisfaction	Disloyal customers	Count	27	15	34	6	82
		% within Customer satisfaction	32.9%	18.3%	41.5%	7.3%	100.0%
	Moderate customers	Count	62	54	135	25	276
		% within Customer satisfaction	22.5%	19.5%	48.9%	9.1%	100.0%
	Loyal customers	Count	40	35	70	31	176
		% within Customer satisfaction	22.7%	19.9%	39.8%	17.6%	100.0%
Total		Count	129	104	239	62	534
		% within Customer satisfaction	24.1%	19.4%	44.7%	11.8%	100.0%

From the above table, it is found that 32.9% of disloyal customers satisfied with the Mobile services consider the cost at the time of purchasing this brand. 19.5% of the Moderate customers consider services rendered after sale and 39.8% of the loyal customers consider network coverage and 17.6% of the customer in the same group considers other factors during the purchase of Mobile services. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.26

Chi-Square Tests - Factors considered while purchasing Mobile services

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.484(a)	6	.036
Likelihood Ratio	12.772	6	.047
Linear-by-Linear Association	4.405	1	.036
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.18.

From the above table, it is found that Pearson chi-square statistics =0.036, $p = .047$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and factors considered such as cost, service, network coverage, colour, shape etc., the most while purchasing Mobile services.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND AWARENESS OF ADVERTISEMENT OF MOBILE NETWORK

The association between clusters of customer satisfaction and loyalty and awareness of Mobile network advertisement is verified in the following table.

Table 6.27**Crosstab – Awareness of Mobile network advertisement**

			Awareness of advertisement		Total
			Yes	No	
Customer satisfaction	Disloyal customers	Count	60	22	82
		% within Customer satisfaction	73.1%	26.9%	100.0%
	Moderate customers	Count	222	54	276
		% within Customer satisfaction	80.4%	19.6%	100.0%
	Loyal customers	Count	103	73	176
		% within Customer satisfaction	58.5%	41.5%	100.0%
Total		Count	384	150	534
		% within Customer satisfaction	72.0%	28.0%	100.0%

From the above table, it is found that 73.1% of Disloyal customers satisfied with the Mobile services are aware of mobile network advertisement and 19.6% of the Moderate customers satisfied with the Mobile services are not aware of mobile advertisement. It is further found that 58.5% of loyal customers are also aware of Mobile advertisement. This leads to the computation of chi-square statistics as stated in the table below.

Table 6.28**Chi-Square Tests - Awareness of Mobile network advertisement**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.616(a)	2	.000
Likelihood Ratio	24.133	2	.000
Linear-by-Linear Association	12.140	1	.000
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.87.

From the above table, it is found that Pearson chi-square statistics =0.000, p = .000 are statistically significant at 5% level. It can be concluded that there is a deep association between the customer's satisfaction and awareness of mobile network advertisements. Therefore awareness of Mobile network advertisement plays a major role in a consumer's buying decision-making process. It is imperative and very helpful to analyze the response of the customers towards the product and availability of the product to the consumer is one such way of doing this.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND AWARENESS OF MOBILE POSTPAID PLANS

The association between clusters of customer satisfaction and loyalty and awareness of Mobile network post-paid plans is verified in the following table.

Table 6.29

Crosstab – Awareness of Mobile Post-paid plans

			Awareness of Mobile Post-paid plans		Total
			Yes	No	
Customer satisfaction	Disloyal customers	Count	28	54	82
		% within Customer satisfaction	34.1%	65.9%	100.0%
	Moderate customers	Count	167	109	276
		% within Customer satisfaction	60.6%	39.4%	100.0%
	Loyal customers	Count	51	125	176
		% within Customer satisfaction	29.0%	71.0%	100.0%
Total		Count	246	288	534
		% within Customer satisfaction	46.1%	53.9%	100.0%

From the above table, it is found that 65.9% of Disloyal customers satisfied with the Mobile services are not aware of post-paid plans, 60.6% of the Moderate customers satisfied with the Mobile services are aware of mobile post paid plans. It is further found that 71.0% of loyal customers are also not aware of Mobile post paid plans. This leads to the computation of chi-square statistics as stated in the table below

Table 6.30

Chi-Square Tests - Awareness of Mobile Post-paid plans

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.853(a)	2	.000
Likelihood Ratio	46.717	2	.000
Linear-by-Linear Association	6.734	1	.009
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 36.09.

From the above table, it is found that Pearson chi-square statistics =0.000, $p = .000$ are statistically significant at 5% level. There is a deep association between the customer's satisfaction and awareness of mobile post-paid plans a being satisfaction among the customer as they are given the benefit of charging their bills at a flat rate for any usage equal to or less than that allowance.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND PRICES ON RECHARGES

The association between clusters of customer satisfaction and loyalty and prices on Mobile recharges is verified in the following table.

Table 6.31

Crosstab – Prices on recharges

			Prices on recharges				Total
			Rs.120	Rs.155	Rs.250	Rs.1000	
Customer satisfaction	Disloyal customers	Count	23	27	32	0	82
		% within Customer satisfaction	28.0%	32.9%	39.1%	0.0%	100.0%
	Moderate customers	Count	69	100	105	2	276
		% within Customer satisfaction	25.0%	36.4%	38.0%	.8%	100.0%
	Loyal customers	Count	64	39	62	11	176
		% within Customer satisfaction	36.3%	22.0%	35.1%	6.6%	100.0%
Total		Count	156	166	199	13	534
		% within Customer satisfaction	29.2%	31.2%	37.1%	2.5%	100.0%

From the above table, it is found that 39.1% of Disloyal customers are satisfied with Rs.250 on Mobile recharges and 36.4% of the Moderate customers are satisfied on Rs.155 on Mobile recharges and 0.8% of customers in the same group on Rs.1000 recharge. It is further found that 36.3% of loyal customers are satisfied on Rs.120 Mobile recharges. This leads to the computation of chi-square statistics as stated in the table below:

Table 6.32

Chi-Square Tests – Prices on recharges

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.546(a)	6	.000
Likelihood Ratio	27.875	6	.000
Linear-by-Linear Association	.001	1	.979
N of Valid Cases	534		

a 2 cells (16.7%) have expected count less than 5. The minimum expected count is 1.99.

From the above table, it is found that Pearson chi-square statistics =0.000, $p = .000$ are statistically significant at 5% level. It can be concluded that there is a deep association between the customer's satisfaction and Prices on Mobile recharges which are affordable by different types of income earning groups of customers using Mobile network.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND USING OF MOBILE

The association between clusters of customer satisfaction and loyalty and maximum using of mobile services is verified in the following table.

Table 6.33

Crosstab – using of Mobile services

			Using of Mobile services			Total
			Incoming	Out going	Both	
Customer satisfaction	Disloyal customers	Count	15	37	30	82
		% within Customer satisfaction	18.3%	45.1%	36.6%	100.0%
	Moderate customers	Count	86	33	157	276
		% within Customer satisfaction	31.2%	12.0%	56.8%	100.0%
	Loyal customers	Count	48	63	65	176
		% within Customer satisfaction	27.4%	35.7%	36.9%	100.0%
Total		Count	149	133	252	534
		% within Customer satisfaction	27.9%	24.9%	47.2%	100.0%

From the above table, it is found that 45.1% of Disloyal customers are satisfied in outgoing Mobile services, 56.8% of the Moderate customers are satisfied in both incoming and outgoing mobile services and 27.4% of loyal customers are satisfied in incoming Mobile services. This leads to the computation of chi-square statistics as stated in the table below:

Table 6.34

Chi-Square Tests – Using of Mobile services

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.026(a)	4	.000
Likelihood Ratio	53.241	4	.000
Linear-by-Linear Association	1.649	1	.199
N of Valid Cases	534		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.42.

From the above table, it is found that Pearson chi-square statistics =0.000, p = .000 are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and using of Mobile services as they attract the customers with service guarantee and offering long term loyalty benefits staggered over a period of time.

ASSOCIATION BETWEEN CUSTOMER SATISFACTION AND LOYALTY AND AVERAGE AMOUNT SPEND ON MOBILES

The association between clusters of customer satisfaction and loyalty and average amount spent on mobiles per month is verified in the following table.

Table 6.35

Crosstab – Average spend on mobiles

			Average spend on mobiles					Total
			<100	101-200	201-300	301-400	Above Rs.500	1.00
Customer satisfaction	Disloyal customers	Count	16	32	29	4	1	82
		% within Customer satisfaction	19.5%	39.0%	35.4%	4.9%	1.2%	100.0%
	Moderate customers	Count	45	136	71	17	7	276
		% within Customer satisfaction	16.3%	49.3%	25.7%	6.2%	2.5%	100.0%
	Loyal customers	Count	31	69	38	28	9	176
		% within Customer satisfaction	17.6%	39.2%	21.6%	16.0%	5.1%	100.0%
Total		Count	92	237	138	49	18	534
		% within Customer satisfaction	17.3%	44.3%	25.9%	9.2%	3.3%	100.0%

From the above table, it is found that 38.5% of Disloyal customers are satisfied in spending Rs.101 to Rs.200 on mobile recharges per month and only a minimum of 1.3% spend above Rs.1000. 25.8% of the Moderate customers are satisfied in spending Rs.201 to Rs.300 on mobile recharges per month and 17.9% of loyal customers satisfied with the mobile services spend less than Rs.100 per month and 16.1% from the same group spend Rs.301 to Rs.400 per month. This leads to the computation of chi-square statistics as stated in the table below

Table 6.36

Chi-Square Tests - Average spend on mobiles

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.926(a)	8	.002
Likelihood Ratio	22.796	8	.004
Linear-by-Linear Association	3.960	1	.047
N of Valid Cases	534		

a 1 cells (6.7%) have expected count less than 5. The minimum expected count is 2.60.

From the above table, it is found that Pearson chi-square statistics =0.002, $p = .004$ are statistically significant at 5% level. Therefore it can be concluded that there is a deep association between the customer's satisfaction and average amount spend on recharges per month that is purely based on the customer's usages of mobile networks.

INFLUENCE OF PERSONAL VARIABLES OF CUSTOMERS USING MOBILE NETWORK AND THEIR LEVEL OF SATISFACTION

Customers using Mobile network are influenced by their demographic backgrounds. It is found that gender, age, educational qualification, occupation, Income, marital status are considered as independent variables on the factors of level of satisfaction of customers by using Mobile network is obtained through the analysis

of variance. It compares the segmentation of various demographic variables and their respective mean values simultaneously.

Influence of gender of the customers using mobile network on the factors of level of satisfaction

The present study deals with the gender of customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.37

ANOVA- Gender

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	9.935	1	9.935	19.627	.000
	Within Groups	257.154	532	.506		
	Total	267.089	533			
Clarity satisfaction	Between Groups	7.576	1	7.576	24.911	.000
	Within Groups	154.501	532	.304		
	Total	162.078	533			
Service cost	Between Groups	6.031	1	6.031	10.817	.001
	Within Groups	283.242	532	.558		
	Total	289.273	533			
Advanced service	Between Groups	1.571	1	1.571	2.430	.120
	Within Groups	328.420	532	.646		
	Total	329.991	533			
Innovative technology	Between Groups	3.152	1	3.152	7.063	.008
	Within Groups	226.683	532	.446		
	Total	229.835	533			
Perfect billing	Between Groups	8.997	1	8.997	20.358	.000
	Within Groups	224.499	532	.442		
	Total	233.495	533			

From the table it is found that add-on services ($F=19.627$), Clarity satisfaction ($F=24.911$), Service Cost ($F=10.817$), Innovative technology ($F=7.063$), Perfect billing ($F=20.358$) differs significantly with respect to gender of the customers using Mobile network in Kanchepuram District. This leads to mean wise comparison of each segment of gender group.

It can be concluded that the male customers using Mobile network expressed moderate satisfaction towards add-on services (mean = 3.99) and service cost (mean = 3.76) compared to female customers opinions on add-on services (mean=3.65) and customer care (mean = 3.50). It is further found that the female customers expressed high satisfaction towards Innovative technology (mean = 4.07) compared to male customers (mean = 3.88). The analysis further revealed that male customers strongly agreed towards clarity satisfaction (mean = 4.49) and Perfect billing (mean = 4.02) compared to female customers concerned to clarity satisfaction (mean = 4.19) and Perfect billing (mean = 3.71).

Influence of age of the customers using mobile network on the factors of level of satisfaction

The present study deals with the age of customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.38**ANOVA -Age**

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	24.428	3	8.143	16.979	.000
	Within Groups	242.662	530	.480		
	Total	267.089	533			
Clarity satisfaction	Between Groups	7.667	3	2.556	8.375	.000
	Within Groups	154.411	530	.305		
	Total	162.078	533			
Service cost	Between Groups	11.275	3	3.758	6.841	.000
	Within Groups	277.998	530	.549		
	Total	289.273	533			
Advanced service	Between Groups	9.119	3	3.040	4.793	.003
	Within Groups	320.872	530	.634		
	Total	329.991	533			
Innovative technology	Between Groups	4.469	3	1.490	3.344	.019
	Within Groups	225.367	530	.445		
	Total	229.835	533			
Perfect billing	Between Groups	6.007	3	2.002	4.453	.004
	Within Groups	227.489	530	.450		
	Total	233.495	533			

From the table it is found that add-on services (F=16.979), Clarity satisfaction (F=8.375), Service Cost (F=6.841), Advanced service(F=4.793), Innovative technology (F=3.344), Perfect billing (F=4.453) differs significantly with respect to age of the customers using Mobile network in Kancheepuram District. This leads to mean wise comparison of each segment of age group.

It can be concluded that the customers in the age group 31 to 40 years expressed high satisfaction towards add-on services(mean = 4.11), Perfect billing (mean = 4.04) and moderate satisfaction towards service cost (mean = 3.87), advanced service (mean = 3.95), compared to other age group of the customers using Mobile network. The analysis further revealed that customers in the age group 31 to 40 years expressed more satisfaction towards networking services (mean = 4.53) compared to

customer in the age group below 20 years (mean = 4.27) whereas the customer in the same age group (mean = 4.09) expressed high satisfaction towards Innovative technology compared to customers in the age group above 40 (mean = 3.78).

Influence of education of the customers using mobile network on the factors of level of satisfaction

The present study deals with the education of customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.39

ANOVA-Education

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	12.161	4	3.040	6.023	.000
	Within Groups	254.928	529	.505		
	Total	267.089	533			
Clarity satisfaction	Between Groups	5.420	4	1.355	4.368	.002
	Within Groups	156.657	529	.310		
	Total	162.078	533			
Service cost	Between Groups	4.116	4	1.029	1.822	.123
	Within Groups	285.157	529	.565		
	Total	289.273	533			
Advanced service	Between Groups	4.643	4	1.161	1.802	.127
	Within Groups	325.348	529	.644		
	Total	329.991	533			
Innovative technology	Between Groups	4.868	4	1.217	2.732	.029
	Within Groups	224.968	529	.445		
	Total	229.835	533			
Perfect billing	Between Groups	5.247	4	1.312	2.902	.021
	Within Groups	228.249	529	.452		
	Total	233.495	533			

From the table it is found that add-on services ($F=6.023$), Clarity satisfaction ($F=4.368$), Innovative technology ($F=2.732$), Perfect billing ($F=2.902$) differs significantly with respect to educational qualification of the Mobile customers. This leads to mean wise comparison of each segment of educational group.

It can be concluded that the customers with post graduation educational qualification expressed high satisfaction towards add-on services (mean = 4.10), clarity satisfaction (mean = 4.46) and Perfect billing (mean = 4.08) compared to customers have other educational qualification. The analysis further revealed that customers having SSLC qualification expressed high satisfaction towards Innovative technology (mean = 4.03) compared to customer having graduate educational qualification (mean = 3.96).

Influence of occupation of the customers using mobile network on the factors of level of satisfaction

The present study deals with the occupation of the customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.40**ANOVA -Occupation**

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	51.290	5	10.258	23.958	.000
	Within Groups	215.799	528	.428		
	Total	267.089	533			
Clarity satisfaction	Between Groups	12.002	5	2.400	8.061	.000
	Within Groups	150.076	528	.298		
	Total	162.078	533			
Service cost	Between Groups	20.175	5	4.035	7.557	.000
	Within Groups	269.098	528	.534		
	Total	289.273	533			
Advanced service	Between Groups	8.637	5	1.727	2.709	.020
	Within Groups	321.353	528	.638		
	Total	329.991	533			
Innovative technology	Between Groups	6.563	5	1.313	2.963	.012
	Within Groups	223.272	528	.443		
	Total	229.835	533			
Perfect billing	Between Groups	19.682	5	3.936	9.279	.000
	Within Groups	213.814	528	.424		
	Total	233.495	533			

From the table it is found that add-on services (F=23.958), Clarity satisfaction (F=8.061), service cost (mean = 7.557), advanced service (mean = 2.709), Innovative technology (F=2.963), Perfect billing (F=9.279) differs significantly with respect to occupation of the Mobile customers. This leads to mean wise comparison of each segment of occupation group.

It can be concluded that the customers with professional occupation expressed high satisfaction towards add-on services (mean = 4.20) and moderate satisfaction towards service cost (mean = 3.94) compared to customers with other occupations. The analysis further revealed that customers working in Government /Private (mean = 4.53) expressed high satisfaction towards clarity satisfaction compared to students (mean = 4.18). It is further concluded that those customers having self employed

occupation (mean = 3.96) moderate expressed satisfaction towards service segmentation and highly satisfied towards Perfect billing (mean = 4.16) compared to students (mean = 3.58) and unemployed customers (mean = 3.51).

Influence of income of the customers using mobile network on the factors of level of satisfaction

The present study deals with the income of the customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.41

ANOVA –Income

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	52.779	4	13.195	31.092	.000
	Within Groups	214.311	529	.424		
	Total	267.089	533			
Clarity satisfaction	Between Groups	9.114	4	2.279	7.523	.000
	Within Groups	152.963	529	.303		
	Total	162.078	533			
Service cost	Between Groups	23.543	4	5.886	11.185	.000
	Within Groups	265.730	529	.526		
	Total	289.273	533			
Advanced service	Between Groups	12.087	4	3.022	4.800	.001
	Within Groups	317.904	529	.630		
	Total	329.991	533			
Innovative technology	Between Groups	22.002	4	5.501	13.366	.000
	Within Groups	207.833	529	.412		
	Total	229.835	533			
Perfect billing	Between Groups	22.862	4	5.715	13.703	.000
	Within Groups	210.634	529	.417		
	Total	233.495	533			

From the table it is found that add-on services ($F=31.092$), Clarity satisfaction ($F=7.523$), service cost (mean = 11.185), advanced service (mean = 4.800), Innovative technology ($F=13.366$), Perfect billing ($F=13.703$) differs significantly with respect to income of the Mobile customers. This leads to mean wise comparison of each segment of income group.

It can be concluded that the customers earning a monthly income Rs.10001 to Rs.15000 expressed high satisfaction towards add-on services (mean = 4.30), net working clarity (mean = 4.59) and Perfect billing (mean = 4.26) compared to customers earning other groups of customers earning different incomes and also revealed that customers of same group (mean = 3.96) expressed moderate satisfaction towards service cost compared to customer earning a monthly income of Rs.20001 and above (mean = 3.44). The analysis further revealed that customers earning a monthly income of Rs.15001 to Rs.20000 expressed high satisfaction towards advanced service (mean = 4.06) and Innovative technology (mean = 4.23) compared to customers earning a monthly income of Rs.50001 to Rs.10000 concerned to advanced service (mean = 3.78) and Innovative technology (mean = 3.67).

Influence of marital status of the customers using mobile network on the factors of level of satisfaction

The present study deals with the marital status of the customers and the factors of level of satisfaction derived by the customers in using Mobile network is analysed through factor analysis, a principal component method. The relationship between independent and dependent variables is established through one-way Analysis of Variance (ANOVA) as presented below.

Table 6.42**ANOVA –marital status**

		Sum of Squares	df	Mean Square	F	Sig.
Add-on services	Between Groups	30.539	1	30.539	65.584	.000
	Within Groups	236.550	532	.466		
	Total	267.089	533			
Clarity satisfaction	Between Groups	5.123	1	5.123	16.581	.000
	Within Groups	156.955	532	.309		
	Total	162.078	533			
Service cost	Between Groups	5.658	1	5.658	10.134	.002
	Within Groups	283.615	532	.558		
	Total	289.273	533			
Advanced service	Between Groups	6.099	1	6.099	9.565	.002
	Within Groups	323.892	532	.638		
	Total	329.991	533			
Innovative technology	Between Groups	2.325	1	2.325	5.191	.023
	Within Groups	227.510	532	.448		
	Total	229.835	533			
Perfect billing	Between Groups	9.522	1	9.522	21.597	.000
	Within Groups	223.973	532	.441		
	Total	233.495	533			

From the table it is found that add-on services ($F=65.584$), Clarity satisfaction ($F=16.581$), service cost (mean =10.134), advanced service (mean = 9.565), Innovative technology ($F=2.325$), Perfect billing ($F=21.597$) differs significantly with respect to marital status of the Mobile customers. This leads to mean wise comparison of each segment of marital status group.

It can be concluded that the married customers expressed high satisfaction towards add-on services (mean = 4.09), net working clarity (mean = 4.50) and Perfect billing (mean = 4.05) compared to unmarried customers concerned to add-on services (mean = 3.57), net working clarity (mean = 4.28) and Perfect billing (mean = 3.76). It is further revealed that unmarried customers expressed high satisfaction for Innovative technology (mean = 4.02) compared to married customers (mean = 3.87). The

analysed also stated that married customers expressed moderate satisfaction towards service cost (mean = 3.78), advanced service (mean = 3.88) compared to unmarried customers concerned to service cost (mean = 3.55) and advanced service (mean = 3.65).

Influence of brand switching reasons on customer satisfaction and loyalty of mobile services

The subsequent application of factor analysis by principal component method identified six predominant factors easy usage, extensive reliability, affordable price, brand reputation, customer care, Efficient coverage of brand switching reasons and six factors add-on services, network clarity, service cost, advanced service, Innovative technology and Perfect billing of customer satisfaction and loyalty are considered as independent and dependent variables . The cumulative influence of these six factors of brand switching reasons on customer satisfaction and loyalty of Mobile services are examined through regression analysis in the following section.

1. INFLUENCE OF BRAND SWITCHING REASONS ON ADD-ON SERVICES

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty add-on services are measured through regression analysis and the results are presented below.

Table 6.43

Model Summary – brand switching reasons on add-on services

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707(a)	.500	.494	.51522

a Predictors: (Constant), user-friendly, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that R=0.707, R-square =0.500, and adjusted R-square is equal to 0.494. This implies that the factors of brand

switching reasons explain the add-on services factors of customer satisfaction and loyalty at 50 % level. The goodness of regression fit is presented in the following table.

Table 6.44

ANOVA -brand switching reasons on add-on services

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.566	6	22.261	83.860	.000(a)
	Residual	133.524	527	.265		
	Total	267.089	533			

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Technical approach

b Dependent Variable: add-on services

From the above table it is found that the F-value = 83.860, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons of mobile services and add-on services of customer satisfaction and loyalty factor are significantly related and they have the good explanatory powers.

Table 6.45

Coefficients-brand switching reasons on add-on services

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.922	.023		171.911	.000
	Efficient coverage	.407	.023	.562	17.839	.000
	Customer care	.180	.023	.248	7.873	.000
	Brand reputation	-.085	.023	-.117	-3.720	.000
	Affordable price	.149	.023	.206	6.527	.000
	Brand attachment	.121	.023	.167	5.293	.000
	Easy usage	.142	.023	.196	6.206	.000

a Dependent Variable: add-on services

Table 6.47**ANOVA -brand switching reasons on clarity satisfaction**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.005	6	5.668	22.259	.000(a)
	Residual	128.073	527	.255		
	Total	162.078	533			

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

b Dependent Variable: Clarity satisfaction

From the above table it is found that the F-value = 22.539, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons factors have good explanatory powers to predict the customer satisfaction and loyalty of Mobile services

Table 6.48**Coefficients-brand switching reasons on clarity satisfaction**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	4.433	.022		198.384	.000
	Efficient coverage	.170	.022	.302	7.613	.000
	Customer care	.119	.022	.211	5.321	.000
	Brand reputation	-.007	.022	-.012	-.311	.756
	Affordable price	.070	.022	.125	3.149	.002
	Brand attachment	.048	.022	.085	2.156	.032
	Easy usage	.128	.022	.226	5.712	.000

a Dependent Variable: Clarity satisfaction

From the above table it is found that Efficient coverage ($t=7.613$, $p=0.000$), customer care ($t=5.321$, $p=0.000$), affordable price ($t=3.149$, $p=0.002$), brand attachment($t=2.156$, $p=0.032$) and easy usage ($t=5.712$, $p=.000$) are statistically significant at 5 percent level. The regression analysis concludes that the brand switching reasons factors of mobile services except brand reputation offer them good satisfaction levels. The customers of mobile services are able to get the services preferred by them at the initial stages of obtaining services.

3. INFLUENCE OF BRAND SWITCHING REASONS ON SERVICE COST

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty service cost are measured through regression analysis and the results are presented below.

Table 6.49

Model Summary - brand switching reasons on service cost

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497(a)	.247	.238	.65793

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that $R=0.497$, $R\text{-square} =0.247$, and adjusted $R\text{-square}$ is equal to 0.238. This implies that the factors of brand switching reasons explain service cost factor of customer satisfaction and loyalty at 24.7% level. The goodness of regression fit is presented in the following table.

Table 6.50**ANOVA--brand switching reasons on service cost**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.536	6	11.923	27.543	.000(a)
	Residual	217.737	527	.433		
	Total	289.273	533			

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

b Dependent Variable: service cost

From the above table it is found that the F-value =27.543, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons of mobile services customers and their level of satisfaction factor service cost are significantly related and they have the good explanatory powers.

Table 6.51**Coefficients-brand switching reasons on service cost**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.710	.029		127.337	.000
	Efficient coverage	.309	.029	.410	10.606	.000
	Customer care	.138	.029	.183	4.725	.000
	Brand reputation	.027	.029	.036	.925	.356
	Affordable price	.061	.029	.082	2.108	.036
	Brand attachment	.113	.029	.150	3.887	.000
	Easy usage	.092	.029	.123	3.168	.002

a Dependent Variable: service cost

From the above table it is found that Efficient coverage ($t=10.606$, $p=0.000$), customer care ($t=4.725$, $p=0.000$), affordable price ($t=2.108$, $p=0.036$), brand attachment ($t=3.887$, $p=.000$) and easy usage ($t=3.168$, $p=.002$) are statistically significant at 5 percent level. On the whole, it can be concluded that the brand switching reasons of mobile customers on efficient coverage, efficiency of services, brand attachment and easy usage give them high satisfaction on service cost after experiencing the services.

4. INFLUENCE OF BRAND SWITCHING REASONS ON ADVANCED SERVICE

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty service are measured through regression analysis and the results are presented below

Table 6.52

Model Summary-brand switching reasons on advanced service

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.361(a)	.130	.120	.75550

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that $R=0.361$, $R\text{-square} =0.130$, and adjusted $R\text{-square}$ is equal to 0.120 . This implies that the factors of brand switching reasons explain advanced service factors of customer satisfaction and loyalty at 13.0% level. The goodness of regression fit is presented in the following table.

Table 6.53

ANOVA-brand switching reasons on advanced service

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.886	6	7.148	12.522	.000(a)
	Residual	287.105	527	.571		
	Total	329.991	533			

a Predictors: (Constant), easy usage, extensive reliability, affordable price, brand reputation, customer care, Efficient coverage

b Dependent Variable: advanced service

From the above table it is found that the F-value =12.522, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons of mobile services are able to predict the advanced service satisfaction of the customers significantly.

Table 6.54

Coefficients -brand switching reasons on advanced service

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.811	.033		113.910	.000
	Efficient coverage	.194	.033	.240	5.779	.000
	Customer care	.097	.033	.121	2.903	.004
	Brand reputation	.061	.033	.076	1.816	.070
	Affordable price	.139	.033	.172	4.143	.000
	Brand attachment	.056	.033	.069	1.669	.096
	Easy usage	.106	.033	.132	3.172	.002

a Dependent Variable: advanced service

From the above table it is found that Efficient coverage ($t=5.779$, $p=0.000$), customer care ($t=2.903$, $p=0.004$), affordable price ($t=4.143$, $p=0.000$) and easy usage ($t=3.172$, $p=0.002$) are statistically significant at 5 percent level. The multiple regression analysis clearly displayed that the customer preference towards technology, customer care, effective cost and easy usage approach fetch them a maximum satisfaction on the advanced service of mobile network services.

5. INFLUENCE OF BRAND SWITCHING REASONS ON INNOVATIVE TECHNOLOGY

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty Innovative technology are measured through regression analysis and the results are presented below.

Table 6.55

Model Summary-brand switching reasons on Innovative technology

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354(a)	.126	.115	.63211

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that $R=0.354$, $R\text{-square}=0.126$, and adjusted $R\text{-square}$ is equal to 0.115 . This implies that the factors of brand switching reasons explain the satisfaction of Innovative technology at 13.0% level. The goodness of regression fit is presented in the following table.

Table 6.56

ANOVA-brand switching reasons on Innovative technology

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.854	6	4.809	12.036	.000(a)
	Residual	200.981	527	.400		
	Total	229.835	533			

a Predictors: (Constant), easy usage, extensive reliability, affordable price, brand reputation, customer care, Efficient coverage

b Dependent Variable: Innovative technology

From the above table it is found that the F-value =12.036, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons of mobile services are able to predict the satisfaction of the customers on Innovative technology significantly

Table 6.57

Coefficients -brand switching reasons on Innovative technology

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.925	.028		140.244	.000
	Efficient coverage	-.164	.028	-.244	-5.858	.000
	Customer care	.080	.028	.119	2.842	.005
	Brand reputation	.127	.028	.189	4.531	.000
	Affordable price	-.003	.028	-.004	-.107	.915
	Brand attachment	.083	.028	.123	2.954	.003
	Easy usage	-.021	.028	-.031	-.741	.459

a Dependent Variable: Innovative technology

From the above table it is found that Efficient coverage (t=-5.858, p=0.000), customer care (t=2.842, p=0.005), brand reputation (t=4.531, p=0.000) and brand attachment(t=2.954, p=.003) are statistically significant at 5 percent level. Therefore it can be concluded that the Innovative technology satisfaction of mobile services directly depends upon the preference of customers on technology, customer care, brand reputation as well as the reliability of the service.

6. INFLUENCE OF BRAND SWITCHING REASONS ON PERFECT BILLING

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty namely Perfect billing are measured through regression analysis and the results are presented below

Table 6.58

Model Summary-brand switching reasons on Perfect billing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518(a)	.269	.260	.58260

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that $R=0.518$, $R\text{-square}=0.269$, and adjusted $R\text{-square}$ is equal to 0.260 . This implies that the factors of brand switching reasons explain the satisfaction of Perfect billing at 26.9% level. The goodness of regression fit is presented in the following table.

Table 6.59

ANOVA-brand switching reasons on Perfect billing

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.764	6	10.461	30.818	.000(a)
	Residual	170.732	527	.339		
	Total	233.495	533			

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

b Dependent Variable: Perfect billing

From the above table it is found that the F-value =30.818, p=0.000 are statistically significant at 5% level. Therefore it is inferred that the brand switching reasons of mobile services are able to predict the satisfaction of the customers on perfect billing significantly

Table 6.60

Coefficients -brand switching reasons on Perfect billing

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.957	.026		153.378	.000
	Efficient coverage	.230	.026	.340	8.906	.000
	Customer care	.137	.026	.202	5.290	.000
	Brand reputation	-.086	.026	-.127	-3.323	.001
	Affordable price	.097	.026	.143	3.749	.000
	Brand attachment	.074	.026	.109	2.856	.004
	Easy usage	.172	.026	.254	6.659	.000

a Dependent Variable: billing services

From the above table it is found that Efficient coverage (t=8.906, p=0.000), customer care (t=5.290, p=0.000), brand reputation (t=-3.323, p=0.000), affordable price, brand attachment(t=2.856, p=0.004) and easy usage (t=6.659, p=.000) are statistically significant at 5 percent level. Therefore it can be concluded that the Perfect billing satisfaction of mobile service customers can be well predicted by the customer preference on technological services, cost and friendly operative procedures.

Therefore the quality of service provided by the mobile companies service provider is directly influencing the customers satisfaction. The brand switching reasons is the point on inception for the customers to expect the service and the satisfaction is the ultimate perception after experiencing the service. There is a significant influence of brand switching reasons on customer's satisfactions and loyalty.

From the above table it is found that Efficient coverage ($t=17.839$, $p=0.000$), customer care ($t=7.873$, $p=0.000$), brand reputation ($t=-3.873$, $p=0.000$), affordable price ($t=6.527$, $p=0.000$), brand attachment ($t=5.293$, $p=0.000$) and easy usage ($t=6.206$, $p=0.000$) are statistically significant at 5 percent level. This implies that the brand switching reasons of mobile customers is highly significant in deciding their satisfaction level. It is concluded that the customer preferring efficient coverage, customer care, and brand reputation get more satisfaction in the add-on services of Mobile services. The affordable price, brand attachment and easy usage preference of customer make them to realize their satisfaction on add-on services.

2. INFLUENCE OF BRAND SWITCHING REASONS ON NETWORK CLARITY

The influence of six factors of brand switching reasons of mobile services on one of the factors of customer satisfaction and loyalty network clarity are measured through regression analysis and the results are presented below.

Table 6.46

Model Summary – brand switching reasons on clarity satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.458(a)	.210	.200	.50460

a Predictors: (Constant), easy usage, brand attachment, affordable price, brand reputation, customer care, Efficient coverage

From the above table, it is clearly revealed that $R=0.458$, $R\text{-square}=0.210$, and adjusted $R\text{-square}$ is equal to 0.200. This implies that the factors of brand switching reasons of mobile services explain the efficient coverage factor of customer satisfaction and loyalty at 21.0% level. The goodness of regression fit is presented in the following table.