

INTERNET FOR ALL – REALITY OR PIPE DREAM?

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Around the globe, conventional jobs are being replaced by technology-related jobs. As most of these jobs employ cutting-edge technologies such as AI, 3-D printing, drones, big data and blockchain etc. they rely heavily on the provision of reliable internet access. The telecommunications sector, arguably the most dependent sector on the internet, has the potential of creating an enabling environment which gives people access to health, education, agritech, e-commerce, fintech, etc., creating jobs in the process. The scope of the Pakistani economy to create such jobs will be limited if the country fails to provide widespread and reliable internet access, in terms of speed and quality, to its people. In this essay, I will highlight some of the challenges faced by Pakistan in providing internet access to its citizens as well as briefly suggest possible solutions to these problems.

Although the internet was perceived to be a social equaliser, providing a levelling field to everyone through equal access to opportunities, in Pakistan, it has worsened the class divide. While the rich continue to enjoy facilities such as the provision of internet access, according to the IMF, 89% of the population in Pakistan cannot afford internet (Jamal, 2018). Moreover, by January 2021, there were only 61.34 million internet users in Pakistan and the internet penetration rate stood at an abysmal 27.5% (Kemp, 2021). These statistics have become even more problematic during the COVID-19 pandemic where a shift to remote work and learning has been accelerated with businesses and organisations vaulting forward 5 years in terms of technology adoption (Baig, Jenkins, Lamarre & McCarthy, 2020). However, in Pakistan, this shift to online learning was deemed unfeasible due to a dearth of internet access in poor regions of the country. This can have a detrimental impact on the future economic prospects of a country where 64% of the total population is under 29 (Farhan, 2021). This lack of access to internet to the wider population in the country can be partly attributed to internet being perceived as a luxury rather than a necessity. This perception is further augmented by the imposition of taxes; the Government of Pakistan imposes a 32% tax on internet users, rendering it unaffordable for most people (Hasan, 2021).

Pakistan is significantly cheaper in terms of a gigabyte of data availability compared to India,

Egypt, and Bangladesh (Anwar & Qayyum, 2021). This is partly due to healthy competition between internet providers. However, the devices needed to access internet services are not affordable by most people as nearly 50% of the internet users use 2G technology via relatively cheap mobile phones (Hasan, 2021). Furthermore, the utilisation of optical fibre cables by mobile towers in Pakistan continues to be an issue. Approximately only 10% of mobile towers in Pakistan utilise optical fibre cables, whereas in Thailand, Malaysia, India, and Bangladesh, 90%, 40%, 30% and 27% of mobile towers utilise optical fibre cables, respectively (Anwar & Qayyum, 2021).

Spectrum, the medium for transmitting internet signals between two points, is released under the authorisation of the Government of Pakistan through auction. Unlike other countries, the Government of Pakistan hoards spectrum to create artificial scarcity to inflate prices and gain higher upfront fees. Spectrum released in Pakistan is one third that of Bangladesh and India, and one fourth that of Turkey (Hasan, 2021). No spectrum has been released after 2014 in Pakistan (Anwar & Qayyum, 2021). This drip-feed release of spectrum can be explained by the Government's preference for short-term budget balancing rather than providing internet access to all as a basic human right (Hina, 2021). This strategy in the long-run is less beneficial for tax collection purposes as it hampers the growth of sectors dependent on the availability of the internet. A case in point is China which has waived 5G spectrum fees (KPMG, 2019).

The average revenue per user of spectrum in Pakistan is around 1 USD whereas in the USA, it is over 30 USD (Hasan, 2021). Since internet providers get a relatively low return in Pakistan, investment is deterred in this sector. In addition to spectrum fee, additional license fee needs to be paid to relevant government authorities which when accumulated, form a significant part of capital expenditure required by internet providers when undertaking the expansion of their services. As a result, internet providers are forced to face a trade-off between improving the quality of internet access or purchasing spectrum and increasing internet penetration. To avoid this, a pay-as-you-go model could be utilised as distributing spectrum without upfront license fee could lead to a potential faster rollout.

In addition to the Government of Pakistan's short-termism, internet service providers also need to become more operationally efficient. Historically, in Pakistan, internet providers have treated their towers as their competitive advantage and have been reluctant on sharing them with their competitors. Currently, 48,000 towers in Pakistan are independently owned by the 4 largest internet providers (Siddiqui, 2020). In the USA, however, American Tower manages over 42,000 common transmission towers, resulting in greater internet coverage (American Tower, 2021). Given their advantages to both the firms and the public, common transmission towers are now being set up in Pakistan. Unfortunately, the same cannot be said about optical fibre cables. These assets are currently not shared between service providers in the country and the consolidation of telecom companies could result in these firms improving their margins through economies of scale as well as building a robust infrastructure to provide the public with improved internet access. One way of pushing firms to be more efficient would be through encouraging disruptive competition in the sector such as SpaceX's Starlink which will provide low-cost internet to remote areas around the world (The Express Tribune, 2021).

By focusing on expanding 4G services and ignoring 5G technology, Pakistan risks lagging behind other countries in the years to come. To circumvent this, it

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could emulate the UK and its drive for improving the provision of internet facilities. In the UK, as part of 'Project Gigabit', the Government plans to invest in internet-related infrastructure and provide a subsidy to internet providers with the goal of delivering gigabit-speed broadband to 85% households by 2025 (Cellan-Jones, 2021). Similar measures in Pakistan, supervised by top-level management, could help boost economic growth. Although the role of the State should not be understated, the private sector too has a role to play in providing internet access to people. In India in 2015, Mukesh Ambani launched Reliance Jio which connected over 80% of the country and provided them with internet access (Riley & Arora, 2016).

To conclude, the Government of Pakistan needs to avoid short-termism and utilise a pay-as-you-go policy for spectrum which will encourage the provision of internet services to a wider audience, especially to those in remote areas. Furthermore, it needs to invest directly in infrastructure. The private sector will also play an important role in improving internet access such as seen in the case of Reliance Jio. A combination of these factors can result in greater tax revenue for the Government as well as facilitate economic growth by creating additional jobs and prevent Pakistan from playing technological catch-up in the coming years.

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