

Bangladesh's 5G moment: promise, challenges, and the road ahead

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On September 1, 2025, Bangladesh formally entered the 5G era when Robi Axiata became the first operator to switch on commercial fifth-generation services in select areas of Dhaka, Chattogram and Sylhet. Within hours, Grameenphone followed with its own announcement, claiming coverage across all eight divisional headquarters. The occasion came with customary fanfare. Government officials spoke of transformative potential, operators invoked visions of smart cities and telemedicine, and the Bangladesh Telecommunication Regulatory Commission declared a new horizon for the sector.

Yet beneath the ceremonial rhetoric lies a more sobering reality. Bangladesh's 5G launch comes more than three years after the March 2022 spectrum auction that raised \$1.23bn from operators, and nearly seven years after South Korea became the

rarely been starker.

THE LONG ROAD TO THE FIFTH GENERATION

Bangladesh's mobile telecommunications journey is, in many respects, a remarkable story of catch-up development. At independence in 1971, the country possessed fewer than 200,000 telephone lines serving a population of 70 million, yielding teledensity of less than 0.3%. Today, mobile subscriptions exceed 180 million, representing a penetration rate of 107%, while internet users account for roughly 73% of the population. Mobile financial services, pioneered by BKash, have brought 120 million registered accounts into the formal financial system.

Yet this progress has consistently arrived late relative to global technology cycles. The country launched 3G services in 2013, roughly 12 years after

SUMMARY

1. Bangladesh's 5G launch in September 2025 marks a symbolic milestone, but exposes a persistent gap between ambition and execution.
2. Years of delay after the 2022 spectrum auction have compounded lateness, leaving weak foundations in 4G uptake, device readiness and digital literacy.
3. Heavy spectrum fees and sector taxes are framed as a self-inflicted constraint that limits investment and keeps costs high for consumers.
4. A severe device affordability gap risks turning 5G into an elite service, especially as handset verification may reduce informal 5G phones on networks.
5. To make 5G economically meaningful, Bangladesh needs fiscal recalibration, clearer regulation, cheaper devices, stronger fibre and power reliability, and real sector use cases.

first country to deploy commercial 5G networks. More pertinently, it arrives at a moment when the gap between the country's digital aspirations and its structural capacity to realise them has

the technology's commercial debut elsewhere. 4G followed in 2018, about nine years behind the global curve. The pattern has repeated with 5G. While India launched commercial services in



IMAGE: JAMES YAREMA/ UNSPLASH

October 2022 and had accumulated more than 250 million active 5G users by early 2025, Bangladesh's operators spent years in a holding pattern, citing regulatory delays, unclear rollout obligations, and insufficient ecosystem readiness.

The consequences of perpetual lateness compound. According to industry analysts, only 55% of Bangladesh's mobile users currently access 4G services, and just 3% to 4% own 5G-compatible devices. Smartphone penetration, while rising, remains heavily skewed, with 64% in urban areas against 31% in rural regions. National digital literacy hovers around 31%. These figures suggest that the infrastructure of the future is being laid on foundations that remain uneven and incomplete.

THE SPECTRUM BURDEN: A SELF-INFILCTED CONSTRAINT

If 5G is to serve as a catalyst for national

competitiveness rather than a prestige project for metropolitan elites, the economics of network deployment must make sense for operators. Here, Bangladesh faces a problem largely of its own making. A comprehensive study released by the GSMA in September 2025 laid bare the scale of the regulatory burden: spectrum fees in Bangladesh now account for about 16% of operators' recurring revenue, substantially higher than the Asia-Pacific median of 10% and the global median of 8%.

When revenue-share levies, universal service contributions and sector-specific taxes are added, the total fiscal burden rises to an unprecedented 55% of operators' market revenue. Corporate tax rates on mobile operators can reach 45%, levels typically reserved for harmful products such as tobacco in other jurisdictions. By comparison, India applies 35%, Pakistan 29%, and Vietnam about 20%. A supplementary

duty of 20% on mobile recharges adds further pressure, passed directly to consumers who are already among the region's poorest.

The GSMA's modelling suggests that aligning spectrum costs with the Asia-Pacific median could lift average download speeds by 17% and enable 5G to reach 99% of the population by 2035, adding an estimated \$34bn to GDP. Alignment with the global median, requiring about a 75% reduction in spectrum prices, could generate \$45bn in additional economic value over the same period. These are not trivial sums for a country aspiring to upper-middle-income status by 2031.

The counterargument, invariably advanced by treasury officials, is that spectrum auctions and sector-specific levies represent legitimate revenue streams for a developing state with pressing fiscal demands.

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