INTERNET USAGE

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Connectivity

Opportunity in cheaper Internet

Without widening the base of internet-capable devices, the economics of cheaper data will remain constrained

On paper, Uganda's digital transformation looks almost complete. According to the latest GSMA Digital Economy report, 96 percent of Uganda's population now lives within reach of a 4G signal — outperforming the East African average of 78 percent and the continental average of 81 percent.

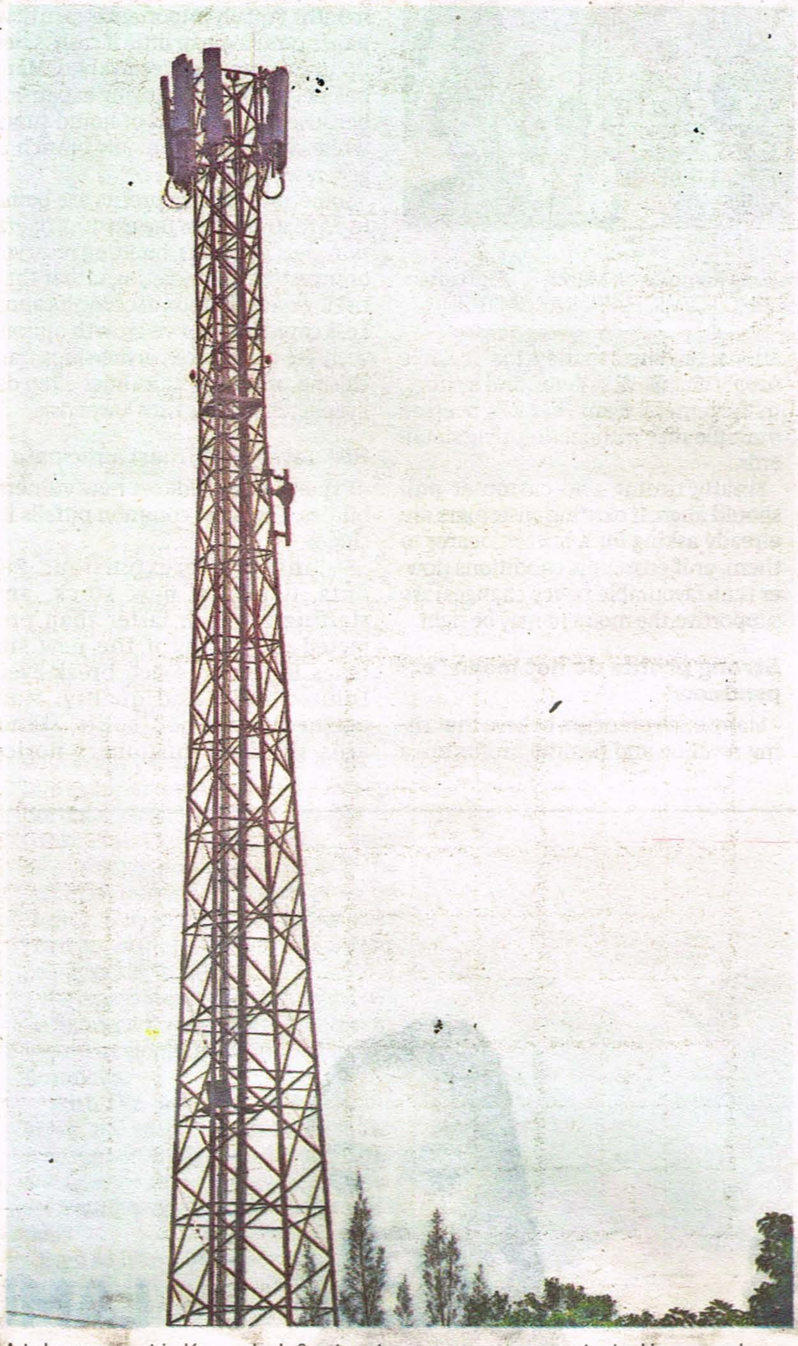
Telecom operators have rolled out hundreds of new 4G and 5G sites, expanded fibre backbones and upgraded towers across towns once considered commercially unviable. Yet, three out of every four Ugandans who live within broadband coverage are not using the internet. The GSMA assessment places Uganda's internet usage gap at 75 percent. In practical terms, coverage does not equal connection.

According to Fred Otunnu, director for corporate affairs at Uganda Communications Commission (UCC), 3G network, which is the most dominant, serves about 98 percent of the population, while 4G coverage serves about 82 percent of Ugandans. Yet, as of December 2025, mobile internet subscriptions active within 90 days stood at 18.5 million, representing just 39.3 percent of the country's 47.1 million active mobile subscriptions.

Of the 58.3 million devices connected to mobile networks, only about 20 million are smartphones. This means the majority of subscribers remain locked out of broadband services regardless of how affordable data bundles become. In effect, Uganda's adoption ceiling is defined less by signal reach than by device capability.

This analysis exposes a paradox at the heart of Uganda's digital future. Infrastructure is advancing rapidly, but adoption is lagging. For a country whose National Development Plan IV envisions 45 percent of the population using the internet by 2030, the road ahead looks steeper than the signal bars on a smartphone screen suggest.

But would cheaper internet close this gap or are the barriers are deeper than price alone?



A telecom mast in Kampala. Infrastructure gaps are concentrated in sparsely populated regions where the cost of building towers, extending fibre and supplying power outweighs expected returns. PHOTO/MICHAEL KAKUMIRIZI

Coverage versus usage

Uganda's communications sector has grown dramatically over the past five years. Smartphone connections more than doubled from about eight million in 2020 to roughly 19 million by 2025, according to data from UCC market reports. National data traffic has nearly quadrupled. The cost per gigabyte has fallen sharply, from above Shs5,000 in 2020 to roughly Shs2,000 today.

From this perspective, this looks like success. However, usage remains uneven.

UCC categorises this imbalance into three distinct gaps. The coverage gap, affecting areas where people live without any mobile network signal. The access gap, where individuals live within coverage but cannot make a meaningful connection due to lack of suitable smartphones, affordable data or reliable electricity.

Rhona Arinaitwe, MTN's senior manager communications, public relations and stakeholder management reports that approximately 43 percent of MTN's subscribers are not active data users, relying primarily on voice and SMS. Though the company recorded a 10.2 percent increase in its subscriber base to 22.8 million, with active data subscribers increasing by 23.4 percent to 10.8 million active data subscribers in the first half of 2025, a significant share of its base remains offline.

Airtel Uganda, which had about 17.9 million total subscribers by mid2025, counted roughly 7.5 million internet users. Like its rival, it acknowledges the prevalent pattern. While it declined to disclose precise figures, it confirms that coverage expansion has not translated into equivalent growth in active internet users.

The gap extends beyond a lack of infrastructure. In 2025 alone, Airtel's public relations manager, David Birungi notes that the company continues to expand its 5G footprint from 100 to 365 sites, while adding 219 new 4G sites targeting rural districts including Wakiso, Jinja, Mbale, Lira, Gulu, Mityana, Mbarara and Fort Portal.

"Infrastructure gaps are concentrated in sparsely populated regions where the cost of building towers, extending fibre and supplying power outweighs expected returns. Only 25 percent of Uganda has access to the national grid, making it costly to keep networks running," says Otunnu.

Crucially, signal strength does not determine digital inclusion. Household economics can help explain this.

With nearly half of rural workers earning approximately or less than Shs200,000 per month, according to the 2023/2024 National Labour Force Survey, Arinaitwe emphasizes data affordability as one of the biggest challenges.

"For many households, data bundles compete with essential expenses such as food, rent and school fees. When incomes are constrained, internet usage may not be prioritised," says Otunnu.

This often leads the average Ugandan to ration connectivity, buying bundles only when necessary. As average monthly data usage per person has climbed toward 5.4GB, average monthly spending on mobile data has also risen, exceeding Shs10,000. As such, the increase in traffic is driven disproportionately by heavy urban users consuming more gigabytes, masking a vast offline majority.

The business of data

If the high cost of internet limits usage, a natural question follows: is there a business opportunity in making data cheaper?

In theory, the answer is yes.

Telecommunications is a scale industry. Networks require heavy upfront investment in spectrum licences, fibre backhaul, towers and power. But once built, the assumption would be that the cost of delivering additional gigabytes is relatively low. As more people come online and usage increases, the average cost per unit can fall. In such markets, lower prices can sometimes stimulate higher consumption, with volume compensating for thinner margins.

Furthermore, recent financial results suggest Uganda's data market is expanding rapidly. In the first six months of 2025, MTN Uganda reported total revenue of Shs1.7 trillion, a 13.3 percent year on year increase. Of that, Shs490.2 billion came from data services alone, representing a 31.3 percent increase compared to the previous year. Voice revenue, by contrast, grew by just 0.4 percent, reaching Shs629 billion.

MTN also reported a profit of Shs267 billion after tax settlement of Shs110.9 billion for the period, despite a one-off tax settlement affecting results. Excluding that settlement, underlying profit growth was nearly 28 percent.

On the other hand, Airtel's first half 2025 performance shows a similar trajectory. Total revenue reached Shs1.08 trillion, up around 12 percent year on year. While it does not disaggregate data revenue in the same detail, industry disclosures indicate data income is growing close to 30 percent with average monthly data usage per subscriber approaching 6GB. These figures not only reveal data is no longer a supplementary service, they seem to point to a significant trend. Even as the nominal cost per gigabyte has declined over recent years, total data revenue continues to rise driven by increased consumption.

This reflects a classic economic dynamic - volume can offset lower prices. However, industry experts caution against drawing simple conclusions.

Revenue growth, they emphasize, does not automatically translate into excess profit. A substantial portion is reinvested into network growth and resilience. Telecom operators argue that retail data prices reflect structural costs beyond their control. Arinaitwe breaks down a Shs1,000 data bundle this way.

"When a customer purchases a Shs1,000 data bundle, Shs153 is paid to the government as value-added tax, Shs91 as excise tax. A total of Shs244 is collected and remitted to government, leaving Shs756 as gross income to the operators before costs and income tax. Thereafter, another Shs158 is again paid to the government as income tax, leaving only Shs598 for the operators to meet all costs of operating and investing in the network across the country."

After corporate income tax and other levies, including spectrum fees and a 2 percent contribution to the Rural Communications Development Fund, the company estimates roughly 40 percent of the retail price ultimately flows to the state in one form or another.

Birungi explains that data pricing is, therefore, determined by capital expenditure plus operational costs divided by the number of internet users. With adoption still limited relative to coverage than usage, costs are spread across a smaller base.

Device affordability compounds the challenge. The GSMA estimates that taxation accounts for roughly 35 percent of the cost of an entry-level smartphone in Uganda. Although devices cost close to Shs150,000, that price equates to approximately 40 percent of the average monthly income, almost a full month's income for the majority Ugandan. Until that barrier shifts, lower data prices alone cannot deliver mass internet adoption.

Affordability

'The opportunity for transformative affordability lies in addressing structural cost drivers, especially sector-specific taxes and levies on entry-level smartphones.'