



IMPACT OF AFFORDABLE INTERNET (JIO) ON THE DIGITALISATION OF INDIA

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Abstract

The need for empowering the technological infrastructure of our country and its importance were recognised by our Prime Minister Narendra modi. It was put into action with the launch of digital India campaign on 2 July 2015. Digitalisation will have a major impact on the country's Economy. To strengthen the campaign many initiatives were introduced by the government.

Even Though progress was being made it is not enough in the current global scenario. Implementation was faced with several obstacles due to poor information and communication network in the country and the demonetisation was major setback to nation in terms of the growth.

At a time like this the Jio launch changed the dynamics of the country. It was solely responsible for the evolution of data usage and smart phone utilization increased remarkably. The main purpose of this paper is to study the impact of the Jio, its contribution towards digital India and to study the effect of affordable internet in the technological advancement of a country.

Introduction

As of 2016 India ranked 91 among 139 countries in the networked readiness index (NRI) which basically measures how much a country has used its technology to develop. Comparing to previous years India has been losing its position consecutively from 68 in 2013 to 91 in 2016.

The main idea behind the digitalisation is to utilize the ICT (Information and communication technology) to its full extent. The basic operations in the process of digitalization include

- Conversion of information in to digital format thus enabling a access to everyone
- Connect rural areas with high speed internet networks
- Facilities such as e-education, e-payments, e-governance should be provided.

Digital India brings together a large number of ideas into a single, comprehensive vision such that each of them can be implemented as part of a whole. It aims to provide the much needed support to the nine pillars of growth areas.

Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance, e-kranti, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. At the launch of digital India a 220 lakh crore investments towards this initiative was committed by the top ceo, which will be utilized in making the internet devices and smart phones affordable to average citizen.

The launch of jio 4G services was considered as last year's one of the most bold and disruptive announcements.

Jio services while being extremely affordable aims to provide 4G VoLTE services at high speeds, currently it is the only VoLTE service provider in the country. It was commercially launched on September 5th 2016 with the offer to provide free internet, calls and other exclusive services till end of December 2016 which was later extended to end of March 2017.

The fast, affordable internet access has struck a chord with the average Indian citizen and set tough bench mark among its competitors; it is responsible for the internet usage revolution in India with its tariff pricing.

Objectives of Study

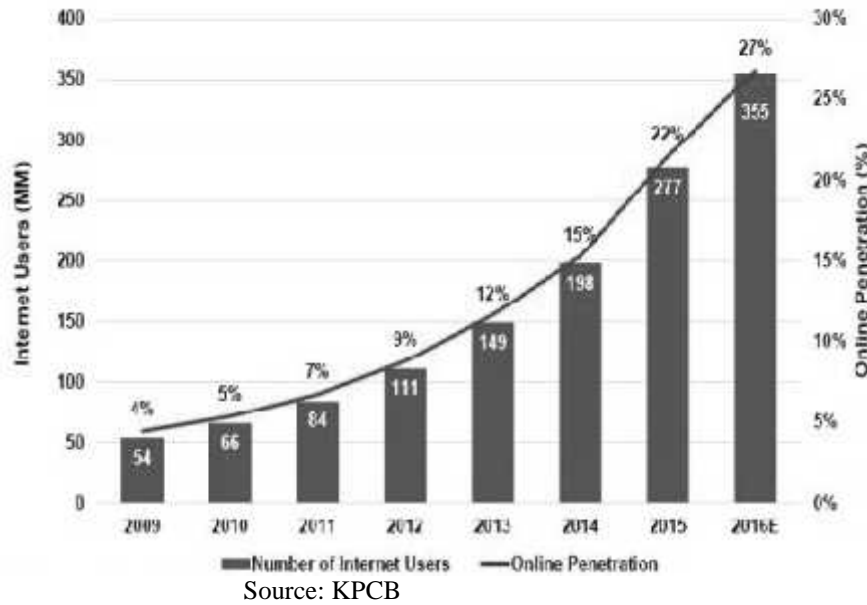
The main aim of the paper is to study:

1. To study changes in the usage of internet, smart phones, digital wallets, e-payments, with the introduction of Jio.
2. To analyse the importance of affordable internet to the digitalisation.



Research Methodology

The study is mainly based on secondary sources of data. Secondary sources of data include sources like government publications, previous articles, magazines, research papers, journals, official website of Digital India & JIO.



Internet Users in India (2009-16)

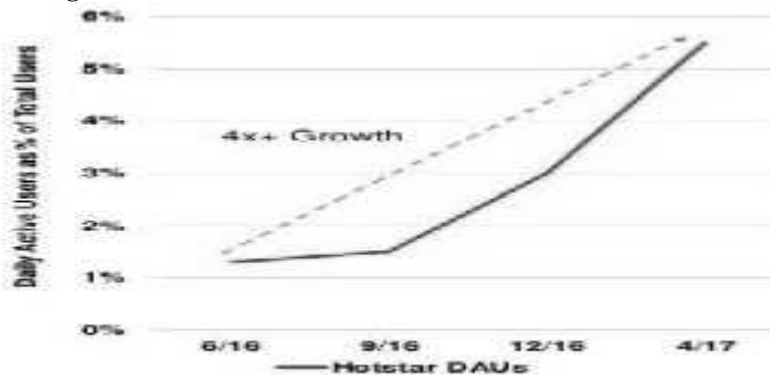
Indian market being price sensitive welcomed the Jio, the underlying plan is to penetrate deep into the market enabling everyone to experience 4G internet like never before and to develop a strong preference for it.

	Before the launch of JIO (June 2016)	After the launch of JIO(June 2017)
Mobile data consumption / month	20 Crore GB	150 Crore GB (125crore is jio's)
India's world rank in data volume consumption	155 th	1 st
Mobile internet tariff (in rupees)	250 per GB	50 per GB *
Internet user base (in millions)	355	455

*with Jio dhana dhan offer data costs as low as rupees 5 per GB

There is a significant change in the way people experiencing the internet usage, instead of voice calls inclination towards video calls is increasing, WhatsApp become a universal platform for fast and easy communication and videos are streamed instead of downloading. In a way one is experiencing the smart phone like never before.

Hotstar Streaming Service Usage



Source: KPCB



While the country was getting habituated to this new life style there was another sudden disruptive announcement: Demonetisation On November 8 2016, government of India made the 500 and 1000 bank notes invalid and announced the issuance of new 500 and 2000 bank notes in exchange of old notes. Our economy being heavily dependent on cash, only about 50% of population uses banking system for monetary transactions, it has hit hard for trade and business as there was no cash in hand to pay for goods and services

Though the move was made to eradicate the black money and fake currency there were negative impacts, while it has caused inconvenience for many the people with little knowledge about the modern banking facilities, senior citizens and rural people were affected the most. At the time of demonetisation the total money in circulation was valued to 16.42 lakh crore rupees of which 86 % i.e. 14.18 lakh crore rupees were of 500,1000 denominations.

With the limit on daily exchange of new currency and the old currency being invalid there was a huge cash crunch in the market , consumption accounts for 56% of the Indian economy , so the decline in spending will result drop in growth of the country's economy.

Government of India shifted its narrative for demonetisation to the virtues of digital payments. The initiatives like BHIM, discounts for online payments, digital payments campaign was introduced.

JIO's penetration coupled with demonetisation acted as perfect catalyst in the rapid growth of cashless payments. It also played a vital role in the development of digitalisation in India.

Paytm Registered Users			
S. No	Year	Paytm users (millions)	% change
1	September,2015	100	-
2	April,2016	122	22 %
3	december,2016	180	47 %
4	April .2017	215	20 %

UPI (unified payments interface)		
	Number of Transactions(in lakh)	Value of amount (in crore)
OCT ,2016	1.03	50
May,2017	91.6	2760
% change	8793 %	5420 %

After the demonetisation the necessity of cashless payments is realised, many retail vendors lacked the facility of card payments, with Jio's launch around 450 million people were equipped with high speed mobile internet, and this facilitated the rise of digital payments along with the use of internet banking which softened the blow to retail market

The popular apps such as Paytm had increase of 435% in traffic, 200% in downloads and 250% in transactions. In 2016-17 80% of the total internet users in India are mobile users while the global average is at 50%.

The trend here is the emergence of mobile as the preferred means of payments and consumption over the internet.

Conclusion

The internet and communication infrastructure is vital in the growth of a country. The Jio managed to provide the necessary foundation with its affordable internet and the analysis of above data suggests the significance of it. Government should concentrate on providing the fast, reliable and affordable internet to everyone. Internet penetration in rural area is very low compared to the urban in India. While focusing on improving the digitalisation, government should try to reduce the technological gap within the country. There is a scope to study the impact of Jio in rural areas with introduction new Jio phone. The T-test in SPSS is applied for the data collected



References

1. <http://digitalindia.gov.in/>
2. <https://www.jio.com/>
3. https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation
4. <http://www.news18.com/news/tech/reliance-jio-completes-one-year-top-15-achievements-1509565.html>
5. <http://www.kpcb.com/internet-trends>

Data Analysis Using SPSS Software

Problem Statement: Whether there is a statistically significant linear relationship between the different parameters and the strength and direction to correlation of data collected namely

- Digital payments through UPI
- Internet users in India
- Paytm registered users
- Price of data per GB
- Monthly data consumption

Data view in SPSS

	UPI_USAGE	NET_USERS	PAYTM_USERS	DATA_PRICE	DATA_CONSUMPTION
1	2	55	22	43	200
2	5	66	50	40	400
3	7	84	100	39	600
4	15	111	122	37	800
5	106	149	180	37	900
6	249	198	215	35	1100
7	285	277	277	31	1200
8	359	355	305	27	1400

Variable view in SPSS

Level of significance-95%-0.05

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	UPI_USAGE	Numeric	9	0		None	None	9	Right	Scale	Input
2	NET_USERS	Numeric	9	0		None	None	9	Right	Scale	Input
3	PAYTM_USERS	Numeric	11	0		None	None	11	Right	Scale	Input
4	DATA_PRICE	Numeric	10	0		None	None	10	Right	Scale	Input
5	DATA_CONS...	Numeric	10	0		None	None	15	Right	Scale	Input



Output in SPSS

Correlations

		DATA_PRICE	PAYTM_USERS	UPI_USAGE	NET_USERS	DATA_CONSUMPTION
DATA_PRICE	Pearson Correlation	1	-.962**	-.923**	-.930**	-.957**
	Sig. (2-tailed)		.000	.001	.000	.000
	N	8	8	8	8	8
PAYTM_USERS	Pearson Correlation	.962**	1	.948**	.966**	.986**
	Sig. (2-tailed)	.000		.003	.000	.000
	N	8	8	8	8	8
UPI_USAGE	Pearson Correlation	-.923**	.948**	1	.971**	.911**
	Sig. (2-tailed)	.001	.000		.000	.002
	N	8	8	8	8	8
NET_USERS	Pearson Correlation	-.930**	.966**	.971**	1	.937**
	Sig. (2-tailed)	.000	.000	.003		.001
	N	8	8	8	8	8
DATA_CONSUMPTION	Pearson Correlation	-.957**	.986**	.911**	.937**	1
	Sig. (2-tailed)	.000	.000	.002	.001	
	N	8	8	8	8	8

** Correlation is significant at the 0.01 level (2-tailed)

The above table helps to understand the correlation of various parameters.

In the table, first column and first row are the variables involved. For every variable the size is N=8. the correlation constant 'r' varies between -1 to +1 (absolute value between 0 to 1), the value '0' being no correlation and '1' means total correlated.

The correlations in the main diagonal are all equal to 1 this is because a variable is always perfectly correlated with itself. SPSS will mark the most significantly correlated values (0.01 significance level) with double asterisks **. From the above table you can see that all the values are significantly correlated.

1. The Internet users is in direct linear relation with UPI usage (r =0.971) and Paytm users (r =0.966).
2. The price of data is direct linear relation with the Internet users (r = -0.98), here the negative sign indicates the inverse relation i.e. the decrease in data price results in the increase of internet users.

Result

From the above correlation test we can conclude that the internet users and the e-wallet usage (UPI, Paytm) are dependent on the Price of the data inversely.