

INTERNET ACCESS

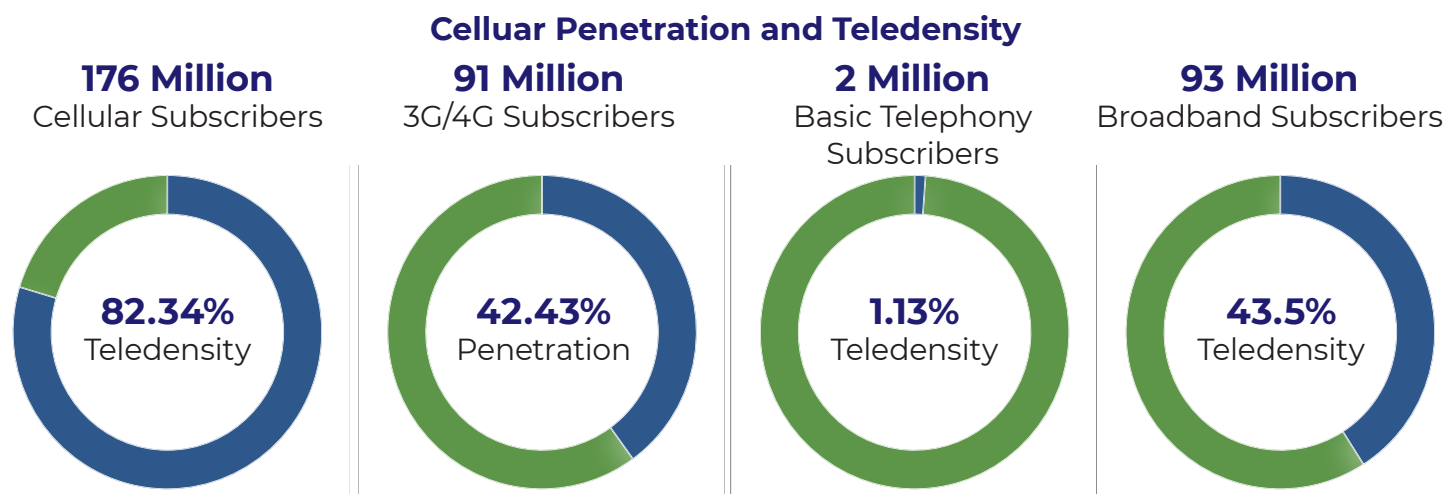
A limited population of Pakistan enjoys internet access. Imagine the benefits that would accrue to the society and the economy if the entire population of the country had internet access. The internet access would prove useful in raising the literacy rate through online education to the deprived ones, providing health advice remotely in far-flung areas, enabling farmers and handicraft manufacturers to connect wholesalers and retailers directly in cities without the intervention of middlemen, and providing freelancing opportunities to many more, accelerating e-commerce. These are just a few of the benefits of internet connectivity. Given the disruption that Artificial intelligence and technology are causing a full range of benefits is even difficult to imagine at this stage.

What needs to be done to provide universal internet access is described in Table 9.1, after a brief overview of the cellular industry, which is to play a key role in ensuring access.

The State of Cellular Penetration

Pakistan is an emerging cellular economy, with digital technologies beginning to transform the way people live and work. Currently, there are 169 million cellular subscribers that cover 80% population of the country.

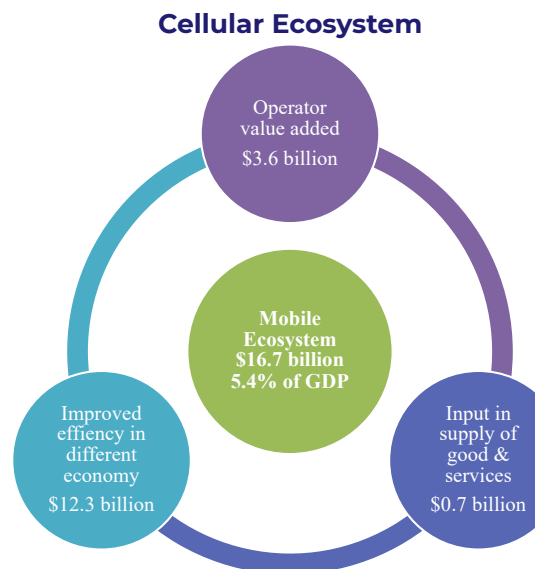
- 40% of the population is using internet facilities.
- The total economic contribution of the mobile ecosystem in Pakistan was \$16.7 billion in 2018.
- The ecosystem created more than 450,000 direct and indirect jobs.
- It contributed \$2.2 billion to public sector revenue, including \$1.5 billion direct and \$0.7 billion indirect taxes.



Source: Pakistan Telecommunication Authority (December 2020)

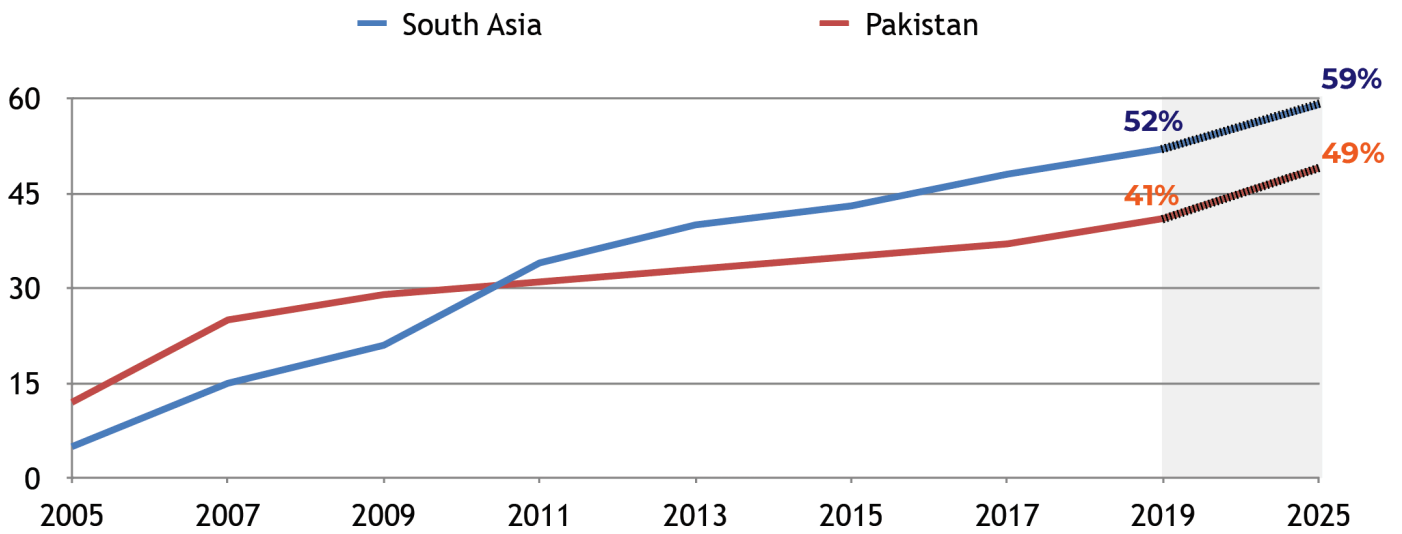
The Story So Far

- Mobile subscriber penetration is still low.
- The country scored 39.8 in the latest Mobile Connectivity Index, compared to an average of 45.7 for South Asia.
- There is a sizeable 'coverage gap'; mobile broadband (3G or 4G services) accounts for less than five in 10 cellular connections.
- Availability, affordability, and content are the key barriers.
- The smartphone adoption rate is 49%.
- Conservative pace of 4G adoption in recent years.
- (23% in 2019) suggests certain intervention are required to disrupt market dynamics.

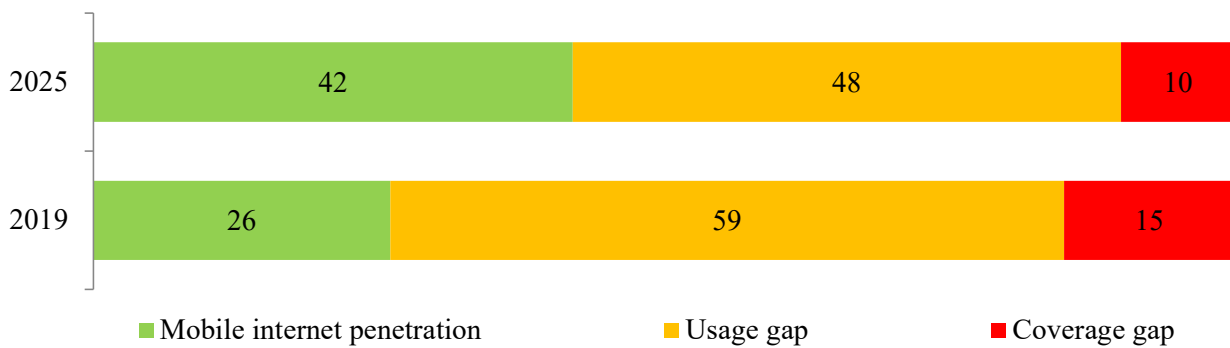


- Pakistan’s operators invested \$5.3 billion between 2010 and 2018, but the average CAPEX as a proportion of revenue is lowest (23%) in South Asia.
- There is poor local manufacturing. Still, the Samsung and Huawei account for over half of all mobile phone sales in Pakistan, reflecting an absence of homegrown firms.

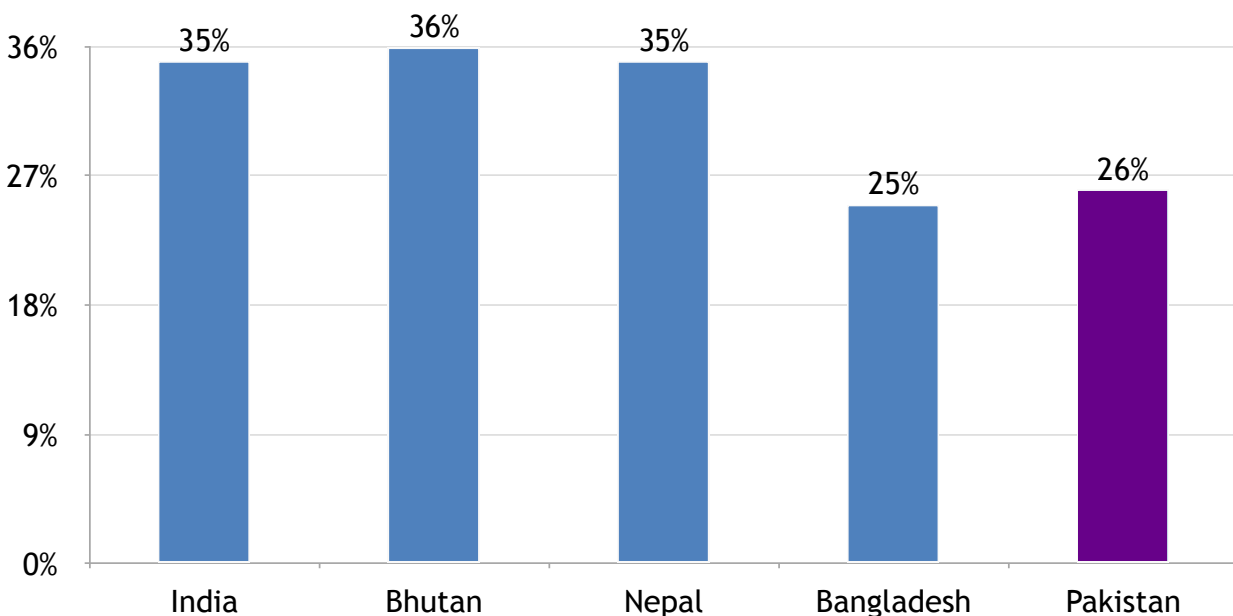
Unique Mobile Subscriber Penetration (%)



Mobile Internet Penetration, Usage Gap & Coverage Gap



Mobile Internet Penetration (%)



Internet Access

Issues	Solutions
<ul style="list-style-type: none"> • Provision of internet infrastructure does not require public investment – the infrastructure shall be laid and owned by the network operators. They have to be facilitated by easing out their overall cost. • A total spectrum of 19000 MHZ is available out of which only 256 MHZ has been auctioned so far . • The infrastructure required to provide internet access is to be laid by the cellular industry. • The rising demand for the internet increases the radio frequencies that a mobile phone operator requires. • Radio frequencies are auctioned to mobile network operators in the shape of the spectrum. • The first sale of spectrum fetched \$291 million from each of the network operators in the early 2000s. Since then the sale of spectrum is being viewed as a revenue generation avenue. 	<ul style="list-style-type: none"> • Do not eye sale of the spectrum to mobile network operators as a source of revenue – Internet access should be a priority. Provide spectrum at a nominal price or even free of any fee. • Bind the cellular industry to lay down the infrastructure required to provide access to at least 90% of the population. • Spectrum for 5G, whenever auctioned, should preferably be at a nominal price or even free because the deployment (infrastructure) cost of 5G for the network operators is quite high.
<p>A significant segment of the population, especially the recipient of grants from BISP, may not be able to afford internet charges.</p>	<p>Provide a targeted subsidy to those who either cannot afford or can afford only partially. This investment will carry high payoffs.</p>
<p>Tower sharing by network operators would reduce the cost for all operators. Some institutional issues that constrain tower sharing needs to be addressed.</p>	<p>Institutional constraints to tower sharing need to be addressed (We need to understand the institutional constraints to tower sharing through research).</p>
<p>While awarding spectrum to mobile network operators some conditions regarding access are part of the contract.</p>	<p>Coverage obligations may be enhanced to increase access.</p>
<p>E-commerce: Currently most of E-commerce is relying on 'Cash on Delivery'. The real breakthrough will come when online payment becomes easier.</p>	<p>With the launch of RAAST by SBP, online payment is likely to become easier.</p>
<p>1% sales revenue of the cellular industry goes into USF (Universal Service Fund). The funds available in the USF were to be utilized for providing connectivity in remote areas. The USF has not been utilized exactly as intended – at some point the funds available were even used for retiring circular debt.</p>	<p>The law should be enacted to make it difficult for using the USF funds other than the prescribed purpose. USF needs more focus on fixed Internet for high speed. As fixed is more under served.</p>

Consumers in Pakistan Face a Complex System of Taxes and Fees

- Telecom services in Pakistan are perceived as a luxury.
- For the country's bottom 20% and 40% income groups, the total cost of owning a mobile phone for both low and medium consumption baskets is above the UN's "1 for 2" target (i.e. 1 GB of data costing less than 2% of monthly income).
- The 31% tax rate as a percentage of the total cost of mobile ownership (TCMO) is significantly above the global average of 19%.

Cellular Phones: Cross Country Comparison of Taxes & Fees

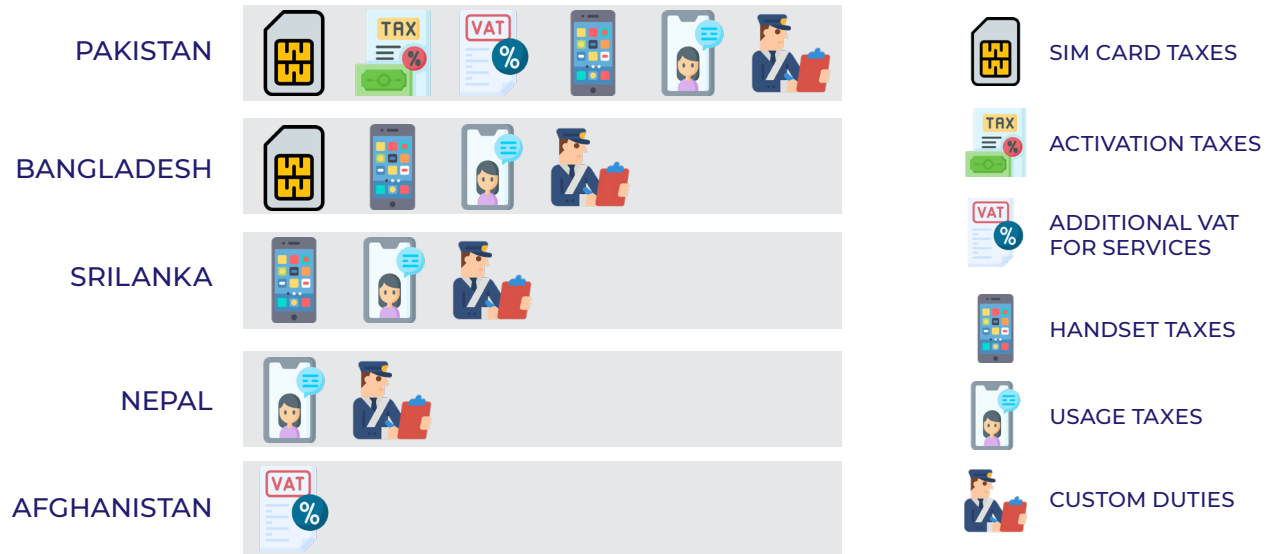


Figure Action Points

- 1 Make internet widely and cheaply accessible - consider fully funding fast internet access to all major cities within 2021.
- 2 Look at the sale of Spectrum (i.e. frequency) to telecom firms as an internet access issue rather than revenue generation.

Figure Further Research

- 1 What will be the cost of providing internet access to almost entire population of the country? What percentage of population cannot afford internet? What annual expenditure will have to be incurred to provide to those who cannot afford it?
- 2

References:

- Global System for Mobile Communications, GSMA (2020a). The Mobile Economy Asia Pacific 2020. GSMA Association.
- Global System for Mobile Communications, GSMA (2020b). The Mobile Economy Asia Pacific 2020. GSMA Association.
- Global System for Mobile Communications, GSMA (2020c). Mobile Internet Connectivity 2020 South Asia Fact Sheet. GSMA Association.