



Marketing Strategies of Selected Cellular Service Providers in Bhopal Madhya Pradesh: A Comparative Study

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Abstract – India is presently the world’s alternate-largest telecommunications request with a subscriber base of 119 crores registered in December 2023 (Times of India, Feb 23). The Indian cellular service frugality is growing hastily and contributes mainly to India’s Gross Domestic Product (GDP), according to a report prepared by the (GSM Association, GSMA) in collaboration with the Boston Consulting Group (BCG). The country is the fourth-largest app frugality in the world. A liberal supporter of reform programs, the Government of India has been contributing along with strong consumer demand as well as rapid-fire growth in the Indian telecom sector (investindia.gov.in). The government has enabled easy request access to telecom outfits and a fair and hands-on nonsupervisory frame, that has assured the vacuity of telecom services to consumers at reasonable prices (PIB, Delhi 2024). The deregulation of Foreign Direct Investment (FDI) morals has made the sector one of the swift-growing and top five employment occasion directors in the country (OCED, 202). The changing requirements of information communication and telecom have paved the way for innovative marketing strategies. This paper deals with, the marketing blend strategies espoused by the select cellular service providers within the named areas of Bhopal in Madhya Pradesh.

Keywords - cellular service, marketing strategy, GSMA, telecom.

I. INTRODUCTION

The Indian telecommunication assiduity is the world’s fastest-growing assiduity with more than 1.143.93 million active wireless mobile connections in March 2023 (TRAI annual report 2023). The wireless subscription in civic areas increased by 0.16 percent in March 2023 (TRAI annual report 2023). The market shares of private Wireless Service providers in March 2023 recorded 90.73% as per the TRAI annual report (TRAI). The combinations, appropriations, and price wars between the subscribers are adding day by day, subscribers are the ultimate heirs of the competitive war (Strategy and.pwc.com, 2018). India’s telecommunication network is the second largest in the world grounded on the total number of telephone druggies (traigov.in, Aug 2023). It has one of the smallest call tariffs in the world enabled by the mega telephone networks and hyperactive- competition among them. India has a diversified communication system, which links all country corridors by telephone, internet, Radio, TV, and satellite. Indian telecom assiduity passed a high pace of request liberalization and growth since the 1990s and now has become the world’s most competitive and one of the fastest-growing telecom requests (TRAI Performance Indicator 2023). The government has pragmatically used ultramodern telecommunication installations to deliver mass education programs for the pastoral folk of India (Kannan, Shilpa, June 2010).

Now Jio is (and has been for some time) India’s mobile request leader. At the end of October, it boasted 452.4 million mobile connections, giving it a request share of 39.3 (Ray Le Maistre, 2024). Its customer base and request

share are growing each month Jio added nearly 3.2 million connections in October alone (TRAI, 2023).

Bharti Airtel is its main rival. It ended October with 378.1 million mobile connections and a request share of 32.85. It added nearly 353,000 mobile connections in October (TRAI, Oct 2023).

Together, Jio and Airtel command further than 72 of one of the world’s largest mobile requests and, having invested billions of bones each truly snappily in rolling out 5G networks and each attracting further than 50 million 5G guests within a time of launch, they are nearly untouchable in the request (Times of India, Apr 28, 2024).

II. REVIEW OF LITERATURE

(Pawar, 2017) explained that promotional strategies play an important role in increasing the sales volume of Airtel services, role of celebrity endorsements, and loyalty rewards placed a positive image in the subscriber's mind, it made to company, a powerful brand with its varied products and offerings to consumers on a huge scale to deliver its customers at its best. (Sharma, A, 2017) Comparative Study of Telecommunication Service Providers BSNL and Airtel operating in Gwalior division India, 2017, Stated that the subscribers are satisfied with the performance of BSNL and AIRTEL in the parameters of provisioning of services, satisfied with network performance, reliability, and availability, Customers satisfied with maintainability, Customers satisfied with supplementary and value-added services, Customers



satisfied with redressal system, and Customers satisfied with overall service quality.

(Roshita Sodani, 2016) That of the entry of Reliance JIO in the telecom sector has paved the way to the 4G revolution and it is viewed as a game changer, other business aspects such as merger and acquisition, spectrum allocation, infrastructure, handset availability, call drop issue, competition, financial performance, etc.

(Dr.Aparna J Varma D. T., 2016) studied that the liberalization policies have brought enormous changes in the Marketing strategies of the various telecom service providers, Marketing strategy plays a very important role in the existence of the telecom service provider. The Indian telecom sector experienced major reforms and transformations during the last two decades. The Indian consumers have witnessed a different marketing strategy by both domestic and foreign players which in turn resulted in the saturation of telecom services. The appropriate marketing strategies become imperative for the existence and prosperity of telecom service providers. The formulation and execution of marketing strategies significantly differ between BSNL and AIRTEL service providers, the effectiveness of marketing mix strategies adopted by BSNL and AIRTEL become imperative for the existence and prosperity of telecom services prover, the formulation and execution of marketing strategies are significantly differing between these two players.

(JAIN, 2014): He calculated in their article “Comparative Analysis of Marketing Strategies of Bharti Airtel and Idea Cellular in Eastern Rajasthan” that marketing mix, pricing strategies, integrated marketing communication, and product distribution are the striving factors to distinguish them from other rivalries, in today’s competitive world communication plays a very important role. The telecom sector has undoubtedly contributed to the rapid economic growth and the intensified competition in the market has led subscribers to enjoy sumptuousness of choice and higher bargaining power. The freedom to choose has made organizations customer-centric.

Limitations of the study:

This study is limited to the different areas of Bhopal, Madhya Pradesh State, and it is based on the primary data. The collected data from the selected districts and respondent’s answers to the questionnaire were major limitations.

Objectives of the study:

- To compare the marketing strategies adopted by select cellular service providers.
- To evaluate the marketing strategies and marketing mix of cellular service providers

III. RESEARCH METHODOLOGY

Research Design- The study employed both descriptive and exploratory exploration design slice design, as a sample there were 750 respondents were selected from Bhopal, Madhya Pradesh State. For this study, the bifurcation of collected data is 175 from BSNL, from AIRTEL, and 238 from JIO subscribers. An accessible slice fashion is used for the collection of the data. Collected data was tabulated, while different statistical tools were applied to tests of hypothesis like Kruskal-Wallis H and Mann- Whitney tests with the help of SPSS 20.

Hypothesis:

- There’s no significant difference in the product isolation strategies of BSNL, Airtel, and JIO telecom service providers.
- There’s no significant difference in the pricing strategies of BSNL, Airtel, and JIO telecom service providers.

Result and Discussion:

Hypothesis 1:

There is no significant difference in the product differentiation strategies of BSNL, Airtel, and JIO Cellular service providers.

Testing of hypothesis: Kruskal-Wallis test

The summary of ranked data corresponds to the variables Excellent voice clarity, Excellent Network Coverage, Value Added Services, Variety of products, very easy to connect or disconnect the calls, and instant advance talk time in the form of a loan.

Table 1: Kruskal-Wallis test statistics based on PRODUCT-based services delivered by select service providers

Details	Excellent Voice clarity	Excellent Network coverage	More Value Added Services	variety of products	Connect or disconnect the calls very easily and quickly.	Instant advance talk time
Chi-Square	3.789	4.297	10.846	10.143	6.366	9.616
df	2	2	2	2	2	2
Asymp.	0.15	0.117	0.004	0.006	0.041	0.008



Grouping Variable: Cellular Service Providers						
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Table -2: Descriptive statistics of core benefits delivered by mobile service providers

Cellular Service Providers	N	Excellent Voice Clarity	Excellent Network Coverage	More Value Added Services	variety of Products	Connect or Disconnect the Calls Very Easily and Quickly	Instant Advance Talk Time						
		Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.
BSNL	177	4.25	0.92	3.64	1.13	3.9	1.028	3.51	0.96	3.78	0.961	3.65	1.109
AIRTEL	335	4.15	0.941	3.61	1.014	3.66	0.959	3.39	1.038	3.69	1.088	3.77	1.168
JIO	238	4.3	0.837	3.79	0.916	3.84	1.009	3.68	0.914	3.89	1.024	3.4	1.377
TOTAL	750												

2. Post hoc test 2: The JIO compared to the BSNL

Post hoc test 1: The Airtel compared to the BSNL

Measured on a 5-point Likert Scale, Strongly Disagree =1, Disagree=2, Uncertain=3, Agree = 4, Strongly Agree=5

1. Post hoc test 1: The Airtel compared to the BSNL

Table -3: The Airtel Compared to the BSNL: Mann-Whitney U test

Mobile service provider	N	MEAN RANK						
			Excellent Voice, Clarity	Excellent Network Coverage	More Value Added Services	Variety of Products	Connect or Disconnect the calls Very easily and quickly	Instant Advance Talk Time
AIRTEL	335	359.93	361.07	348.72	351.47	359.6	399.57	
BSNL	177	385.5	374.34	404.98	378.47	369.47	370.68	
Total	512							

The aforesaid table shows the test statistic for the Mann-Whitney test on the focused comparison of the variables, Excellent voice clarity, Excellent geographical network content, further Value Added Services, variety of products,

Connecting or dissociating the calls veritably fluently and snappily, Instant advance talk time. Concerning the mobile service providers Airtel and BSNL.

Table -4: Mann - Whitney U test statistics based on core benefits delivered by Airtel and BSNL

Details	Excellent Voice Clarity	Excellent Network Coverage	More Value Added Services	variety of Products	Connect or Disconnect the calls very easily and quickly	Instant Advance Talk Time
Mann-Whitney U	27658.000	28659.000	25186.500	27495.500	28765.500	27179.000
Wilcoxon	83938.000	84939.000	81466.500	83775.500	85045.500	42932.000
Z	-1.358	-0.657	-2.982	-1.415	-0.586	-1.631
Asymp. Sig.(2-Tailed)	0.174	0.511	0.003	0.157	0.558	0.103



Grouping Variable: Cellular Service Providers						
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The summary of the Mann – Whitney test shows and indicates in the below table that the observed significance values of the variables Excellent voice clarity, Excellent geographical network content, variety of products, Connect or dissociate the calls veritably fluently and snappily, Instant advance talk time are lesser than 0.0167, this shows that these variables don't significantly differ between the mobile service providers Airtel and BSNL. However, the observed significance values of the variable further value-added services connected to the network is lower than 0.0167, it significantly differs between the mobile service providers, Airtel and BSNL. The value of mean ranking grounded on the Mann- Whitney U test given in the table indicates that the mobile service provider BSNL has significantly advanced situations in the value of the variable Excellent voice clarity and Excellent geographical network, content variety of products, Connect or disconnect the calls veritably fluently and snappily, Instant advance talk time, further value-added services than Airtel. So it can be concluded that BSNL has appreciatively discerned the Product benefit characteristics, Excellent voice clarity, and Excellent geographical network content, variety of products, Connect or dissociate the calls veritably fluently and snappily, Instant advance talk time, and further value-added services from the mobile service provider Airtel.

The summary of the Mann – Whitney test shows and indicates in the table as mentioned earlier that the observed significance values of the variables Excellent voice clarity, Excellent geographical network content, and variety of

products, Connect or dissociate the calls veritably fluently and snappily, Instant advance talk time are lesser than 0.0167, this shows that these variables don't significantly differ between the mobile service providers Airtel and BSNL. still, the observed significance values of the variable further value-added services connected to the network is lower than 0.0167, it significantly differs between the mobile service providers Airtel and BSNL. The value of mean ranking grounded on the Mann-Whitney U test given in the table indicates that the mobile service provider BSNL has significantly advanced situations in the value of the variable ‘Excellent voice clarity and Excellent geographical network content variety of products Connect or dissociate the calls veritably fluently and snappily Instant advance talk time, further value-added services than Airtel. So it can be concluded that BSNL appreciatively discerned the Product benefit characteristics of Excellent voice clarity and Excellent geographical network content variety of products Connect or dissociate the calls veritably fluently and snappily Instant advance talk time and further value-added services from the mobile service provider Airtel.

The JIO compared to the BSNL: Mann-Whitney U test
The summary of ranked data corresponding to the variables ‘Excellent voice clarity’, ‘Excellent Network coverage’, ‘More Value Added Services’, ‘variety of products’, ‘Connect or disconnect the calls very easily and quickly’, ‘Instant advance talk of the mobile service providers JIO and BSNL has been computed with Mann-Whitney U test. The test results are given in the table 5.

Table 5: The JIO compared to the BSNL: Mann-Whitney U test

Mobile service provider	N	MEAN RANK					
		Excellent voice clarity	Excellent Network coverage	More Value Added	variety of products	Connect or disconnect the calls very easily and quickly.	Instant advance talk time
JIO	238	389.99	396.67	391.27	407.12	402.37	345.21
BSNL	177	385.50	374.34	404.98	378.47	369.47	370.68
Total	415						

Table 5 shows the test statistic for the Mann- Whitney test on the focused comparison of the variables, Excellent voice clarity, Excellent geographical network coverage, More Value Added Services, Variety of products,

Connecting or disconnect the calls very easily and quickly, Instant advance talk about the mobile service providers JIO and BSNL.



Table 6: Mann- Whitney U test statistics based on core benefits delivered by JIO and BSNL

Details	Excellent voice clarity	Excellent Network Coverage	More Value Added Services	Variety of products	Connect or disconnect the calls very easily and quickly.	Instant advance talk time
Mann-Whitney U	20843.000	19868.500	20306.000	19436.500	19113.500	19448.500
Wilcoxon W	36596.000	35621.500	48747.000	35189.500	34866.500	47889.500
Z Asymp. Sig. (2-tailed)	-.201	-1.059	-.660	-1.425	-1.750	-1.380
Grouping Variable: Cellular Service Providers	.841	.290	.509	.154	.080	.168

The summary of Mann – Whitney test statistics shown in the table indicates that the observed significance values of the variable's Excellent voice clarity Excellent geographical network content further Value Added Services variety of products Connect or dissociate the calls veritably fluently and snappily Instant advance talk time are lesser than 0.0167, these variables don't significantly differ between the mobile service providers JIO and BSNL. The value of mean ranking grounded on the Mann-Whitney U test given in the table indicates that the mobile service provider JIO has significantly advanced situations in the value of the variable Excellent voice clarity, Excellent geographical network, variety of products, and Connect or dissociate the calls veritably fluently and snappily than JIO. So it can be concluded that BSNL appreciatively discerned the core benefit characteristics further Value Added Services and Instant advance talk time from the mobile service provider JIO.

Hypothesis 2

There is no significant difference between the pricing strategies of BSNL, Airtel, and JIO cellular service providers in Bhopal.

Variables considered for the analysis of pricing strategies: The variables considered for the analysis of pricing strategies of mobile telecom service providers in Bhopal are reasonable or competitive price, after purchasing services, Service package according to budget, pricing of 4G services compared to other competitive service providers, and free SIM card.

All items of the variables are measured by the Likert Scale with five anchor points, specifically Strongly Agree, Agree, Uncertain, Disagree and Strongly Disagree.

Strategy-related different types of Prices are being offered to Prepaid-paid customers

Table 7: Mean ranking of Price based strategies offered to prepaid customers of selected service providers based on the Kruskal-Wallis test are as follows:

Mobile service provider	N	MEAN RANK	Reasonable or Competitive Price.	After purchasing services	Service package According to the budget	Pricing of 4G service compared to another competitive service providers	Free SIM card
BSNL	127	303.03	323.51	319.37	288.13	350.09	
AIRTEL	302	323.74	326.12	320.05	322.78	320.25	
JIO	232	355.76	341.46	351.61	365.17	333.21	
Total	661						



The table above shows the test statistic for the Kruskal-Wallis test grounded on tariff variety offered to prepaid consumers by the mobile service providers, the associated degrees of freedom, and the significance. As the number of

mobile service providers considered for analysis is three, and the degrees of freedom will be 2.

Table 8: Kruskal-Wallis test based on tariff variety offered to prepaid Customers by mobile service providers.

Details	Reasonable or competitive price	After purchasing services	Service package according to the budget	Pricing of 4G Services compared to other competitive service providers	Free SIM card
Chi-Square	7.825	1.193	4.553	15.583	2.358
df	2	2	2	2	2
Asymp. Sig.	.020	.551	.103	.000	.308
Grouping Variable: Cellular Service Providers					

Table 8 above shows the descriptive statistics of the variables ‘Reasonable or competitive price, after purchasing services, Service package according to budget, Pricing of 4G services compared to other competitive service providers, and Free SIM card. About the mobile service providers BSNL, Airtel, and JIO.

competitive prices after purchasing services. Service packages according to budget and free SIM cards are significantly different in BSNL, AIRTEL, and JIO. Pricing of 4G services as compared to other competitive service providers does not significantly vary between BSNL, AIRTEL, and JIO service providers.

The summary of Kruskal-Wallis test statistics shown in the above table indicates that the significance value is 0.020 for the variables ‘Reasonable or competitive price, value is 0.551 for After purchasing services for variable ‘Service package according to budget value is 0.103, for variable ‘Free SIM card’ is .308 and for ‘Pricing of 4G services compared to other competitive service providers’ is 0.000 which is less than 0.05. Therefore, it can be concluded that the pricing strategies are linked with Rational or

The value of mean ranking grounded on the Kruskal-Wallis test given in the table indicates that JIO has a significantly advanced position in the value of the variable Reasonable or competitive price, after copping services, Service package according to the budget, Pricing of 4G services compared to other competitive service providers, Reasonable or competitive price. The descriptive statistics of the variables given in the table also agree with these findings.

Table 9: Mann - Whitney U test statistics based on pricing strategies offered to Prepaid customers by Airtel and BSNL

Details	Reasonable or competitive price	After purchasing services	Service package according to the budget	Pricing of 4G services compared to other competitive service providers	Free SIM card				
Mann-Whitney U	27084.500	29097.000	28268.500	26434.000	27502.500				
Wilcoxon W	42837.500	44850.000	44021.500	42187.000	83782.500				
Z	-1.689	-.361	-.904	-2.093	-1.279				



Asymp. Sig. (2-tailed)	.091	.718	.366	.036	.201				
Grouping Variable: Cellular Service Providers									

The summary of Mann – Whitney test statistics shown in the table below indicates that the observed significance values of the variables' Reasonable or competitive price after copping services. Service package according to budget, Pricing of 4G services compared to other competitive service providers, and free SIM card, thus these variables significantly differ between the mobile service providers BSNL and AIRTEL. The value of mean ranking grounded on the Mann- Whitney test indicates that the mobile service provider JIO has significantly advanced

situations of values of the variables, Reasonable or competitive price after copping services. Service package according to budget, Pricing of 4G services compared to other competitive service providers than BSNL and AIRTEL. The mean ranking indicates that BSNL has significantly advanced situations of values of the variable Free SIM card.

2. The JIO compared to the BSNL: Mann-Whitney U test

Table 10: Mann-Whitney U test of JIO compared with the BSNL

Mobile service provider	N	Reasonable or Competitive Services	MEAN RANK			
			After Purchasing Services	Service Package according to the Budget	Prices of 5G Services Compare to other Competitive Service Provider	Free SIM Card
JIO	232	355.76	341.46	351.61	365.17	333.21
BSNL	127	303.03	323.51	319.37	288.13	350.09
Total	459					

Table 11: Mann - Whitney U test statistics based on pricing strategies offered to Prepaid customers by JIO and BSNL

Details	Reasonable or competitive price	After purchasing services	Service package according to the budget	Pricing of 4G services compared to other competitive service providers	Free SIM card
Mann-Whitney U	17332.000	19205.000	18021.000	15963.000	20518.000
Wilcoxon W	33085.000	34958.000	33774.000	31716.000	48959.000
Z	-3.230	-1.617	-2.635	-4.385	-.363
Asymp. Sig. (2-tailed)	.001	.106	.008	.000	.717
Grouping Variable: Cellular Service Providers					



The summary of Mann – Whitney test statistics shown in the table below indicates that the observed significance values of the variable after copping services, Service package according to budget, and Free SIM card have further than 0.5 significant values thus these variables significantly differ between the mobile service providers JIO and BSNL. The value of mean ranking grounded on the Mann- Whitney test indicates that the mobile service provider JIO has significantly advanced situations of values of the variables, Reasonable or competitive price, after copping services, Service package according to budge. Pricing of 4G services compared to other competitive service providers than BSNL. The mean ranking indicates that BSNL has significantly advanced situations of values of the variable “Free SIM card”. Analysis of place (Distribution) strategies of BSNL, Airtel, and JIO mobile telecom service providers in Bhopal.

IV. CONCLUSION

The changing demands and cutthroat competition, peace of technological changes, and increasing demand for new features and more value-added services have led to so many changes in the telecom sector it has paved the way to mergers, and takeovers which in turn resulted in the saturation of telecom services. The appropriate marketing strategies become important to face the competition and to stand in the market for the existence and prosperity of the telecom service providers. However, from the data analysis, it is clear that there is a significant difference in the formulation and implementation of marketing strategies of BSNL, AIRTEL, and JIO service providers. As per the findings from the analysis, BSNL has ample opportunities to formulate and implement a strategic-based strategy to grab the market opportunities.

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