

# ISAS Brief

No. 446 – 2 September 2016

Institute of South Asian Studies  
National University of Singapore  
29 Heng Mui Keng Terrace  
#08-06 (Block B)  
Singapore 119620  
Tel: (65) 6516 4239 Fax: (65) 6776 7505  
www.isas.nus.edu.sg  
http://southasiandiaspora.org



## The New Jio Network – A Game Changer

*There has been talk of the need for disruptive technologies and intelligent manufacturing solutions for India. The first of these attempts is the introduction of all-digital, IP-based services by Reliance Industries. It has tremendous opportunities to leverage economic growth, once it gets over the initial hurdles*

S Narayan<sup>1</sup>

At the Annual General Meeting of Reliance Industries in Mumbai last week, the Chairman Mr Mukesh Ambani unveiled the details of the soon-to-be launched Jio Digital broadband service. From the details that were put out in his speech, the service is likely to be a game changer in many respects.

Existing mobile telephony players started off with networks to support voice and later, messages (SMS). As the internet expanded and technology grew, these players added to their networks to deal with data and Internet Protocols (IP). Demand for data, in the form of entertainment, music, video telephony, financial information, equity and financial markets etc. has multiplied enormously over the last decade. The use of IP in transmission has also exploded. The Jio is an attempt to create an all-IP network, thus moving the old telephony networks into obsolescence. The advantage is that all computers, internet information, and even smart equipment like CCTVs, automobiles, household appliance and the like will communicate

---

<sup>1</sup> Dr S Narayan is Visiting Senior Research Fellow at the Institute of South Asian Studies (ISAS), an autonomous research institute at the National University of Singapore. He can be contacted at [snarayan43@gmail.com](mailto:snarayan43@gmail.com). The author, not ISAS, is liable for the facts cited and opinions expressed in this paper.

through IP, and therefore a digital platform based on IP is likely to become a very powerful tool in heralding a digital revolution.

The new platform will offer voice services free of charge within India. Thus all telephony bills for voice will disappear. Reliance already owns content through ownership of several media, TV and radio channels, and is offering to put out 300 live TV channels, a library of 6000 movies, and 10 million songs in 10 languages on its applications. The platform would offer data rates close to ten percent of existing tariffs. There would be charges for international calls, and several packages available for data, depending on the intensity of use. Jio is also putting out a group of applications (apps) as a reasonable-cost subscriber-package (Rs 15000 per year top-end, but starting from Rs 250 a month).

From 5 September 2016 and until 31 December, these services are being offered free of charge. The platform is accessible on specially-designed handsets that are available from under Rs 2000 to around Rs 5000, much cheaper than the sets currently available in the market.

There are several implications of this development.

First, there would be severe competition-pressure on the other mobile telephony players, especially Airtel, Vodafone and Bsnl. The new offering is 4GLTE in technology, superior to 3G and 2G under offer by the others, and is much faster and clearer. Immediately after the announcement by Mr Ambani, the combined market capitalisation of all the competitors fell by over Rs 13000 crores (US\$ 2-billion). It would not be easy for the competitors to match the offerings on the Jio platform without substantial investments in technology and in modernisation. Reliance has announced that it has invested close to US\$ 20-billion in this enterprise, and even assuming some degree of overstatement, the capital required to replicate this would not be easily available with the other networks. Analysts have been quick to point out that, at the announced tariffs, Jio would be unlikely to make profits for at least 7 years. However, if it emerges as a monopoly over time, tariffs are likely to increase.

Second, there is focus on youth. Employees of the company (around 60,000) are reported to be under 30 years of age, and the products being launched in entertainment, movies, sports, music, dining out etc. are all focused on this group. The attempt at this urban-educated focus would be to draw in as many of the rural youth into the fold as possible, through regional language content. The challenge would be of interest to the basic users, including rural users, basic workers, service personnel etc. in accepting value-added services that they do not use or are

not literate enough to need. The introduction of free voice-calling is a clear attempt to entice this category to try the services being offered.

Third, there would be a cascading effect on other industries. Mobile phone manufacturers, for example, would like to offer Jio services on their gadgets, and they would perhaps have to charge for this service, though this is not clear at this stage. Similarly, other entertainment providers, TV channels as well as sports broadcasters, online gaming companies would like to get on to this platform, and over time this could become an all-encompassing channel not just for entertainment, but also for security services, home appliances control, and in short, for 'smart living'.

Fourth, the network would afford great opportunities for the financial markets, especially in equity- and bond-markets as well as in exchange- and banking-transactions.

Fifth, there is an opportunity to develop content for education through online platforms through skill development courses, which can be offered online, and in video – perhaps even in the interactive mode.

Sixth, health care could be revolutionised through distant access, and especially care for the aged, managed and monitored remotely.

Finally there is a great opportunity for industry and the marketing firms to develop data-management tools to predict consumer behaviour and market opportunities. This could, in turn, lead to a large number of start-ups in different tech-enabled sectors to flourish.

At the recent Niti Ayog lecture in New Delhi, Singapore's Deputy Prime Minister Tharman Shanmugaratnam spoke of the need for technological change, and new skills based on disruptive technologies, for India. Jio appears to offer such a platform. Interestingly, India may not be at the forefront in developing manufacturing technologies and innovations; in the services sector and in IT, it is likely to become one, and Jio may just be the platform to enable that to happen.

There are some risks. It is a first-ever attempt to encompass all services into an IP-enabled network. Reliance's experience of 2002 with the CDMA technology was not a success. It is not clear whether the current architecture has been tried out anywhere in the world. There is also the problem of interconnectivity with other networks. Apart from access and inter-company tariff issues, there is the problem of technology. If Jio attempts to access other networks, its speed and efficacy will be determined by the weaker of the two systems, making

its promises sound hollow. There is also a commercial battle among the service-providers ahead.

Notwithstanding these, the Jio introduction offers exciting technological opportunities. Mr Ambani said once “real power is in contributing to changes in history” – it remains to be seen whether he has done this through Jio.

• • • • •