

A Study on the Effect of Launch of Reliance Jio on Other Telecommunication Service Providers in India

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Abstract

The entire world today has made itself so used to telecommunication that it would collapse if it's taken away. Globalization has made telecommunication an integral part of the infrastructure of the Indian economy. India has a huge subscriber base using both, the fixed lines and mobile phones and thus making India the second largest subscriber base in the world and world's third largest Internet user base. It has one of the lowest call tariffs in the world. Big players like Vodafone, Airtel and Idea Cellular dominated the Indian telecommunication sector. All these service providers were competing mainly based on the pricing factors. But suddenly a new service provider Reliance Jio entered the picture and shook the telecommunication sector of India with their free services for six months. They offered free voice calls, free 4G internet and free SMS. This affected the old players in a huge way as customers started opting for Jio, leading to strategic changes being made by the other service providers. This research paper mainly focuses on how the entry of Reliance Jio in the telecommunication sector has affected the other service providers and how much it has led to customer switching.

Keywords: Telecom service providers, Reliance Jio, Strategy, Consumer switching behavior, Data usage, Data Speed.

Introduction

The telephony segment was dominated by private sector and two state-run businesses. Most companies were formed by a recent revolution and restructuring launched within a decade, since then, most companies gained 2G, 3G and 4G licenses and engaged fixed-line, mobile and internet business in India. Some major telecom operators in India include Airtel, Vodafone, Idea, Aircel, BSNL, MTNL, Reliance Communications, TATA Teleservices, MTS, Uninor, TATA DoCoMo, Videocon, and Tikona Digital. The entry of Mukesh Ambani led Jio was like an earthquake, and when that happened, it included several equal magnitude earthquakes as well. The entry of Reliance Jio was the start of a telecommunication revolution. It brought about healthy competition. The Indian consumers benefitted the most. Their aggressive pricing strategy forced other telecommunication firms to cut their voice and data tariffs. The entry of Reliance Jio surely accelerated data adoption in India with tantalizingly affordable data tariffs paired with cheap 4G handsets. Reliance's Jio network was

available for free to most 4G smart phone users, with subscribers getting a massive three months of unlimited data, voice and a suite of apps for free. Users had embraced Jio, with long queues outside company stores to get the SIM cards. The word of mouth had also been extremely positive, with people very happy with the services. It was great to see a new entrant in the telecom space shake up the market and force competitors to pull up their socks. At the end of the day, capitalism dictates that more the competition, the better it is for users in terms of price and services. (How Reliance Jio has shaken the Indian telecom sector, 2016)

Marketing Strategies Used By Reliance Jio:

Jio targeted 5 areas for where it differed from the other service providers. Network, Data, Tariffs, Devices, Content, Services. Most providers had an infrastructure for voice. Jio focused on only one thing and that was Internet. The all IP design made Jio the most extensive and future-proof in the world. Due to this Voice Over IP framework, Jio was able to provide free voice calls. (Reliance Jio 4G Launch, 2016)

Jio tariffs were built on three principles:

Customer should pay for only one service-voice or data. So all voice calls will be absolutely free. No roaming charges across India.

Data must be affordable: Jio will have a base rate, which is 1/10th of market rates. 5 paise per MB, or Rs 50 per GB. More you use, the cheaper it gets.

Pricing structure should be simple so just 10 tariff plans. No blackout dates.

Impact On Other Telecom Service Providers After The Launch:

The shares of the "Big 3" kept sliding down daily after the launch of Reliance Jio. It was reported that within 2 days, Idea had lost 4500 crores in market value. Bharti Airtel lost 6.4% of the market share; while Idea had to lose 10.7%. The Big 3 started to compete with Jio based on the 4G networks. Airtel claimed to have reduced the price of its 3G/4G data pack by up to 80 percent. With their new scheme, users had to pay Rs 1498 upfront, and only then they could avail the 1GB for Rs 51 offer. (How Airtel, Vodafone will offer 4G internet to fight Jio 4G plans., 2016).

Research Methodology:

This research has been undertaken to study the marketing

strategies of telecom service providers in India before and after the entry of Reliance Jio in the Telecommunication industry. There have been very few research studies on different strategies used by different providers and the entry of the same in a new market, but there has not been any research on the strategies which Reliance Jio has come up with. Hence, A Study on the Effect of Launch of Reliance Jio on other Telecommunication Service Providers In India" was chosen for the purpose of research.

Research Objectives:

To identify the factors influencing the switching behavior of telecommunication users in India.

To study the impact of these factors on the subscribers of various telecommunication service providers switching to Reliance Jio.

To study the change in revenues of the major Telecom companies through their quarterly financial reports before and after the launch of Reliance Jio.

Data Collection Methods:

Primary data collection was done through survey. Since our research is quantitative in nature, we chose questionnaire as the instrument for data collection. A self-designed structured questionnaire consisting of 15 questions was used. A few of the questions have subparts. The questionnaire consisted of questions with a 5-point Likert Scale, a few questions using the nominal scale and a few questions that measure parameters in the ratio scale.

Secondary data on the quarterly revenues of the major Telecom service providers in India before and after launch of Reliance Jio (i.e. on 1st September, 2016) was collected through the quarterly financial reports of the companies through the NSE and BSE websites.

Sampling Design:

The population under consideration consists of all the mobile telecommunication users in India. For this research, Convenience sampling was used. The questionnaire was administered to 135 respondents consisting of both Jio and non-Jio users within the age group of 15-65 years.

Theoretical Framework:

Dependent Variables:

Customer Switching Behavior:

Customer switching is described as "customers/consumers abandoning a product or service in favor of a competitor. In

mobile telecom users, customer switching behaviour can lead to total or partial abandonment of the service. After the launch, Reliance Jio issued free SIM cards and provided unlimited free data and voice calls services with the only condition that the Jio SIM must be used as the primary SIM. This led to customers partially abandoning the services provided by the existing service providers while simultaneously using both SIMs. Customer switching to Jio partially or completely depends on various factors as considered in the research.

Independent Variables:

Promotional offers:

Henderson et al., (1994) had found a significant relationship between advertising and customer switching. It indicates a higher switching rate existed if a consumer had more chances of seeing an advertisement of alternative brands. The promotional activities carried out by Jio have affected other Telecommunication operators as subscribers are drawn to special offers. ?

Price:

According to Kotler and Armstrong (2010) price is one the important factor that plays a vital role in brand switching. Price is that amount which customer pays for using any product or services. Price in mobile phone includes the cost of purchasing a SIM card, charge for a call per minute, cost of sending messages, Internet charges, etc. If service provider charges a lower price than competitors, very few consumers will switch to another brand (Martin et al., 2007). So, price has a positive impact on brand switching.

Comparing Jio's tariff structure with that of its competitors gives it an advantage as it provides voice calls for free due to its voice over LTE technology and also for the higher price band plans, it offers 1GB data for approx. Rs.50 which is not provided by any other operator.

Brand value:

Brand equity is the added value endowed on products and services. It may be reflected in the way consumers think, feel, and act with respect to the brand, as well as in the prices, market share, and profitability the brand commands for the firm. Kotler, P., & Armstrong, G. (2006). In the case of telecommunication, the big 3 are considered to have a huge brand value and it might have an effect on customer switching. Reliance Jio being the new entrant does not possess such equity yet.

Data speed:

This refers to the Internet surfing and downloading speed offered by the telecommunication service provider on the mobile handset. The introduction of 4G technologies has added a new voice-calling feature to it. Consumers now require high-speed Internet connection and consider it as a criterion to select a telecommunication service for them.

Voice call quality:

The number of call drops, distortion and echo deteriorate the voice quality for the consumer. For a consumer with high voice usage, this variable can act as a big deciding factor for switching to another service provider.

Customer service:

The service quality affects particular behaviors that indicate whether customers will remain loyal to or leave an organization. Service quality is measured in five dimensions they are reliability, responsiveness, assurance, empathy and tangibles. The standard of quality and performance of customer care service can be influential in brand switching; subscribers need to be able to call customer lines and get adequate help. A service provided should to meet consumers' needs and expectations in order to lead to satisfaction. If a service falls below consumer expectations this is deemed to be a failure, which involves mistakes, billing errors and services misfortunes- network failures and signal interruptions.

Voice usage:

Voice Usage refers to the amount of time a consumer spends on voice calls per month on an average. Customers with a higher voice call usage could be attracted to Reliance Jio as it offers free voice calls. This could influence subscribers to switch to Jio.

Data usage:

Data usage refers to the amount of data an individual requires on an average per month. Customers with a higher data usage could be attracted to Reliance Jio as it offers free data. This could influence subscribers to switch to Jio.

Network coverage:

Network coverage is the geographical area in which a wireless network company offers cellular service for their own mobile phone subscribers. Network Coverage serves as a catalyst in enhancing or inhibiting the quality of voice and Internet speed hence it is a moderating variable.

Theoretical framework showing the relationship between variables is given below:

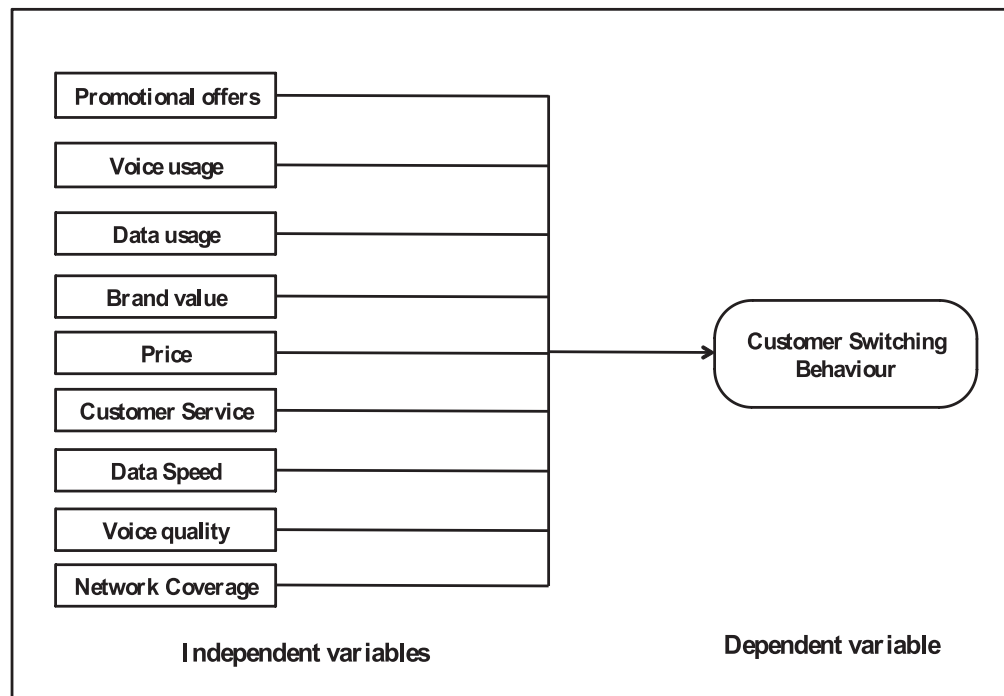


Figure 1: Theoretical Framework

HYPOTHESIS:

H01: Promotional offers has an insignificant impact on Customer Switching Behaviour

H₁ : Promotional offers has a significant impact on Customer Switching Behaviour

H0₂ : Voice usage has an insignificant impact on Customer Switching Behaviour

H₂ : Voice usage has a significant impact on Customer Switching Behaviour

H0₃ : Data usage has an insignificant impact on Customer Switching Behaviour

H₃ : Data usage has a significant impact on Customer Switching Behaviour

H0₄ : Brand value has an insignificant impact on Customer Switching Behaviour

H₄ : Brand value has a significant impact on Customer Switching Behaviour

H0₅ : Price has an insignificant impact on Customer Switching Behaviour

H₅ : Price has a significant impact on Customer Switching Behaviour

H0₆ : Customer service has an insignificant impact on Customer Switching Behaviour

H₆ : Customer service has a significant impact on Customer Switching Behaviour

H0₇ : Data speed has an insignificant impact on Customer Switching Behaviour

H₇ : Data speed has a significant impact on Customer Switching Behaviour

H0₈ : Voice quality has an insignificant impact on Customer Switching Behaviour

H₈ : Voice quality has a significant impact on Customer Switching Behaviour

H0₉ : Network Coverage has an insignificant impact on Customer Switching Behaviour

H₉ : Network Coverage has a significant impact on Customer Switching Behaviour

Data Analysis:

The research basically intended to study the effect of launch of Reliance Jio on the other service providers & to find out the possible reasons for Customers switching to Reliance Jio. Various analysis done such as Descriptive

analysis, Reliability check using Cronbach's Alpha test, Logistic Regression analysis, Descriptive analysis of demographic variables

Descriptive Analysis:**Table : Frequency distribution of demographic variables**

GENDER		
Characteristics	Frequency	Percentage
Male	75	55.6
Female	60	44.4
Total	135	100

AGE		
Characteristics	Frequency	Percentage
15-25	52	41.4
25-35	17	13.5
35-45	10	7.8
45-55	36	28.6
55-65	11	8.7
Total	135	100

NAME OF SERVICE PROVIDER		
Characteristics	Frequency	Percentage
Vodafone	71	52.6
Airtel	32	23.7
Idea	14	10.4
BSNL	10	7.4
RCOM	3	2.2
MTNL	3	2.2
Others	2	1.5
Total	135	100

Table : Frequency distribution of Customers switched to Jio

CUSTOMERS SWITCHED TO RELIANCE JIO		
Characteristics	Frequency	Percentage
Switched	51	37.8
Not switched	84	62.2
Total	135	100

Cronbach's Alpha Test:**Table : Cronbach's alpha test statistics****Reliability Statistics**

Cronbach's Alpha	N of Items
.720	5

Interpretation: Cronbach's alpha gives us a measure of scale reliability and inter item consistency among the constructs in the questionnaire. Cronbach's alpha was calculated taking the data of 5 variables (Data speed, voice quality, Network coverage, Plans and Offer frequency).

From the above table, it is interpreted that the value of Cronbach's Alpha is 0.720, which is greater than 0.7, showing the inter item consistency among the constructs in the questionnaire.

Analysis Of Logistic Regression:

Logistic regression was used to analyze the behaviour of Telecom customers switching to Jio and also test the hypothesis. For the purpose of analysis, the dummy variables were created. SPSS was used to do Logistic Regression

Dependent variable: Customer Switch (0–No, 1–Yes)

Independent variables:

Table : Scale of Independent variables

Variable	Scale	Values
Monthly expense	Ratio	
Data Usage	Ratio	
Prepaid/Postpaid	Nominal	0 - Postpaid user 1 - Prepaid user
Name of Telecom Service Provider	Nominal	1 - Vodafone 2 - Airtel 3 - Idea 4 - BSNL 5 - RCOM 6 - Reliance Jio 7 - MTNL
Plans Data Speed Voice Quality Network Coverage	Likert	1 (Worst) - 5(Best)
Customer Care Frequency Offers Frequency Effect of Offers	Likert	1 - Never 2 - Very rarely 3 - Rarely 4 - Occasionally 5 - Frequently
Customer Care Experience	Likert	1 (Worst) - 5(Best)

The Forward LR option in SPSS was selected as it gives the best model for Logistic Regression

Output of Logistic Regression

“Block 1: Method = Forward Stepwise (Likelihood

Ratio)” – This gives the best model considering only the significant variables on SPSS.

Table : Scale of Independent variables

Classification Table^a					
	Observed		Predicted		
			Switch		Percentage Correct
			.00	1.00	
Step 1	Switch	.00	62	22	73.8
		1.00	25	26	51.0
	Overall Percentage				65.2
Step 2	Switch	.00	69	15	82.1
		1.00	23	28	54.9
	Overall Percentage				71.9
Step 3	Switch	.00	68	16	81.0
		1.00	25	26	51.0
	Overall Percentage				69.6

Interpretation: The above table signifies that using the best model; Customer switch can be predicted 69.6% accurately.

Table : Best model after using Logistic Regression

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	MonthlyExpense	-.002	.000	14.852	1	.000	.998
	Constant	.737	.340	4.685	1	.030	2.089
Step 2 ^b	MonthlyExpense	-.002	.000	15.519	1	.000	.998
	EffectOfOffers	.503	.196	6.609	1	.010	1.653
	Constant	-.577	.606	.907	1	.341	.562
Step 3 ^c	MonthlyExpense	-.002	.000	14.609	1	.000	.998
	Plans	-.635	.260	5.957	1	.015	.530
	EffectOfOffers	.526	.202	6.775	1	.009	1.692
	Constant	1.136	.921	1.521	1	.218	3.113

Interpretation: The above table shows the stepwise derivation of independent variables that significantly affect the dependent variable. Hence it can be seen

MonthlyExpense, Plans & EffectOfOffers influence customer switching the most.

Table : Conclusions from the above table: (Testing of hypothesis)

Independent Variable	Null Hypothesis	Significance Value	Hypothesis Accept/Reject
Promotional offers	H ₀₁	0.009	Accept
Monthly Expenses	H ₀₂	0.003	Accept
Data usage	H ₀₃	0.572	Reject
Service Provider Brand value	H ₀₄	0.932	Reject
Plans	H ₀₅	0.012	Accept
Customer Service	H ₀₆	0.364	Reject
Data Speed	H ₀₇	0.372	Reject
Voice Quality	H ₀₈	0.948	Reject
Network Coverage	H ₀₉	0.568	Reject

Equation of the Logistic regression model is as follows

$$\text{Log} \left(\frac{p}{1-p} \right) = 1.136 - 0.002 * \text{Monthly.Expense} - 0.635 * \text{Plans} + 0.53 * \text{Effect.Of.Offers}$$

In this logistic regression equation Switch is the dependent variable, and the above coefficient model shows the alpha and beta values. The constant (α) value is 1.136; Effect.Of.Offers (β_3) value is 0.53 which has a positive meaning to the relationship between Effect.Of.Offers and Switch. Monthly. Expense(β_1) value is negative 0.002 and Plans (β_2) value is negative 0.635 which means that both Monthly. Expense and Plans have negative relationship with Switch.

Beta coefficients indicate the degree of influence the corresponding independent variable has on variations in the dependent variable. The higher the value of beta the more is the effect of the independent variable; and the sign positive and negative indicates the nature of the relationship whether the independent variable and the dependent variable move together or in opposite directions.

When asked the respondents, 85% users said they have

switched to Reliance jio because of the free data scheme. Result of regression also supports that effect of offers influences switching. This analysis shows that Customers Switching to Jio is mostly influenced by Monthly expense, Plans and Effect of Offers. Reliance Jio while entering the market focused on the above factors and tried to take an advantage over the other service providers through them.

It came up with exciting promotional offers like free voice calling and free data for a specific amount of time. It also came up with cheaper data rates along with free voice calling in the tariff plans which would ultimately reduce the monthly expense of the customers.

Analysing the impact on the Sales revenue of competitors:

Quarterly Revenues of FY 2016-17 of competitors of Reliance Jio:

Table : Quarterly revenue analysis (in Rs. Crores)

	After launch of Reliance Jio	Before launch of Reliance Jio			
Telecom Service Provider	Dec '16	Mean	Sep '16	Jun '16	Mar '16
Airtel	15,204.20	16,120.57	16,432.60	16,339.70	15,589.40
Idea	8,570.50	9,363.51	9,223.78	9,446.98	9,419.76
Rcom	2,185.00	2,431.00	2212	2482	2599
MTNL	686.76	767.14	726.56	741.2	833.66

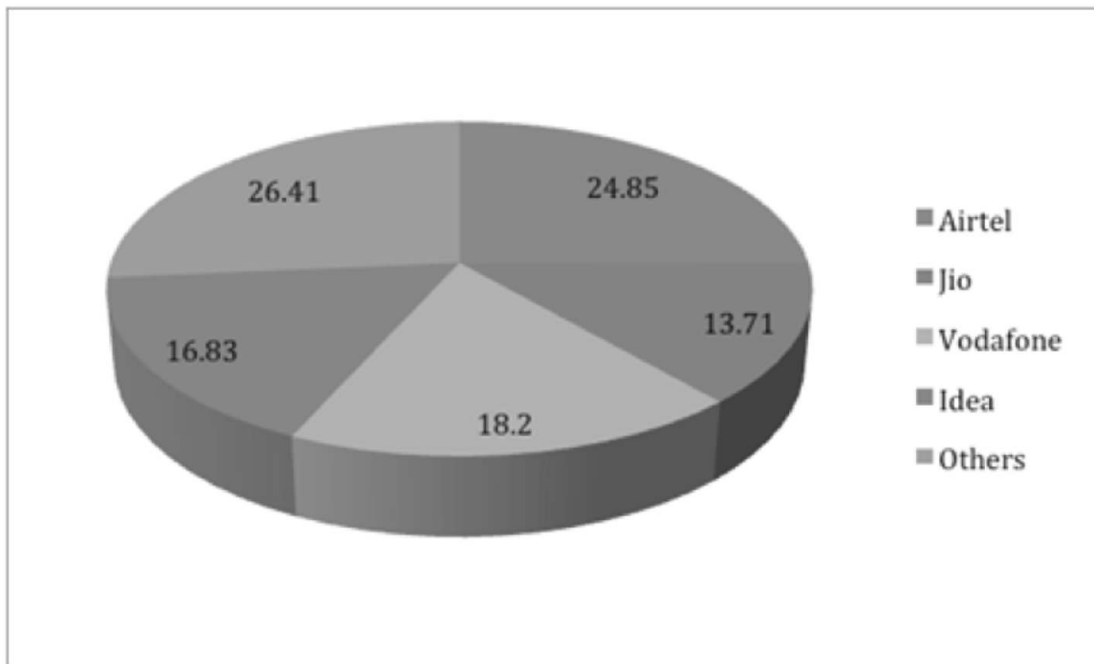
Reliance Jio was launched in September 2016. The data shows a clear fall in the revenues of the Telecom Service Providers in the quarter (December 16) after the launch of Jio when compared to the quarterly revenues prior to Jio's launch. The drop in revenues of the Indian telecom service

providers was caused due to Customers using the Free Jio SIM as the primary SIM card (partial switching) & the losses incurred by the service providers while offering cheaper voice & data plans in order to retain their existing customers.

Table : Quarterly Revenues of FY 2017-18 of competitors of Reliance Jio:

After the revenue stream of Jio began				
Telecom Service Provider	Dec '17	Sep '17	Jun '17	Revenue change (y-o-y)
Vodafone	8,613.24	9881.79	11,206.90	-23.0%
Airtel	12,687.00	13,980.00	14,506.00	-12.9%
Reliance Jio	6,879.00	6,147.00	0.00	11.9% (q-o-q)
Idea	6,391.90	7,349.10	8,054.10	-24.30%
Rcom	497.00	573	1643	-30.60%
MTNL	580.12	642.23	657.22	-15.90%

Due to intense price competition posed by Reliance Jio, all its competitor have seen a major major YOY decline in their revenues as well as the customer base.

Graph 1: Market share of Jio and other service providers**Market Share – December 2017**

This chart depicts the market share captured by Reliance Jio and the market share of its major competitors in India, until December 2017 (TRAI). It can be observed that by just being in existence for over a year, Reliance Jio has captured 13.71% of the total wireless telecommunication market of India. Jio has successfully captured a customer base of 160.1 million subscribers as on December 2017. This increase in the market share is due to the various marketing strategies that Jio has used from its inception, when it was free for everyone to when it started charging at minimal rates. It is still on the rise and is heavily contributing towards increasing number of users. Jio recorded the highest growth rate of wireless subscribers, which is 5.27%, among all the players in the month of December. (TRAI)

Conclusion:

Keeping these questions in mind, we developed a questionnaire and administered it to people with different demography. From the responses which we received, variables were analysed and we formed a conceptual framework. Hypotheses were generated on the basis of this conceptual model which just had one dependent variable and all the others as independent variables.

After the analysis of the data received from the survey through logistic regression, and the data of the quarterly revenues of the providers, we brought our research down to

the following conclusions:

Monthly expense on the service usage, plans offered by the existing providers to the customers, the effect of Promotional offers for a customer to buy a new plan have a significant effect on the customer switching behaviour.

There is a decrease in the revenues generated in the quarter in which Reliance Jio was launched as compared to the average of the previous quarters for different Telecom Service Providers.

There is a significant increase in the market share captured by Reliance Jio since its inception because of the various marketing strategies it has used.

Implication:

The entry of Reliance Jio created a havoc in the mobile network service providers industry. Leaders like Airtel, Vodafone, Idea were forced to change their services and normal business plans to survive the sudden threat of Reliance Jio.

Reliance Jio came in with a great market penetration strategy and made customers to switch to their services in no time. As reported by the Chairman Mr. Mukesh Ambani, Reliance Jio had achieved a customer base of 100 million in 4 months.

There were three major factors that led to the switching of customers to the services provided by Reliance Jio and they were the Monthly Expenses, the Plans provided by

Reliance Jio and the other special offers. As also observed, the revenues of the major players had dropped drastically after the launch of Reliance Jio and such was the impact of the sudden entry of Reliance Jio into this particular market

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