



Service Innovation in selected Firms with reference to Indian Telecommunication Industry for Sustainability

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Abstract: *Indian telecommunication industry has moved way ahead both in terms of offering value added services and delivering quality service. Technology has been playing a crucial role in the tremendous improvement of telecom operator services and operations. Telecom service firms appear to be on the path of achieving sustainability and a long-term survival because of innovation. This study aims at identifying the initiatives undertaken by three telecom operators in India i.e. Vodafone, Airtel and Reliance JIO towards sustainability through a planned and systematic innovation in the services provided to consumers. Study also focuses on some of the recent innovative trends in Indian Telecommunication Industry. The study shows the innovative services offered by three different telecommunication operators in India. Innovation models of Bessant and Tidd (2007) and Six Dimensional Model of Service Innovation developed by Pim den Hertog were used for this purpose. The results found that Airtel is found to be more aggressive in innovation and it is positioned ahead in terms of services offered.*

I. OBJECTIVES OF THE STUDY

1. To identify and analyze service innovation initiatives in selected Private Indian Telecommunication Operators i.e. Vodafone, Airtel and Reliance JIO.
2. To make a comparative study of these initiatives with reference to the two innovative models given by Bessant & Tidd and Pim den Hertog.

II. RESEARCH METHODOLOGY

For the purpose of this study, the official web sites of the three telecom operators were considered along with additional literature. The study is a conceptual one with detailed review of literature. Two models of innovation from the available literature are considered for the study. They are: -

- a) 4Ps of Innovation model by Bessant and Tidd (2007)
- b) Six Dimensional Service Innovation Model by Pim den Hertog (2010)

The above two models are applied on the current strategies of service innovation adopted by three private telecom operators of India. These are – Vodafone, Airtel and Reliance JIO. An analysis has been carried out by applying the above models for identifying and comparing various strategies adopted by the above three private telecom operators of India in line with the selected models.

III. INNOVATION IN INDIAN TELECOMMUNICATION INDUSTRIES IN TERMS OF SERVICES

“Innovation can be defined as a new or innovative idea applied to initiating or improving a product, process, or service” (Ford, 1996; Kanter, 1988; Van de Ven, 1986; Wolfe, 1994). Innovation is defined as “change that creates a new dimension of performance” (Peter Ducker). Innovation is identified as the main driver for companies to prosper, grow and sustain a high profitability (Drucker, 1988; Christensen, 1997). Telecommunications technology touches every aspect of our lives. It affects the way we do business, the way we administer ourselves, the way we keep in touch with those we love, and the way we build the collective human experiences we call culture. According to a report by leading research firm Market Research Store, the Indian telecommunication services market will likely grow by 10.3 per cent year-on-year to reach US\$ 103.9 billion by 2020. According to the Ericsson Mobility Report India, Smartphone subscriptions in India is expected to increase four-fold to 810 million users by 2021 The telecom sector continues to be a critical force for growth, innovation, and disruption across multiple technology industries. India will be in the top five economies in the world by 2020 and have a billion mobile subscribers and the second largest Internet user base in the world; it will become a key force of addition for global business, policy, and technology advancement. India will emerge as a leading player in the virtual world by having 700 million internet users of the 4.7 billion global users by 2025, as per a Microsoft report. Mobile devices are gaining currency, literally and figuratively. Due to the



proliferation of smart devices and reasonable broadband speed at competitive prices, the Indian consumer is now hooked to practical applications—from digital payments to over-the-top (OTT) video, from social networking to personal well being.

IV. DATA AND FACTS ON INTERNET CONNECTIVITY AND DEVICES

60% of the of total Internet users in India have access to the Internet on their mobile phones. There are more than 114.63 million mobile subscribers in India who access 3G/4G. 69 million people in India use Facebook daily, of which 64 million accesses the stage through their mobile devices. The number of Smartphone users in India grew to 239 million by the end of 2015; expected to be 702 million by 2020. 4G/LTE device shipment reached 5.7 million units in India during April–June 2015 with a 154% Q-o-Q growth. The number of wearable devices in India will reach 4.1 million by 2020. As on 1 July, 2016 34.8% of the population in India accessed the Internet.

(Source: Cisco VNI; TRAI; Akamai; Internet Live Stats; Frost & Sullivan, Feb 2017)

Month/Year	Urban (Millions)	Rural (Millions)
Mar-15	143	43
Jun-15	171	68
Oct-15	197	80
Dec-15	219	87
Jun-16	262	109

(Source: IAMAI; BCG; Frost & Sullivan)

Telco Activities for 4G by Airtel, Vodafone and Reliance Jio:

Airtel – The first, who launched 4G services i.e. the key differentiators, has covered 350 cities across 15 circles and operates on the 2300MHz frequency and has access to 20MHz of bandwidth, along with a license to offer data on the 1800MHz frequency in six circles.

Vodafone - Offers 4G services on the 1800MHz frequency in Kerala, Karnataka, Mumbai, Delhi & NCR, and Kolkata and Plans to invest in 4G services in the rest of the circles after assessing the demand. It also offers international roaming for Vodafone's 4G customers when they travel abroad to the U.K., Romania, Spain, and the Netherlands; plans to add more countries to the list

Reliance Jio - Nationwide license on the 2300MHz frequency, along with airwaves in the 1800MHz band and 10MHz spectrum in the 850MHz frequency that's purchased from RCOM in ten circles: Assam, Bihar, Haryana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Mumbai, North East, Odisha, and Uttar Pradesh (East). They also offer Volte, which allows for high-definition voice calls to be placed over the data network. Investment in app ecosystem; slated to offer digital content services that include streaming music, video-on-demand, and a digital payments solution. It also obtained a multi-service operator license, which allows it to introduce live TV as well as television-on-demand services on its network.

Reliance Jio arrived in the Indian telecom sector as a disruptive player offering customers free domestic voice calls and zero national roaming charges till 31 March 2017. This move has forced Airtel, Vodafone and other telecom operators to launch new plans and recharge packs of their own, offering unlimited voice calls, and various data benefits, in order to retain users. Telecom operators are trying to refresh their value-added service (VAS) offerings, including partnerships with VAS providers and start-ups.

About 9.27 crores have been invested so far by telecom service providers (TSPs) in building world class telecom infrastructure. - (COAI's Director General Rajan S Mathews) The Author has predicted the telecom sector continues to be at the epicenter of digitization growth, innovation, and disruption for virtually any industry. Mobile, Cloud, analytics and broadband/IP connectivity continue to be more and more embedded in the fabric of society today, and they are important to driving the momentum around some key trends such as video streaming, Internet of Things (IoT), and digital payments. The number of 'connected things' continues to grow as connectivity/broadband proliferates beyond urban and suburban subscription bases, mobile and smart device price goes down, and penetration expands; this will ultimately shape and define the IOT space. - (Mr. Sanjay Kaul, the M.D. of Cisco India and SAARC) Data explosion is being accelerated by a new wave of digitization linking cloud services with the rise of the Internet of Things (IoT). For consumers, this includes bringing more of our everyday life into the digital world, from fitness tracking with wearable to connecting appliances in our homes. Enterprises have understood that the digitization of their value chain and processes is a key competitive advantage that creates value, and IoT (Internet of Things) further extends that reach with vertical-specific analytics playing an increasingly important role. - (Mr. Randeep Raina, Head of Business and Sales Development, Asia Middle East and Africa at Nokia Networks)



V. 4Ps OF INNOVATION MODEL BY BESSANT AND TIDD

Bessant and Tidd (2007) identified 4Ps of innovation: (1) Product Innovation, (2) Process Innovation, (3) Position Innovation and (4) Paradigm Innovation.

- ✓ Product Innovation is new designs of products or features seen in tangible products. For example: ICICI Bank has made online to open an account.
- ✓ Process innovation consists of fundamental changes in fabrication procedures or modifications in manufacturing methods, sequence, or equipment used to create products/services. For example: State Bank of India has launched a service for unsatisfied consumer i.e. “SMS UNHAPPY”. Any customer who wants to lodge a complaint sends the message “Unhappy” to a specified number (8008202020).
- ✓ Position innovation refers to contextual shifts with regard to the way products/services are introduced. For example: YES Bank has launched a service known as Professional Entrepreneurship Programme (YPEP): The bank tapped the B-school alumni network to hire top-notch graduates unhappy with the jobs they had chosen. That’s now become a campus strategy.
- ✓ Finally, paradigm innovation refers to changes in mental models which frame the actions or behaviors of a social entity and motivates their interest in performing new routines or engaging in practices that may have previously been devalued. Thus, a paradigm innovation may lead to shifts in perceptions, values, and belief systems that generate new actions and behaviors as well as motivate new practices or routines. For example: Andhra Bank has started Internet Banking that motivates consumer to engage in online practices.

VI. SIX DIMENSIONAL SERVICE INNOVATION MODEL BY PIM DEN HERTOEG

A conceptual framework for service innovation was developed by Pim den Hertog (2010) through a Six-Dimensional Service Innovation Model. They define Service Innovation as a new service experience or service solution that consists of one or several of the following dimensions: new service concept, new customer interaction, new value system/business partners, new revenue model, new organizational or technological service delivery system.

- ❖ The first dimension is Service Concept or Service Offering. (For example: ICICI bank introduced a service named Mobile Money Transfer)
- ❖ The second dimension is the New Customer Interaction and the role customers play in the creation of value. (For example: SBI set up a Crorepati Branch for High Income Group People)
- ❖ The third dimension is the New Value System or set of new business partners who co-produce a service innovation. (For example: Andhra Bank has started services like Lock Box facility)
- ❖ The fourth dimension is related to new revenue model. (For example: Andhra Bank has launched a new service to increase the revenue called IndiaFirst Life Insurance)
- ❖ The fifth dimension is the new delivery system; personnel, organization, culture. (For example: SBI started One Rupee Bank)
- ❖ The sixth dimension is technological, which is a new service delivery system. (For example: YES Bank has started Technology Outsourcing Services.)

VII. APPLICATION OF INNOVATION MODELS:

The two models of innovation were applied on innovative strategies of three telecom operators in India. The new innovative ideas of these telecom operators in terms of services offered are mentioned below. For the purpose of study, recent and innovative services are only considered.

Vodafone Services:

- ✓ Vodafone FLEX - One common balance for all our needs, it is a revolutionary new way to use Calls, SMS, Internet and Roaming seamlessly with just one recharge, thus prepaid became simpler.
- ✓ Vodafone RED - Vodafone RED Postpaid Plans gives us Unlimited Calling, Higher Data Quotas, Inbuilt Roaming and a world of Exclusive Privilege
- ✓ m-Pesa- Transforms our mobile phone into a bank account with m-pesa and we get the power of money in our hands
- ✓ Become a Ready Business - A Ready Business is agile and thrives in a continually transforming world. Flexible, collaborative and mobile, the business is built to be exceptionally responsive to the changing needs of its customers. Vodafone’s wifeliness and wireless services work together seamlessly, so that business can be ready for future venture.
- ✓ Vodafone Play - Vodafone Play has been designed as a one-stop entertainment station for Vodafone subscribers to enjoy their favorite content like Live TV, popular shows, latest movies or trending music videos.
- ✓ Live TV - Vodafone Live TV has been designed to watch breaking news, favorite dramas, reality shows& lots more as it happens immediately in the palm of your hand.
- ✓ Vodafone Kisaan MitR RML direct Service - It is a SMS alert service which gives solutions to daily information needs of farmers pertaining to weather, agriculture sector news, crop advisory, market rates, and success stories of other farmers.



- ✓ Vodafone “U” - In order to capture the youth market Vodafone has launched the Vodafone ”U” which is a all in one package for youth providing internet calls, music, and many more attractions, with the tag line “Where fun is always on!”

Airtel Services:

- ✓ Payments Bank - Airtel has taken a revolutionary step towards making banking easier. It gives us the flexibility of making payment of anything at anytime from EMI's to movie tickets, recharge to bills and shopping with online Debit card, thus bringing banking at our finger tip.
- ✓ Partner Connect Programme - Having realized that channel partners, value-added resellers and referral partners who proactively create and win opportunities for Airtel in the market, Airtel has designed this program to engage and reward them.
- ✓ Partner Connect World - It is a platform which brings partners from across the globe to a common dice for reflecting on the shared vision and building joint achievements.
- ✓ WYNK Music & Airtel Movies - It is simply framed as a one stop destination for unlimited movies and popular videos with the facility of downloading unlimited music and listening to them offline.
- ✓ Service Delivery Platform - The leading telecom service provider Bharti Airtel has announced about its partnership with IBM to deliver country's first 'Service Delivery Platform (SDP)' which will enable Airtel to deliver a suite of unique, innovative products ,services and application to its 25 million users through mobile, landline and broadband services.
- ✓ Open Network - It was an open sharing platform which gives each user the access to tower maps by providing them information about weak spots, strong signal zones, high speed internet and more for the users to question, judge or even partner with Airtel.

Reliance JIO Services

- ✓ Free Voice Promise - The most attractive feature of Jio was its Free Voice Promise which included free local calls, free STD calls, free roaming calls(incoming and outgoing) to any network anywhere in India.
- ✓ JioNet - This facility enabled us to search, locate and connect to any national superfast Wi-Fi network which only needed to login once and get auto connected from next use.
- ✓ JioMoney - JioMoney is an application to make smart, simple and secure digital payments. It is also allows the users to become cashless.
- ✓ Jio Prime Membership - Reliance Jio gifted Jio Prime Membership by extending the free call, SMS, internet services until 31st March 2017. This was a ground shaking offer for Reliance Jio prime members. The Reliance Jio offered great deals and offers with reasonable tariff charges for its customers.
- ✓ Every Day More Value - This programme reinsured Jio users that they are getting the best in the industry as Jio has come up with a punch line “20% more Data than competition, always”
- ✓ JioMusic - The highlight for JioMusic is it has HD songs in over 20 languages with an unbeatable experience and a unmatched clarity of millions of music tracks across various genres, moods, artists and language we can say it has right music for every moment.
- ✓ JioMags - JioMags offers the users an enriching reading experience. It is a perfect companion for travel, business and leisure by providing instant access to selected magazine articles. Convenient to read on any screen size is also its major attraction.
- ✓ JioXpressNews - This gave us instant news about any happening let it be cricket score, every breaking news, or even to monitor stock market activity and also updates us by providing notifications for news important to us. Articles were also available in the Expressive mode even in offline mode. It helped by allowing us to select our language by providing 10+ Indian languages, 15+ interest areas and 500+ publications.
- ✓ Jio 4G Voices - This facility permits us to make HD voice and video calls in 4G LTE phone or in a JioFi for 2G/3G smart phones also helped us to enhance our voice calls with an image, a location or a message through the Rich Call feature of RCS.
- ✓ Jio Security - Jio Security is an Anti Virus and award winning App Advisor powered by Norton Mobile Insights protect the user and the device 24x7. Plus, it can help get back mobile devices if it ever goes missing. Jio Security helps us to put us in control of our digital experience.
- ✓ Jio Doorstep Delivery - Started from 17th November 2017, Reliance Jio launched a campaign to provide home delivery of sim cards directly with eKYC till 31st December 2017. A person can get upto 9 Sims according to the TRAI limit, which makes it easier for one to access Jio services
- ✓ Jio 4G personal hotspot – Jio - 4G personal hotspot supported blazing fast internet, download speed upto 150Mbps and upload speed up to 50Mbps. It provided Smartphone services even in 2G/3G smart phones.

VIII. ANALYSIS OF SERVICE INNOVATION IN TELECOM SERVICES

The service innovations of the above three telecom operators have been analyzed and various services offered by these banks were tried to fit into the 4P's Innovation Model and Six Dimensional Service Innovation model. The results of the analysis are presented in the following two tables.

Table 1: - 4P's of Innovation Model

	Vodafone	Airtel	Reliance JIO
Vodafone Services:	Vodafone Flex Vodafone Red	My Plan My Plan Family My Plan Infinity	Free Voice Promise
Vodafone Services:	My Vodafone App	My Airtel App	My JIO App
Vodafone Services:	Become a ready Business	Partner World	Jio Net
Vodafone Services:	m-Pesa	Payments Bank	Jio Money (for cashless)

Table 2: - Six-Dimensional Service Innovation Model

	Vodafone	Airtel	Reliance JIO
Service Concept/offering	My Vodafone App	My Airtel App	My JIO App
New Customer Interaction	Vodafone Kissan Mitr RML Direct services	Partner Connect Program	Jio Prime Membership
New Value System	Vodafone Play	Airtel Movies, Wynk Music, Airtel Games etc.	Everyday More Value
New Revenue Model	Vodafone U	Airtel Payments Bank	Jio Net
New Delivery System	Do it yourself	Service Delivery Platform	Jio Door step Delivery
New Technology	Live TV	Open Network	4G Personal Hotspot

IX. CONCLUSION

India is currently the world's second-largest telecommunications market and has registered strong growth in the past decade and half. The sample considered here for analysis has proved this point very clearly. It is found that all three telecom operators have embraced service innovation as a part of their future telecom strategy and are moving continuously towards customer centric orientation. It is observed that telecom operators in India are moving towards sustainability through innovation and innovative service operations and offerings. It is also found that the innovation is not limited only to product or process innovations but also to business model innovation, operations innovation, markets innovation, and more importantly, paradigm innovations. Out of these three telecom operators, Airtel is found to be more aggressive in innovation and it is positioned ahead in terms of services offered. The rate at which innovations are adopted by these service firms constitutes an important part of the process of technological change.

X. SCOPE FOR FURTHER STUDY

The two models discussed in this article can further be applied by conducting an empirical survey to analyze the perception of customers on the services offered by these telecom operators or one can do the study to measure service quality for these service operators. There is lot of scope for further research in this area of service operations in telecom industries.

REFERENCES

1. Bessant J. & Tidd J, "Innovation and Entrepreneurship", John Wiley & Sons, 2007.
2. Pim den Hertog & et. al., 2010, "Capabilities for managing service innovation: towards a conceptual framework", Journal of Service Management, Vol. 21, No. 4, 2010.
3. Drucker, P.F., "The coming of the new organization", Harvard Business Review, Vol. 66, No. 1, pp. 45-53, 1988.
4. Henry Chesbrough, "Business Model Innovation – it's not just about technology anymore", Strategy and Leadership, Vol. 35, No. 6, 2007, pp. 12-17.
5. Ford, C.M., "A theory of individual creative action in multiple social domains", Academy of Management Review, Vol. 21, 1996, pp. 1112-42.
6. <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-2017-telecommunications-industry-outlook.pdf>
7. <http://telecom.economicstimes.indiatimes.com/tele-talk/author/986/prashant-singhal>
8. Vidya S. Nath, An Exclusive Whitepaper by Frost & Sullivan on Industry Outlook for the Indian Telecom and Broadcast Industry, 25th Anniversary – Digital India Convergence, February 2017, New Delhi.
9. Media Reports and Press Releases, Cellular Operators Authority of India (COAI), Telecom Regulatory Authority of India (TRAI), Department of Telecommunication (DoT), Department of Industrial Policy and Promotion (DIPP)
10. <http://www.dailypioneer.com/story.php?search=TELECOM+SECTOR+SET+FOR+ACTION-PACKED+2017>
11. <https://www.vodafone.in/>
12. www.airtel.in/
13. <https://www.jio.com/>