GSMA

Impact of Spectrum Pricing in Bangladesh

This report provides an overview of spectrum pricing in Bangladesh and its implications for network improvements, the adoption of new technologies, and overall economic growth in the country. As the demand for mobile data accelerates, spectrum policy will play a decisive role in ensuring Bangladesh continues to keep pace with international connectivity standards.

Bangladesh is entering a critical phase in its digital transformation journey. While the country has made commendable progress in expanding mobile connectivity – with 4G coverage now reaching 99% of the population – mobile internet penetration remains relatively low at 46%, and average monthly data usage per connection is just 5 GB. As the country plans for 5G adoption, there will be demand for substantial network investments and spectrum availability. This necessitates targeted policy interventions to unlock the full potential of mobile broadband and support the country's digital goals.

Figure 1:
Mobile internet use penetration (percentage of adult population)

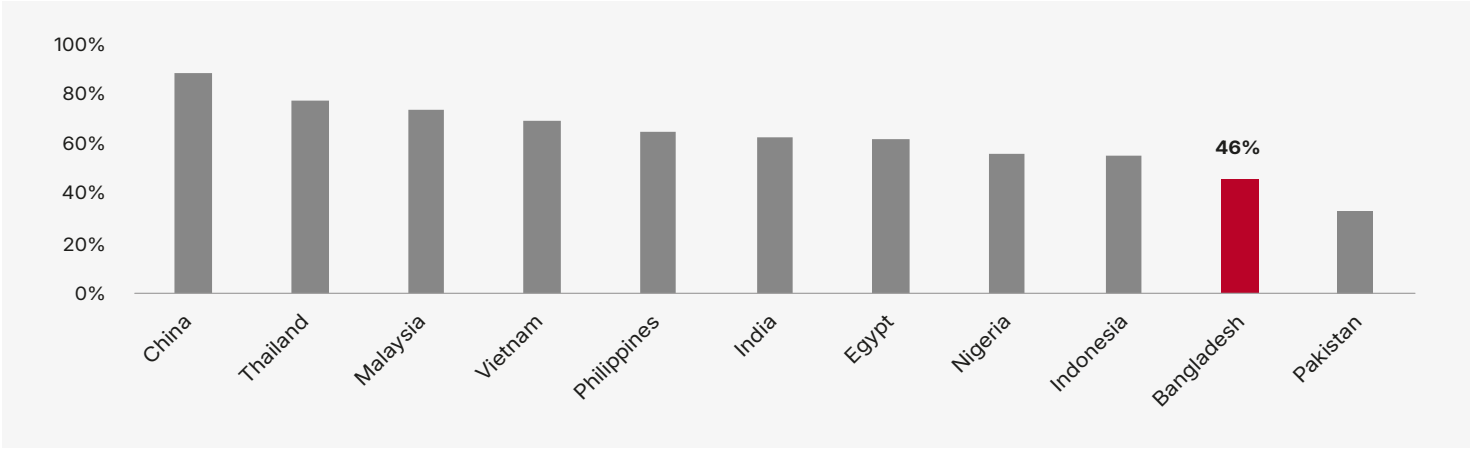


Figure 2:
Data traffic per mobile connection (GB)

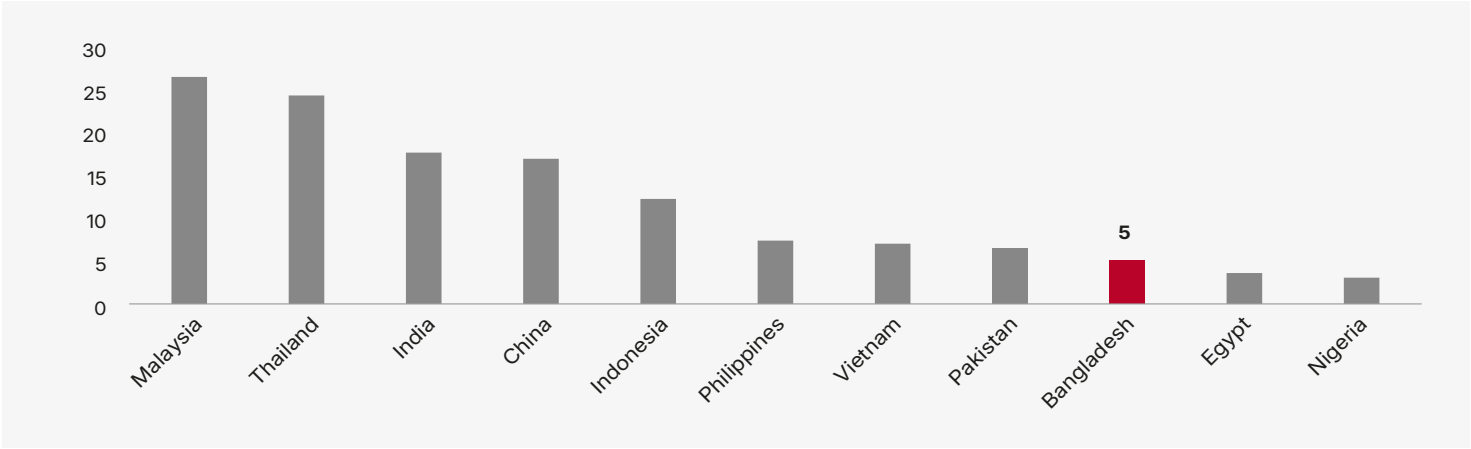
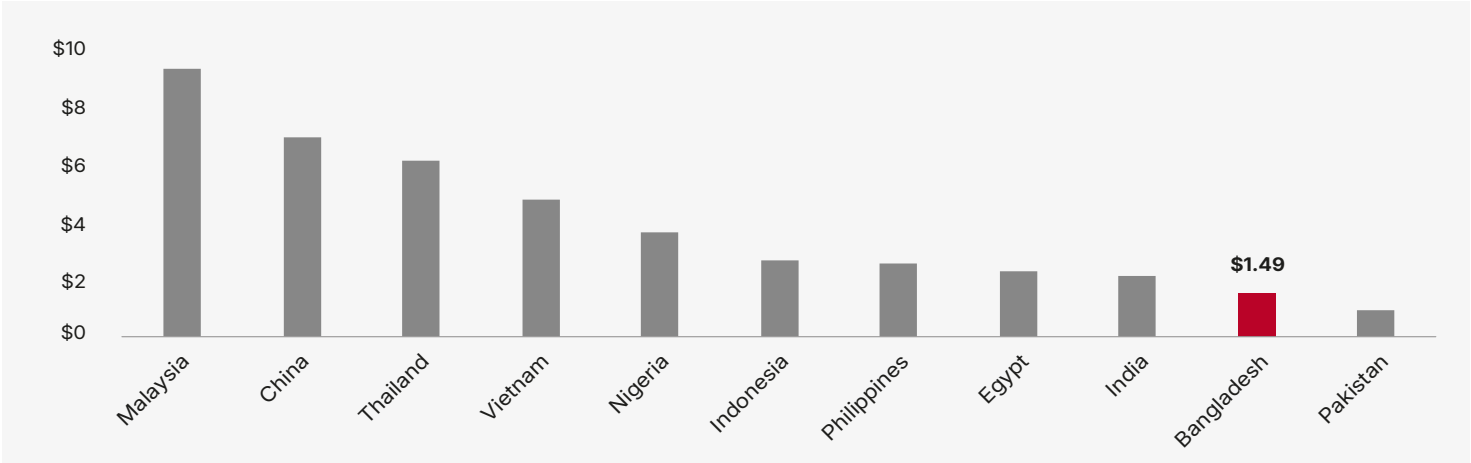


Figure 3:
Average monthly revenue per connection



Regulatory challenge: Balancing affordability with investment incentives

Bangladesh's mobile services are among the most affordable in the region, driven by competitive market dynamics. While mobile operators face pressures from increasing costs, a supportive regulatory environment can unlock new investment opportunities. Revenues per connection have declined by 38% in real terms since 2014, while spectrum and regulatory costs have risen sharply. The spectrum cost has increased from 11% of operators' revenue in 2014 to 16% in 2023, well above the APAC median of 10.4% and the global median of 7.7%. When combined with other sector-specific taxes on both firms and consumers, the regulatory contribution of the telecom sector in Bangladesh accounts for almost 55% which forms a significant share of operators' revenue, highlighting the importance of continued collaboration between government and industry to ensure sustainable growth.

This high-cost structure risks deterring investment in network upgrades and delaying the adoption of advanced technologies such as 5G.

Figure 4:
Average revenue per connection ($, inflation adjusted)

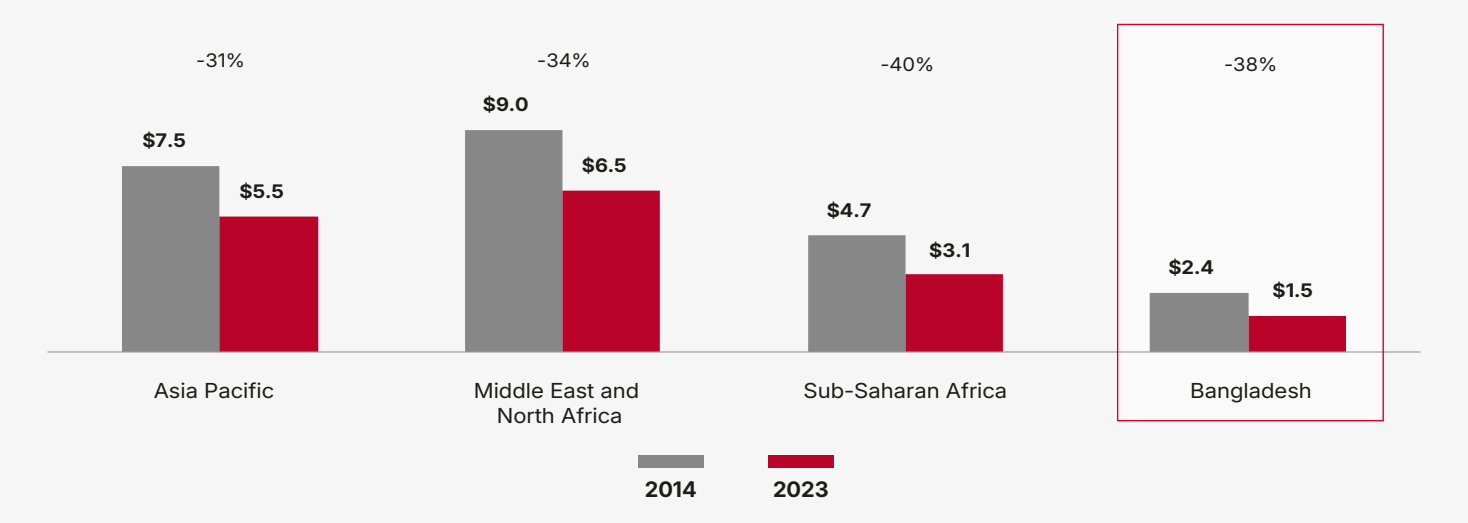
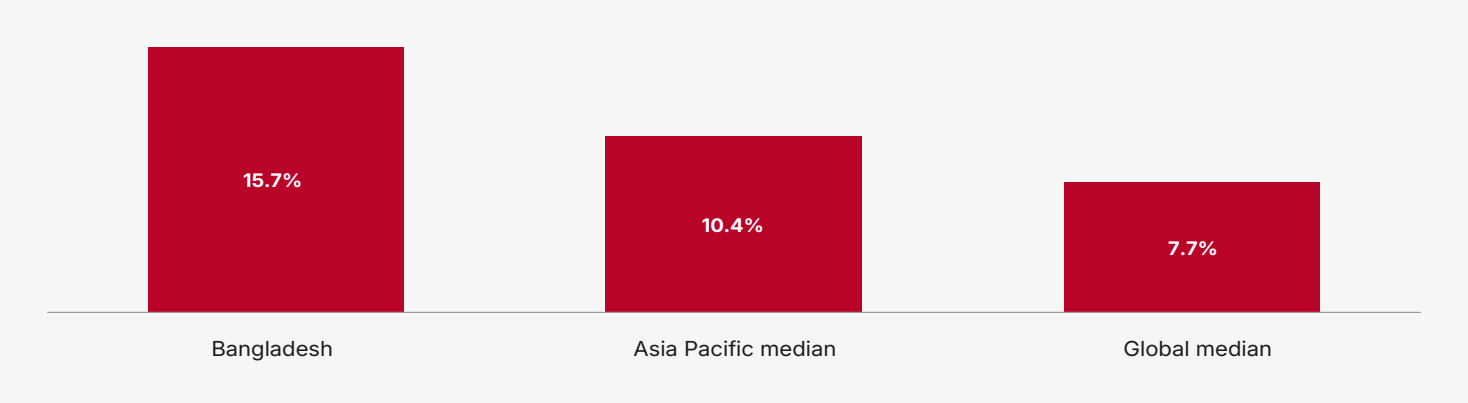


Figure 5:
Spectrum cost, as a share of operators' recurring revenue



Spectrum holdings and cost dynamics

Operators in Bangladesh currently utilise just over 500 MHz of spectrum—below regional norms. Upcoming renewals in 2026 in the 900 MHz, 1.8 GHz, and 2.1 GHz bands, along with new assignments in the 700 MHz and 3.5 GHz bands, will be critical to meeting future demand, whether toaccelerate 5G availability and its adoption or enhance the capacity of 4G networks.

Figure 6:
Spectrum assigned to mobile operators (MHz, 2024)

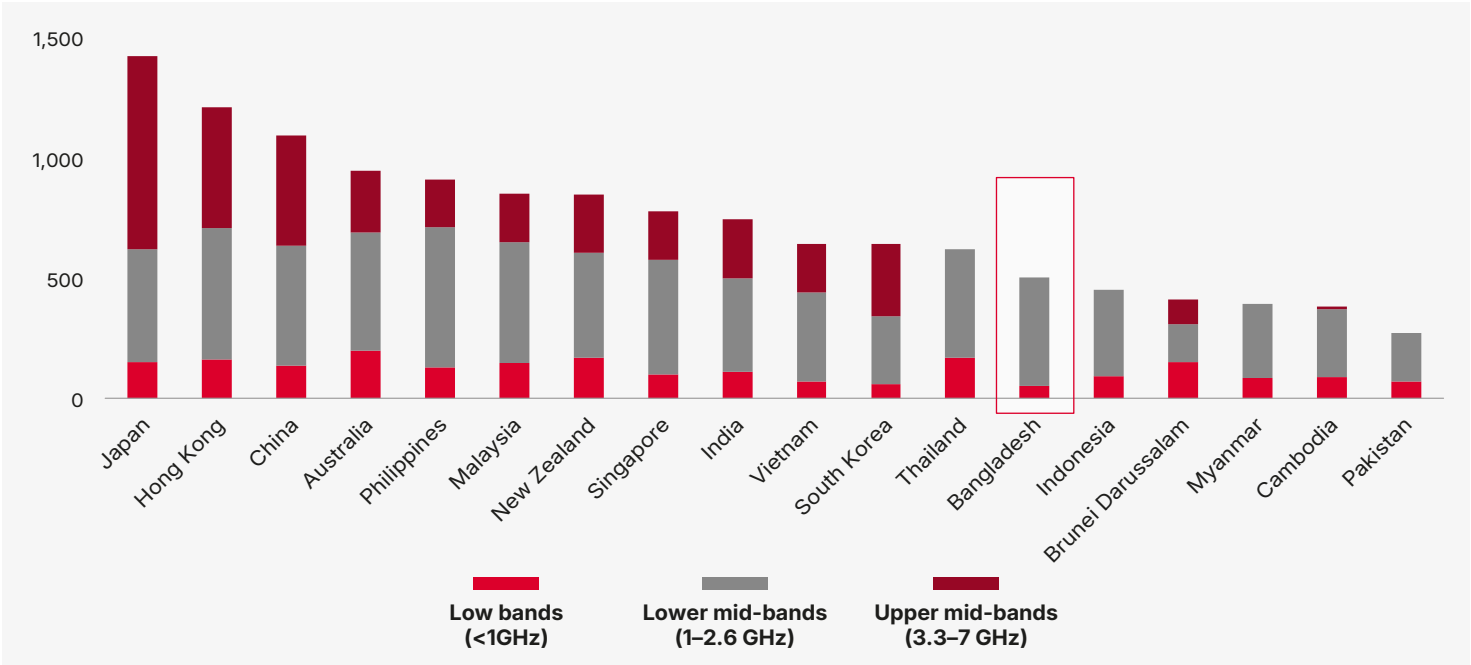
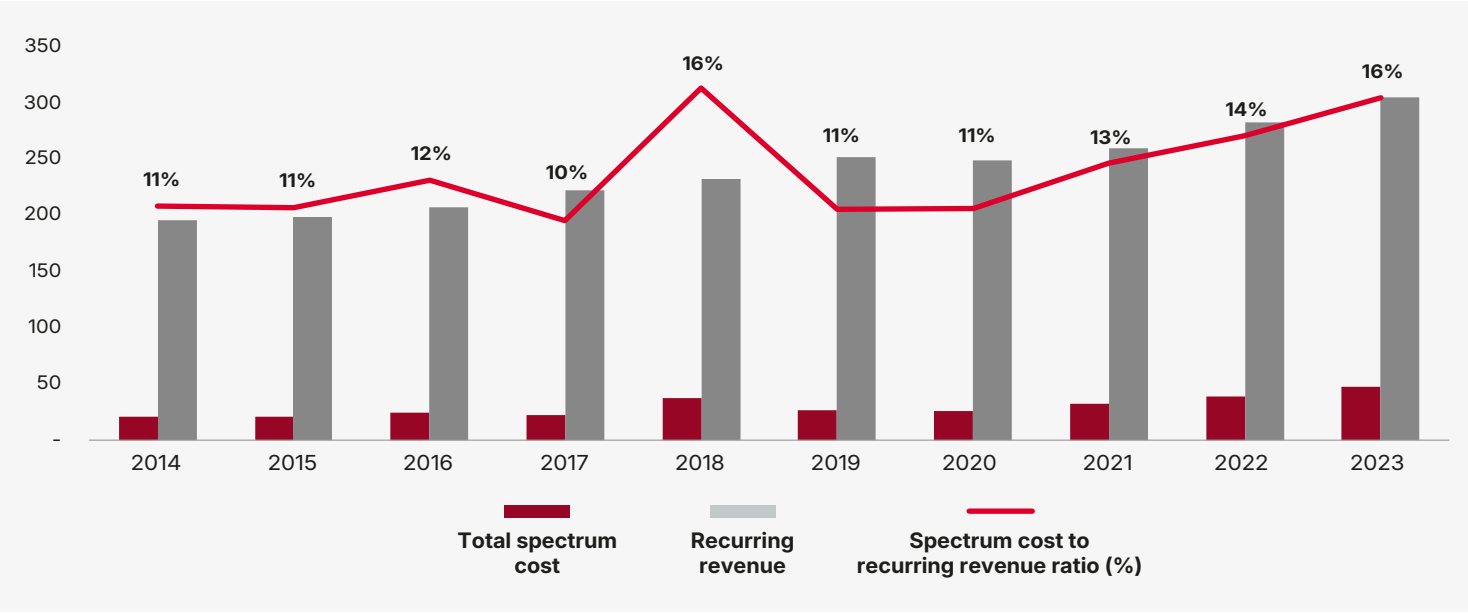


Figure 7:
Total cost of spectrum and recurring revenues in Bangladesh

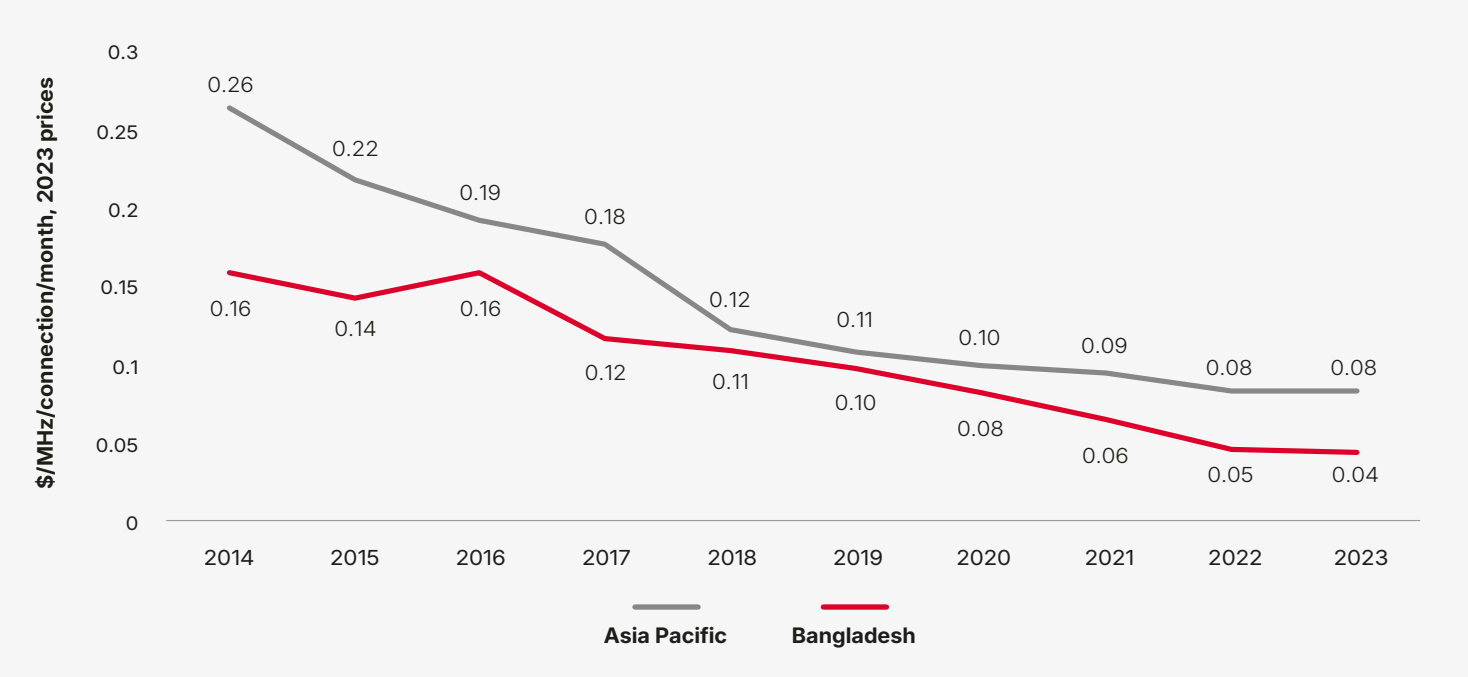


However, the aggregate cost of spectrum has risen disproportionately. Spectrum prices in Bangladesh have historically been set at high levels, often denominated in $, which has exposed operators to currency depreciation risks. Although recent moves to denominate fees in Bangladeshi Taka are welcome, there is an opportunity to align pricing more closely with evolving market realities.

Declining commercial value of spectrum

Between 2014 and 2023, revenue per MHz of spectrum fell by 69%, reflecting both increased spectrum holdings and declining revenues. This trend is consistent globally and signals a need for pricing reform. Spectrum should be priced by taking account of its current economic value, not historical benchmarks, to ensure efficient use and continued investment.

Figure 8:
Monthly recurring revenue per MHz per connection ($, inflation adjusted)



Global trends show that these changes in the fundamental value of spectrum have already translated into lower prices. Between 2018 and 2023, global average spectrum prices fell, reflecting a broader shift in policy emphasis from short-term fiscal returns to long-term economic and social gains.

Economic modelling: Impact of pricing scenarios

GSMA Intelligence outlines three pricing scenarios and their projected impacts:

Scenario 1: **Status quo (current and historical prices)**

- Spectrum cost rises to 23% of operators' revenue by 2027 and settles at 21% by 2035
- Increased risk of unsold or returned spectrum; leading to loss in economic benefits
- Limited improvements in 4G infrastructure

Scenario 2: **50% price reduction**

- Spectrum cost aligns closer to APAC median (~12%) by 2035
- 4G speeds improve by 17%; Accelerated 5G adoption, 12 Mn connections in 2030 & coverage reaching to 99% of the population by 2035
- Cumulative GDP boost of $34 bn by 2035 ($20 bn from 4G, $15 bn from 5G)

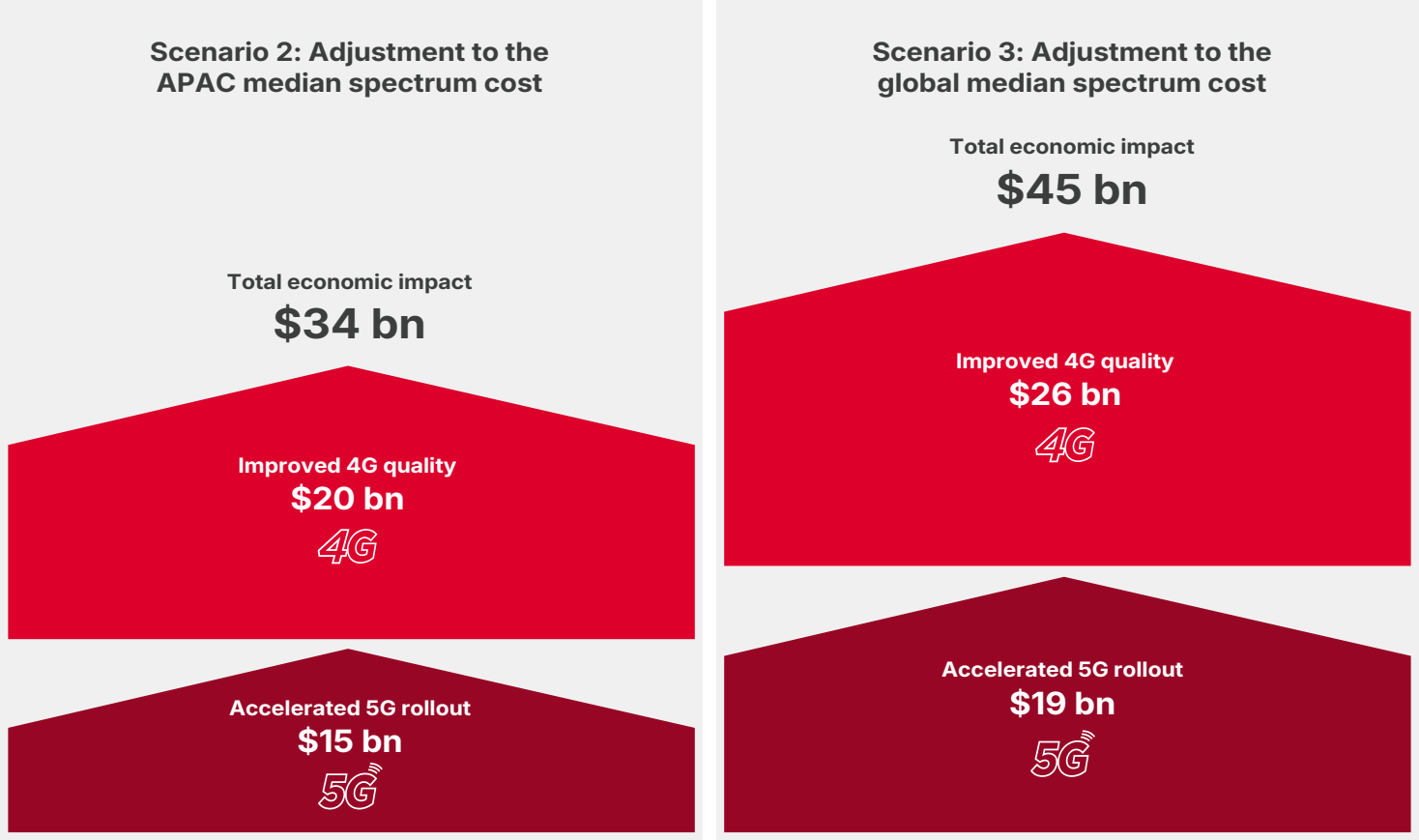
Scenario 3: **75% price reduction**

- Spectrum cost aligns with global median (~8%) by 2035
- 4G speeds improve by 22%; scaled-up 5G network
- Cumulative GDP boost of $45 bn by 2035 ($26 bn from 4G, $19 bn from 5G)

These findings highlight the transformative potential of spectrum pricing reform—not just for the mobile sector, but for the broader economy.

	Scenario 1: **Current and past prices (reference scenario)**	Scenario 2: **Adjustment closer to the Asia Pacific median cost**	Scenario 3: **Aligned with the global median cost**
Spectrum cost	**21%** of operators' revenue	**12%** of operators' revenue	**8%** of operators' revenue
4G quality	Downscaled improvements to 4G networks	**17%** improvement in 4G network speeds relative to scenario 1	**22%** improvement in 4G network speeds relative to scenario 1
5G rollout	**8 million** connections by 2030 **86%** of the population covered by 2035	**12 million** connections by 2030 **99%** of the population covered by 2035	**13 million** connections by 2030 **99%** of the population covered by 2035

Economic benefits of lower spectrum cost
(relative to Scenario 1: Current and prices)



Recommendations for reform

Bangladesh stands at a critical juncture in its digital development. The country's spectrum pricing and assignment policies will significantly influence its ability to enhance 4G and advance the adoption of 5G, narrow the digital divide, and sustain mobile sector growth.

With the right reform, Bangladesh can further stimulate investment and accelerate technological progress. To unlock the full economic and social benefits of mobile connectivity, Bangladesh should adopt a forward-looking spectrum strategy:

- **Align spectrum pricing with the new economic fundamentals,** rather than outdated benchmarks.
- **Reduce reserve prices and annual fees,** especially in low (700 MHz) and mid-band (3.5 GHz) frequencies essential for 5G.
- **Ensure predictability and transparency** in licence renewal frameworks.
- **Provide flexible payment options and longer licence durations** to support long-term planning.
- **Eliminate VAT on spectrum fees,** improving investment viability.

Conclusion

Bangladesh's spectrum policy reforms, including the pricing, will play a decisive role in shaping the future of its digital economy. By reducing costs and aligning pricing with market realities, the country can stimulate investment, improve network quality, and accelerate the wider adoption of next-generation technologies such as 5G. This will not only enhance consumer outcomes but also drive substantial economic growth, employment, and societal wellbeing.