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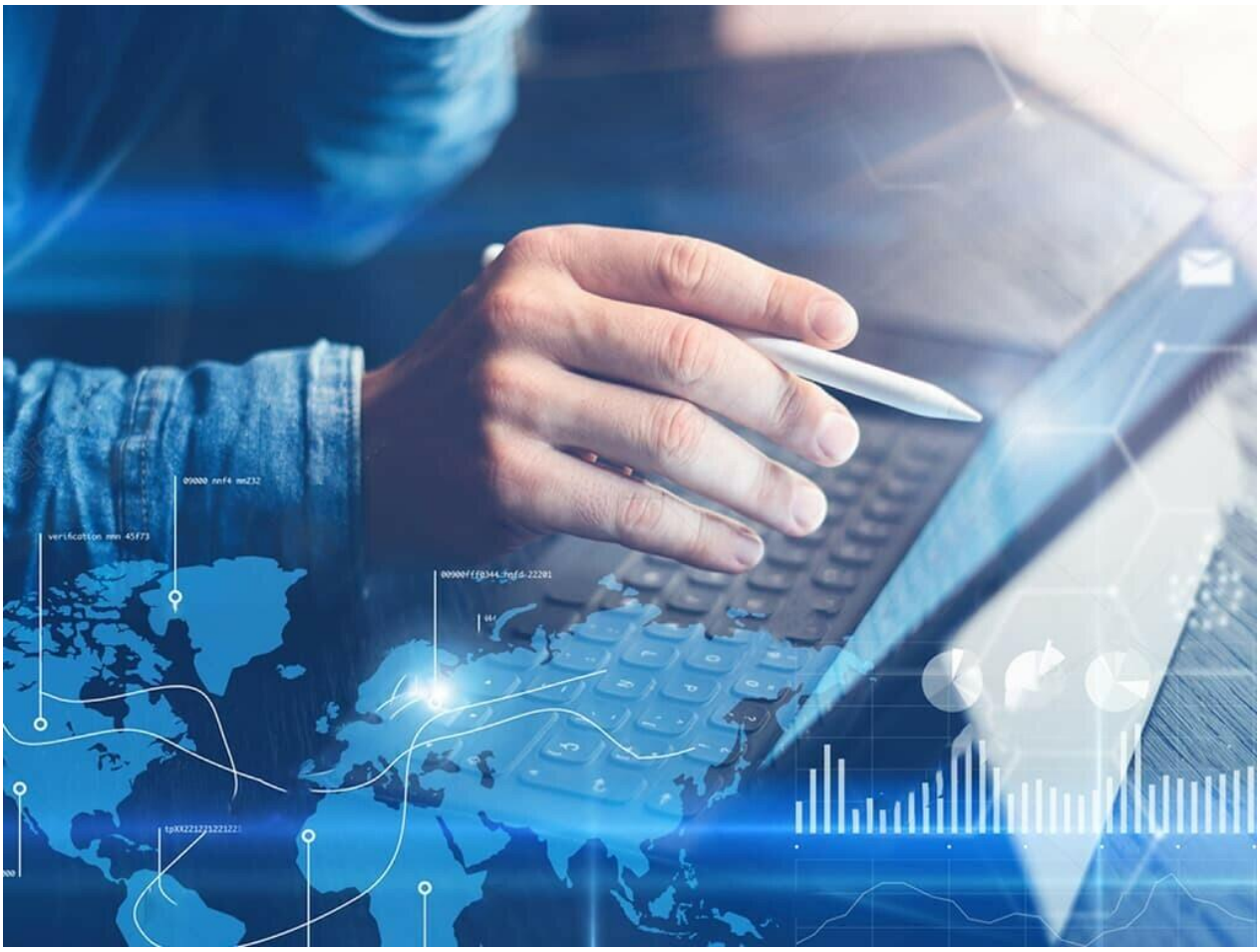
Pakistan's digital leap: trillion-dollar opportunity

Abdus Sattar | 22nd April, 2025



Pakistan's digital economy (DE) has shown remarkable growth over the past two decades. From a modest volume of approximately US$100

million in 2000, it expanded to US$1–2 billion by 2010 and reached an estimated US$12–15 billion in 2023.

Projections suggest this figure could rise to US$60–75 billion by 2030, and potentially reach US$80–150 billion by 2035.

In the early 2000s, the digital economy's contribution to GDP was negligible—less than 0.1 percent. By 2010, this share grew to 0.5 percent, and by 2020, it had reached 1–1.5 percent. In 2023, the contribution stood between 1.5 percent and 3 percent. Looking ahead, this share is expected to climb to 3–5 percent by 2025, 5–7 percent by 2030, and could potentially reach 15–25 percent of GDP by 2035.

The sector has exhibited an impressive compound annual growth rate (CAGR) of 15–20 percent over the past 20 years, driven largely by the country's 140 million internet users—64 percent of whom are under the age of 30—and an 85 percent mobile connectivity rate. Pakistan now ranks fourth globally in freelancing, with a digitally literate youth population representing the true engine of future digital growth.

Key drivers of this growth include rising internet penetration, innovations in fintech, the rapid expansion of e-commerce, increasing IT exports, and supportive government policies.

As of 2024, Pakistan had 195 million telecom subscribers, with broadband penetration reaching 57 percent. Current internet penetration stands at 35–40 percent, with projections indicating it will rise to 60–65 percent by 2030.

The e-commerce sector is growing at a CAGR of 25–30%, with a market size of US$6 billion in 2023, expected to reach US$10 billion by 2027. This growth connects over 500,000 small and medium enterprises (SMEs) with digital consumers. Meanwhile, the IT and software sector has maintained a steady growth rate of 15–20%.

Fintech is also expanding rapidly, fueled by the widespread adoption of smartphones. Digital payment transactions have surged to PKR 10 trillion, growing at 30 percent annually. IT and software exports rose from US$1.4 billion in 2020 to US$3.1 billion in FY23 and are projected to reach US$5 billion by 2025 and US$15 billion by 2030.

Agriculture, a traditionally under-digitized sector, holds transformative potential. With the integration of precision farming technologies such as IoT, drones, and AI-driven analytics, yields could increase by 20–30 percent, while smart irrigation systems could reduce water wastage by 40 percent.

Blockchain-enabled supply chains could halve post-harvest losses—currently estimated at 30 percent—and improve transparency in agri-trade. Digital platforms like e-Mandis and mobile advisory services could boost farmers' incomes by 15–20 percent. AI-based weather forecasting and crop insurance can mitigate risk, especially for smallholders. Through such innovations, agricultural exports could triple to US$15 billion by 2030, contributing over US$150 billion to GDP by 2035.

The digitization of Pakistan's industrial sector—via smart manufacturing, automation, and digital logistics—could enhance efficiency by 15–25%, reduce waste, and lower production costs. Implementing Industry 4.0 technologies and digital supply chain systems can support SME growth

and increase the sector's contribution to GDP to an estimated US$120–150 billion, while creating five million additional tech-driven jobs by 2035.

The service sector, with the highest potential for digital transformation, could also create five million high-skilled jobs. Enhanced digitalization in e-commerce, fintech, freelancing, and digital banking, along with reforms in education, healthcare, and tourism, could significantly boost economic output. Establishing robust 5G infrastructure and strengthening cybersecurity through public-private partnerships is crucial to unlocking the sector's estimated value of US$200–250 billion by 2035.

Pakistan's informal economy—estimated at 35–50% of GDP, or approximately US$150–180 billion—contributes minimally to public revenues due to its reliance on cash-based transactions.

Expanding access to mobile banking, digital wallets, and microfinance could help formalize this sector, opening new opportunities for small businesses, freelancers, and self-employed individuals. Digitization of the informal sector alone could add US$150–180 billion to GDP by 2035.

Meanwhile, the shadow (illegal) economy, estimated at 5–15% of GDP, causes annual losses of US$15–45 billion. Reducing informal remittances and shifting to digital banking could capture an additional US$5–7 billion in annual reserve inflows. Digitizing this sector could contribute a further US$15–45 billion annually, bringing the total combined potential of digitizing the informal and illegal sectors to US$165–225 billion per year by 2035.

Another critical area is the cost of inefficiencies—referred to as "sludge costs"—which account for 39% of GDP (US$132 billion). Digitization has

the potential to reduce both time and financial costs by over 40% and 34%, respectively. Eliminating physical documentation could further reduce opportunity costs.

By harnessing the potential of its agriculture, industry, services, informal and illegal economies—and addressing inefficiencies—the total estimated volume of Pakistan's GDP could surpass US$1 trillion by 2035. This transformation could position Pakistan among the world's top 25 economies, create 20 million high-value jobs, and reduce poverty by 30%.

However, several challenges remain. Connectivity is unreliable, fibre-optic infrastructure is limited, and over 60 percent of the population resides in rural areas. Only 35 percent of rural areas have dependable internet access, compared to 65 percent in urban centers. Women's digital participation is 52 percent lower than men's, and cybersecurity vulnerabilities place Pakistan 79th globally.

Research and development (R&D) investment remains below 0.3 percent of GDP—significantly behind regional peers such as India (0.7 percent) and China (2.4 percent). Additionally, internet shutdowns cost the economy more than PKR 1.3 billion per day—nearly 1 percent of GDP annually.

To bridge the rural-urban digital divide, Pakistan must address infrastructure gaps, expand internet access, attract foreign direct investment (FDI), eliminate bureaucratic inefficiencies, and launch comprehensive digital literacy programmes.

Accelerating 5G deployment could enhance the performance of e-commerce, fintech, SMEs, freelancing, and local tech manufacturing.

Boosting R&D spending could spur innovation and technological advancement.

If these efforts are successfully implemented, the country stands to unlock a digital economy valued at over US$1 trillion by 2035.

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