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INDIA'S 5G LEAP IS ABOUT POWERING TOMORROW

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The fifth generation mobile network, or 5G, is the next level of mobile network that will shape the Fourth Industrial Revolution, or Industrial 4.0, quality of service delivery, innovation, etc. by facilitating smarter and developing societies. Commercial 5G networks began to be deployed in 2020 and are expected to reach 12% of world mobile connections (1.1 billion) and generate revenues up to U.S.$1.3 trillion by 2025 for operators. The technology that 5G uses will improve data transfer speed at unexpected higher levels — almost 100 times more — and reduce latency times helping mission-critical services. Thus, 5G is essential but are we ready for it?

India's telecom sector, which has revolutionised the digital space and facilitated services-led growth and quality of life, has been estimated to be one of the top performers globally for several years; but it has also been in doldrums for the last few years. Moreover, the Supreme Court of India's ruling on the dues being sought by the Department of Telecommunications (estimated to be more than 90,000 crore has further exacerbated the financial condition of telecom companies. It is no wonder then that the number of telecom operators has come down to a handful from around 15 a few years back. In this scenario, the huge investment required for 5G may add to their worries. The trial run of 5G in developed countries such as Japan and the United States reveals that the investment is very high, ranging from $6 million per small city to $60 million per large or densely populated city.

Does 5G have potential to be a harmonising technology layer?

The new generation mobile network has the transformative potential to provide a wide range of benefits to the Indian economy, which when enhanced with artificial intelligence provides a new dimension to connected and autonomous systems. Its use is a chance for Indian policy-makers to educate and empower citizens and businesses, and transform existing cities into smart and innovative cities. This may allow citizens and communities to get socio-economic benefits and comforts delivered by a well-advanced, more data-intensive, digital economy. Broadly speaking, the uses of 5G in India may encompass enhanced outdoor and indoor broadband, the Internet of things, smart cities, smart agriculture, energy monitoring, remote monitoring, smart grids, telehealth, industrial automation, remote patient monitoring and industrial automation to name some of the areas. There is great potential for India to move to an advanced digital revolution.

However, it is imperative to undertake an independent economic assessment, city wise, beginning with the metro cities, to assess the commercial viability for 5G deployment in India. Till this happens we may continue enhancing the existing quality of 4G networks. Singapore had planned four 5G networks — two comprehensive 5G networks and two others with smaller and limited coverage, the reason being the high cost in deployment of fibre cables and the scarcity of 5G airwaves.

The immediate priority for India will be in identifying end users and population to be covered, analysis of the existing network and operators, identification of cities for the 5G roll out, working out an investment model, and minimisation of the digital risk and pricing based on the externalities and usage of various sectors. The deployment of 5G in India needs to be carefully planned after a cost benefit analysis by independent experts which will create a level-playing field through market mechanism such as facilitating, simulating, auctioning, ensuring competition, functioning markets, etc.

India's decision on 5G trials a sovereign one: U.S.

Once a case is made for 5G, the Telecom Regulatory Authority of India (TRAI) may consider preparing a foolproof spectrum road map with a predictable renewal process which will compensate the huge investment required for deployment and ensure coverage. A level-playing field should be created for all telecom companies with more focus on companies which have the experience of ensuring telecom networks to remote areas and the potential to provide affordable coverage. Global trial runs show that the key areas for 5G deployment are harmonisation of 5G spectrum bands, pricing and sharing of the spectrum. Sharing of available spectrum to maximise its efficient use especially in rural areas, and spectrum allocation procedures that favour investment, need to be considered.

As the deployment of 5G network is expensive, both the Central and State governments may need to consider measures which stimulate fibre investment, attract investment through public private partnerships (PPPs) and facilitate investment funds on a nominal interest basis. Fortunately, the big telecom package along with reforms announced by the Government in the middle of September bring relief and create an enabling environment for investment in the sector. Steps such as a moratorium on dues, redefining adjusted gross revenue, and reducing spectrum charges will help all telecom companies, more so Airtel and Vodafone Idea who face precarious financial situations. Further, allowing 100% foreign direct investment in the telecom sector under the automatic route along with these policy reforms augurs well for the sector to attract investment. Implementation of 5G requires huge investment and the relief package is welcome step.

India may have 330 mn 5G subscribers by 2026, data usage to reach 40 GB per smartphone: Report

The Government also needs to address information asymmetry and negative externalities through laws and regulations/taxes and subsidies. The deployment of 5G technology will also need right of access to government infrastructure such as traffic lights, lamp posts, etc. where wireless operators can deploy electronic small cell apparatus. At the same time, reasonable fees may be charged by State and local governments to operators for affordable deployment of 5G equipment. Further, removing the tax burden for deploying fibre networks reduces associated costs, thereby promoting investment as was done by Singapore government, could help in the smooth deployment of fibre in India.

As India has already witnessed digital revolution even in its remotest areas due to cost-effective 4G technology, the use of 5G can play a vital role in enhancing this sector and also facilitating India’s goal to emerge as a manufacturing and innovation hub. The negative implication of 5G is furthering the ‘digital divide’. Therefore, Government policies should also focus on affordable coverage through synchronisation of bandwidth.

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