

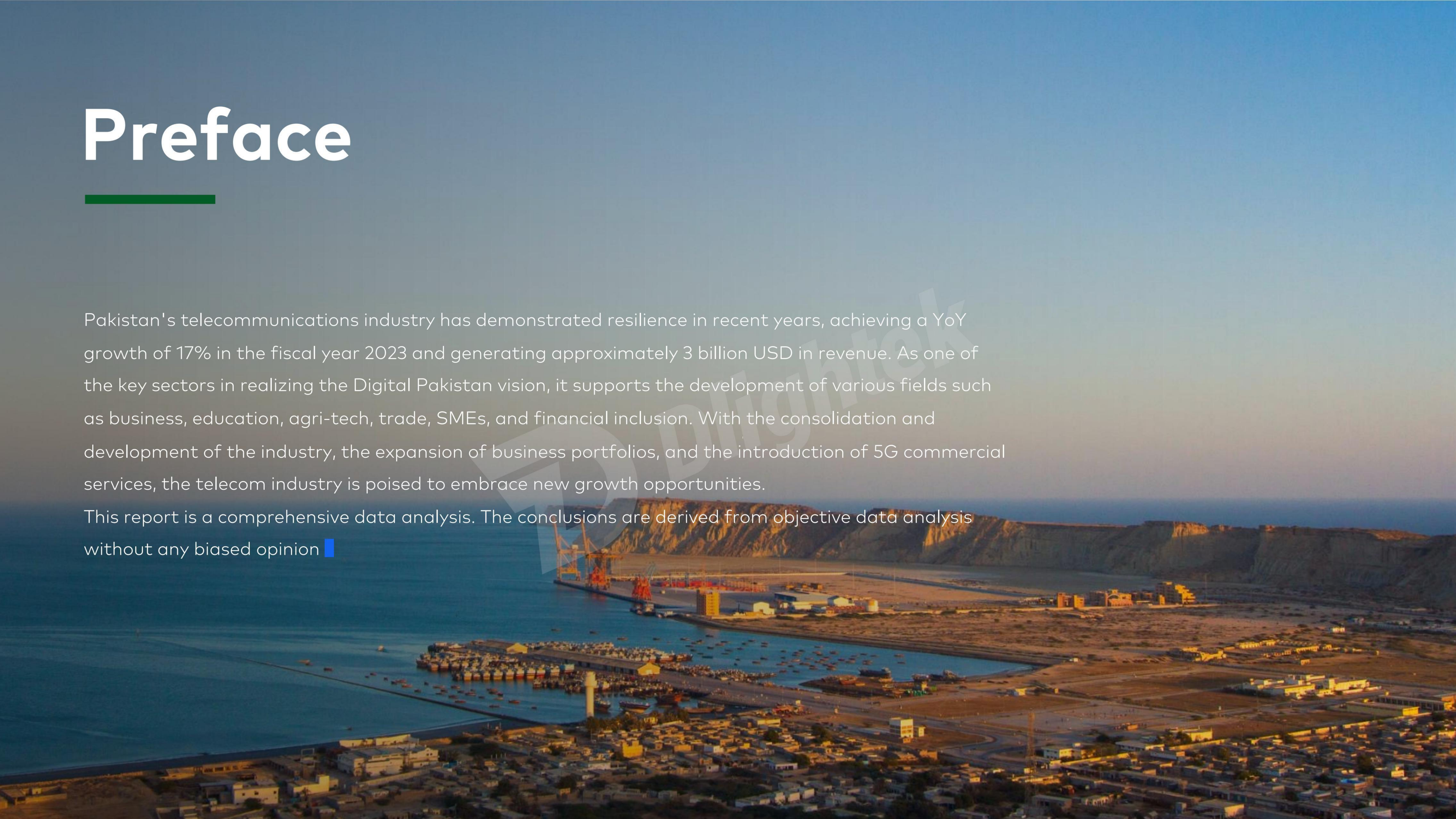
Connectivity and beyond[■]

Telecommunications Industry in Pakistan 2024

Preface

Pakistan's telecommunications industry has demonstrated resilience in recent years, achieving a YoY growth of 17% in the fiscal year 2023 and generating approximately 3 billion USD in revenue. As one of the key sectors in realizing the Digital Pakistan vision, it supports the development of various fields such as business, education, agri-tech, trade, SMEs, and financial inclusion. With the consolidation and development of the industry, the expansion of business portfolios, and the introduction of 5G commercial services, the telecom industry is poised to embrace new growth opportunities.

This report is a comprehensive data analysis. The conclusions are derived from objective data analysis without any biased opinion ■



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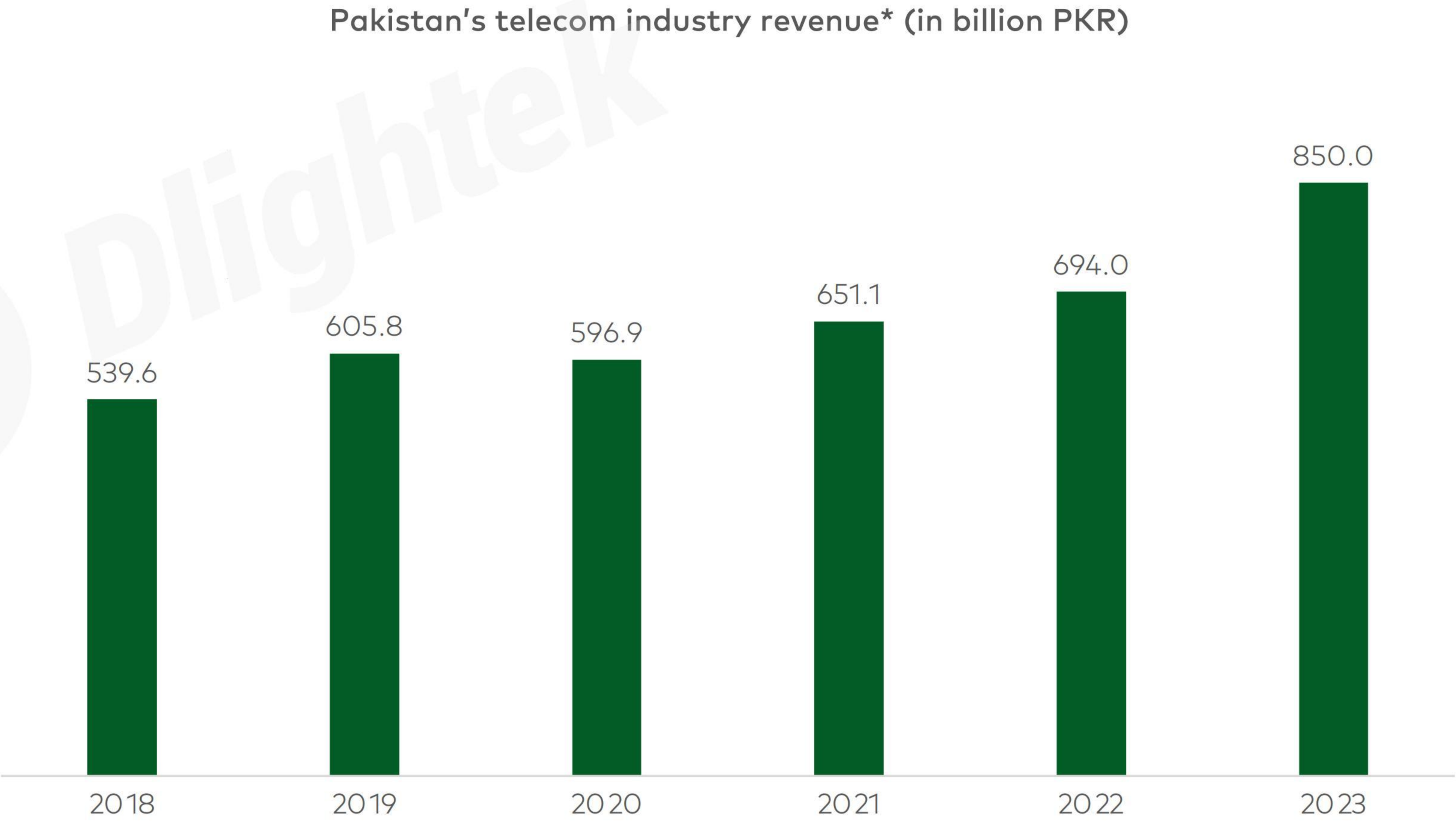
PAKISTAN MARKET OVERVIEW



The economy is rebounding, while telecom sector shows resilience

Pakistan's economy experienced a contraction in 2023 due to uncertainties, but with economic reforms and the easing of inflationary pressure, the GDP growth is expected to recover from -0.2% in 2023 to 2% in 2024. Due to factors such as increased market confidence and private sector investment, the economic growth rate is expected to reach 3.5% in 2025.

In FY2023, Pakistan's telecom industry generated 850 billion PKR in revenue, showing a 17% growth compared to the previous year. Over the past five years, the sector has attracted a total of 5.7 billion USD in local investment and 1.4 billion USD in foreign direct investment ■






Source: IMF, April 2024; Pakistan Telecommunication Authority (PTA). *2018 in the figure represents the fiscal year 2017-18, and so on.

The fifth most populous country worldwide

Pakistan is the fifth most populous country in the world, with a population reaching 240 million in 2023. Islam is the state religion of Pakistan, with approximately 95% of the population being Muslim. Muslim festivals such as Eid al-Adha and Eid al-Fitr play an important role in Pakistan's rich culture.

Pakistan has significant digital growth opportunities, with about 64% of the population under the age of 30, and a median age of 20.6 years in 2023. The national language of Pakistan is Urdu, and the official languages are Urdu and English.

Pakistan's urbanization rate is 34.7%, indicating large room for improvement. Karachi and Lahore are among the most populous cities in the country. As the urbanization process advances, the telecom industry is expected to encounter more growth opportunities ■

	 Population	 Median age	 Urbanization rate
2023	240M 5 th most populous country worldwide	20.6 vs. 30.5 (global)	34.7% vs. 57% (global)
2030e	274M	22.3	36.3%

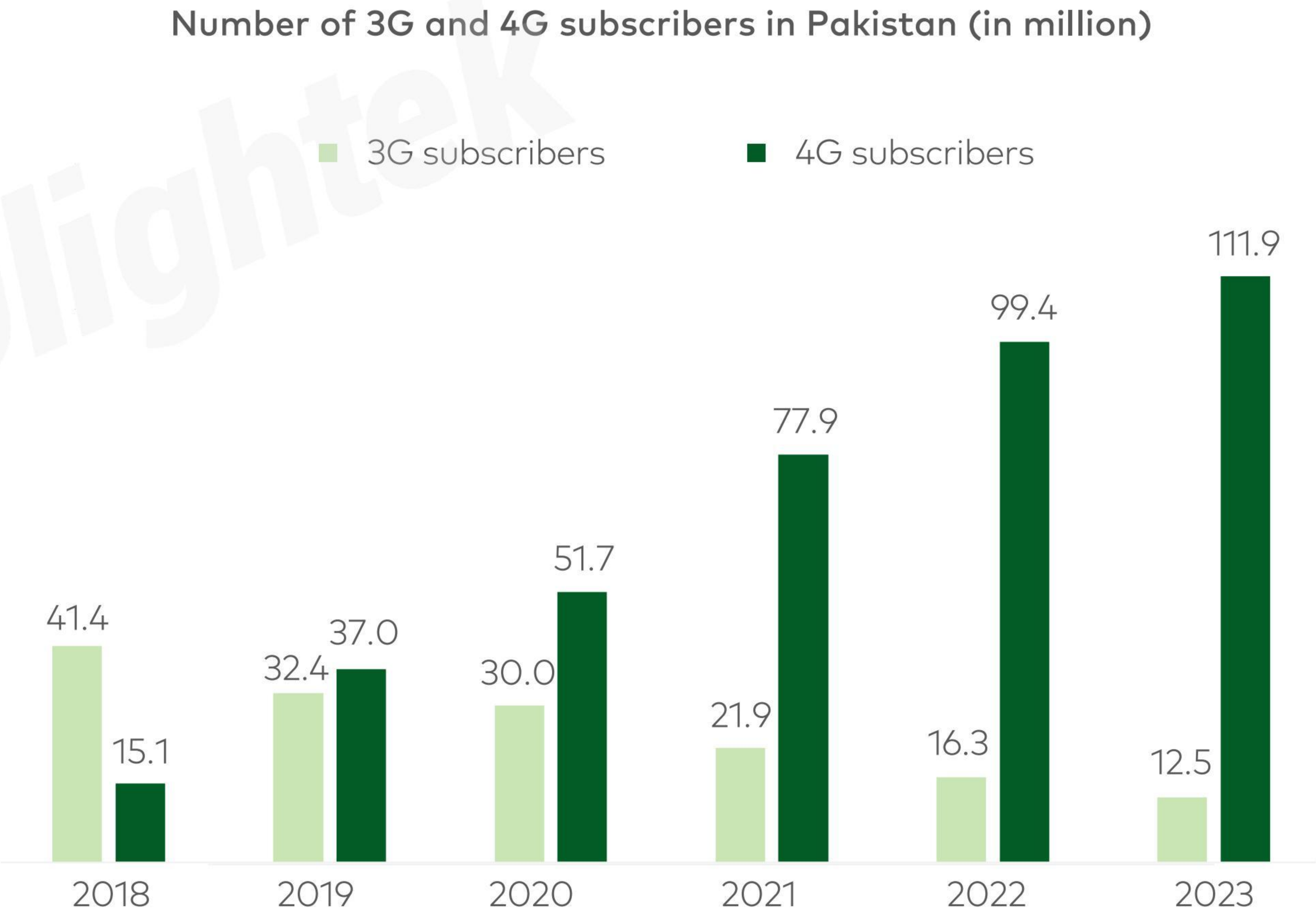
Source: Worldmeters.

Significant growth in 4G subscribers and low mobile data cost

At the beginning of 2024, telecom subscribers in Pakistan reached 192 million, equivalent to about 80% of the total population.

With the improvement of telecom technology, the number of 3G subscribers dropped in Pakistan, while the number of 4G subscribers grew rapidly over the past five years. In FY2023, over 100 million users were on 4G networks, and this growth momentum is expected to continue.

The cost of mobile data in Pakistan has decreased by 71% since FY2018. The current cost of 1GB is only 0.12 USD. In the 2023 global league table of mobile data costs in 237 countries/regions, Pakistan is the sixth lowest in terms of cost. However, the average revenue per user (ARPU) in Pakistan is low, posing challenges to the profitability of telecom companies ■



Source: PTA Annual Report; Cable.co.uk. *2018 in the figure represents the fiscal year 2017-18, and so on.

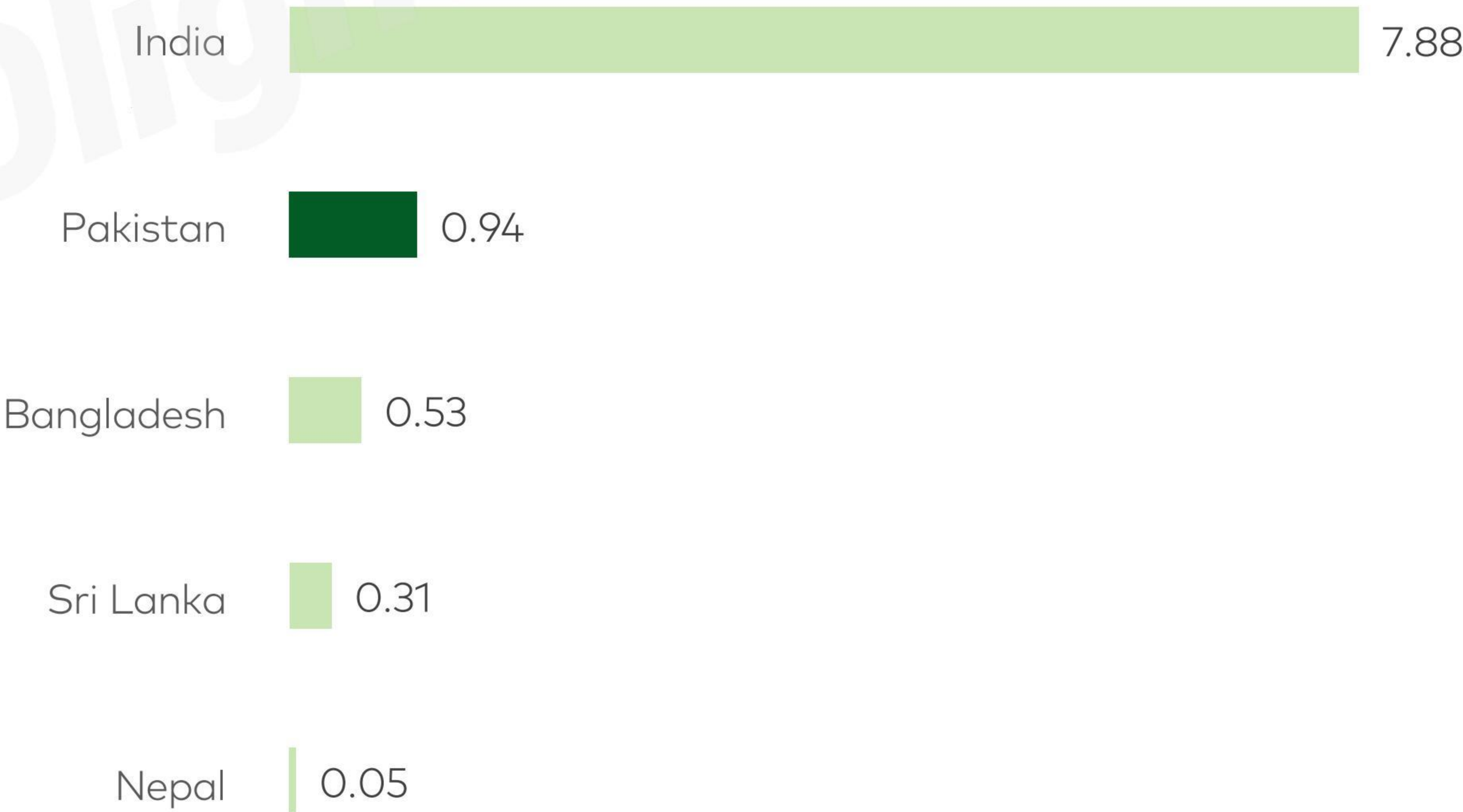
Strengthen international connectivity and data center construction

Pakistan is actively promoting the construction of digital infrastructure and strengthening international connectivity. Currently, Pakistan has seven submarine cable connections. Service providers such as Pakistan Telecommunication Company Limited (PTCL) are continuously investing in cable networks to meet both current and future demands.

The Pak-China Optic Fiber Cable (OFC) is the first cross-border terrestrial cable directly connecting China and Pakistan. It is also an important ICT based project under the framework of the China-Pakistan Economic Corridor (CPEC).

Pakistan has over 20 data centers, mainly located in Lahore, Karachi, and Islamabad, operated by companies such as PTCL and Multinet, etc. The data center market in Pakistan is the second largest in South Asia, with market revenue of approximately 940 million USD in 2023 ■

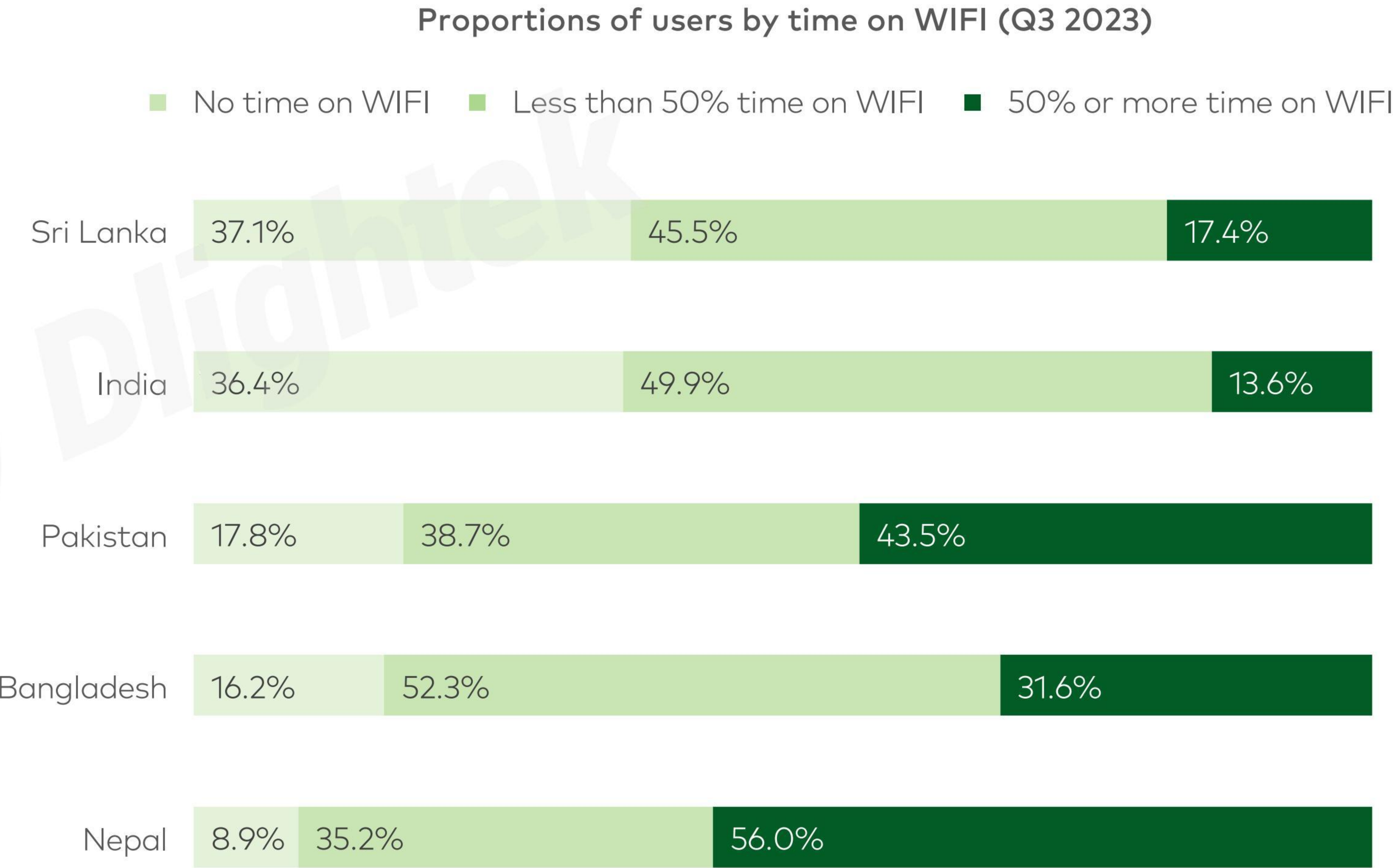
Data center revenue in selected South Asian countries (2023) (in billion USD)



Source: Data Center Dynamics; Statista.

One of the fastest-growing mobile application markets

Pakistan has been one of the fastest-growing mobile application markets in recent years, with app downloads increasing by nearly 35% YoY in 2022. Higher broadband penetration and 4G adoption have facilitated this growth trend. Compared to its neighboring countries, Pakistan internet users are relatively more likely to use WIFI. More than 40% of users spent more than 50% of their connectivity time on WIFI. Despite the growth in mobile app downloads, the potential of local app developers has not been fully tapped. In 2023, slightly over 4,800 apps were released by local developers, a YoY decline of 11.4%. In terms of active users, global leading social and entertainment apps such as Facebook, YouTube, and WhatsApp Messenger remain the most popular among users ■



Source: State of Apps Pakistan 2023; Opensignal; DataReportal.



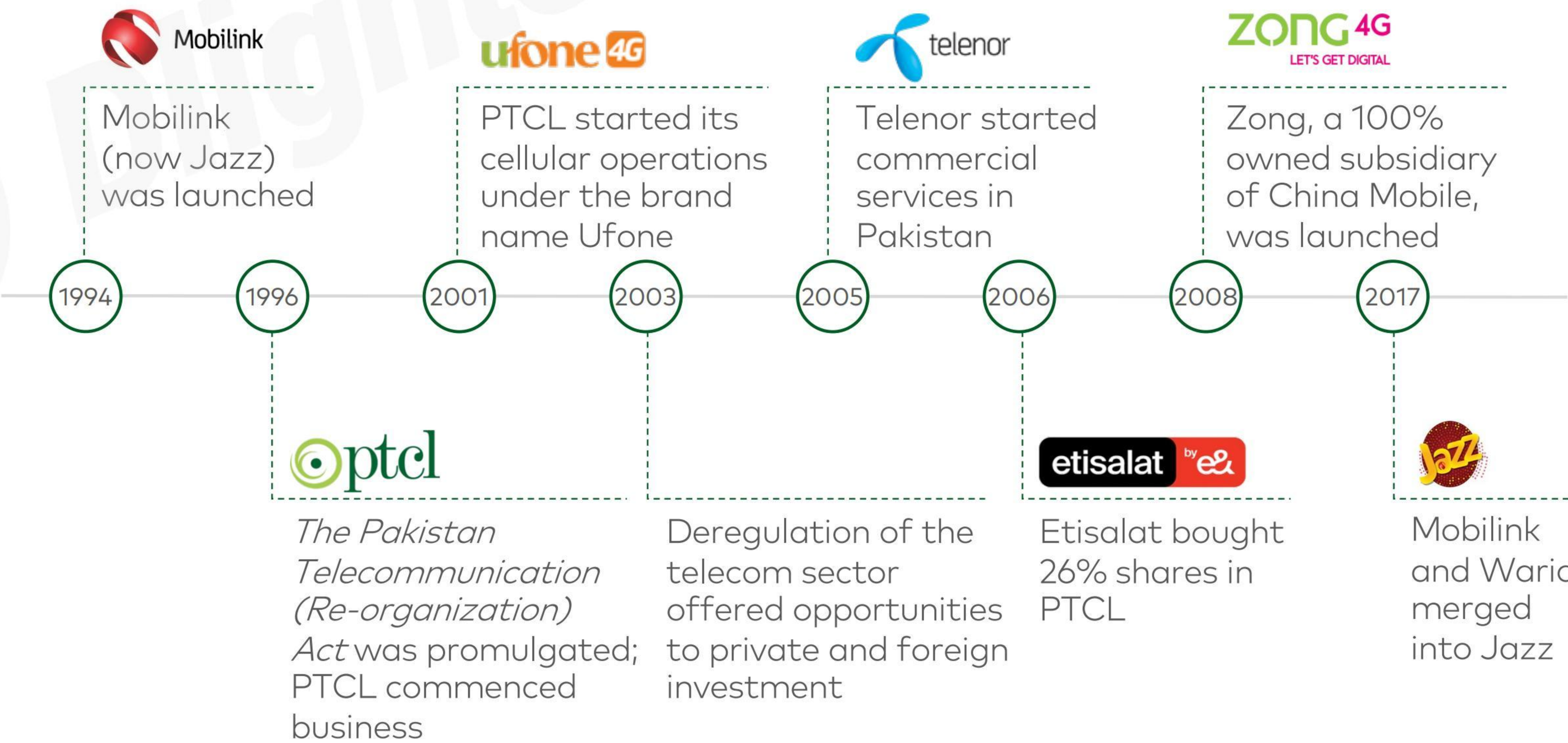
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TELECOM ECOSYSTEM

A more open telecom ecosystem

In 1962, the Pakistan Telephone & Telegraph Department was established, laying the foundation for the development of the telecomm industry. In the 1990s, Pakistan began promoting the privatization process in various sectors, including telecommunications, to develop a comprehensive and competitive telecom market. In 2003, the government introduced a deregulation policy for the sector, which increased private investment and gradually expanded telecom infrastructure. Norwegian telecom operator Telenor and China Mobile Pakistan entered the market in 2005 and 2008 respectively. Over the past 30 years, the telecom industry in Pakistan has undergone transition, liberalization and consolidation, significantly altering the telecommunications landscape and creating more opportunities for industry growth ■

Evolution of Pakistan’s telecom sector landscape

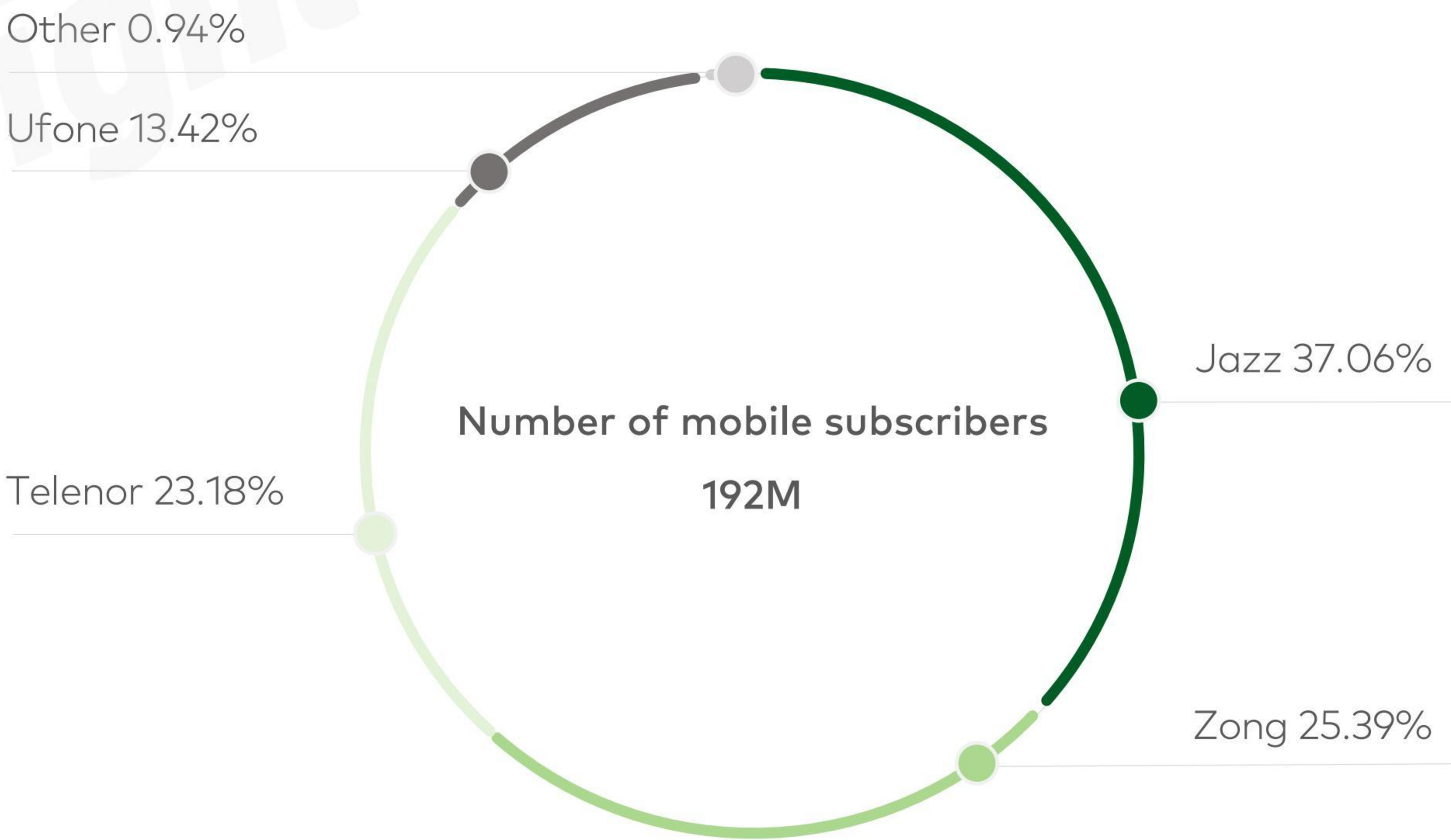


Source: Publicly available information.

Four operators dominate the market

Currently, Pakistan has four major operators: Jazz, owned by Dutch telecom company VEON, China Mobile Pakistan's Zong, Ufone, a wholly-owned subsidiary of PTCL, and the Norwegian operator Telenor. The market size of Pakistan's telecom industry has been continuously growing. Among the total revenue of 850 billion PKR, mobile revenue accounted for 67%, reaching approximately 572 billion PKR. In June 2024, Jazz led other operators with a market share of 37.06%. Jazz also held a leading position in terms of the number of 4G subscribers. In terms of network performance, Zong excelled in multiple network performance indicators

Market share by mobile operator in Pakistan (Jun 2024)

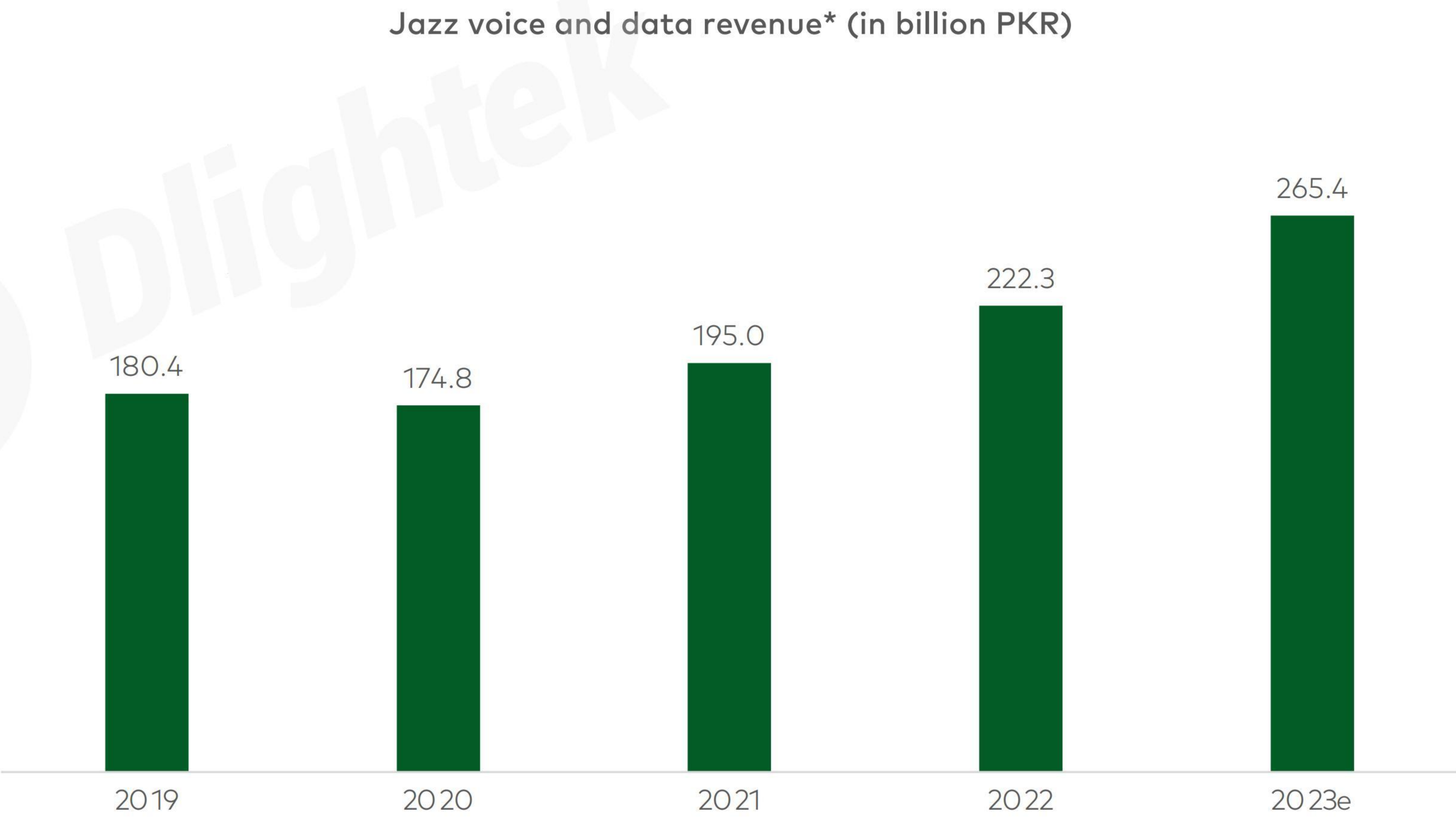


Source: PTA; Opensignal.

Jazz holds the largest market share

Jazz is Pakistan's leading mobile operator. With over 71 million subscribers, the company occupies the top position in both user base and revenue market share. In terms of core business, Jazz continues to expand the coverage and capacity of its 4G network, adding nearly 1,000 4G sites in 2023 to improve service quality. Jazz has the largest 4G user base in Pakistan, with over 40 million 4G subscribers.

Jazz continuously seeks technological transformation to provide users with a superior digital experience. It is projected that by the end of 2027, 25% of its revenue will come from non-telecom business, such as the fintech platform JazzCash, the cloud platform Garaj, and the streaming service platform Tamasha, etc ■



Source: Mettis Link News. *2019 in the figure represents the fiscal year 2018-19, and so on.

Zong is recognized for high quality network experience

Zong is the brand operating under the subsidiary of China Mobile and has become the second largest mobile operator in Pakistan, boasting 49 million subscribers. Zong is favored by users for its high-quality network service. According to an Opensignal report, Zong outperformed in terms of video experience, games experience, and download speed experience. In addition, its network availability and consistency were also recognized. In the first half of 2024, Zong deployed over 400 new 4G sites to further modernize its network. Zong was the first operator in Pakistan to conduct 5G trials. The operator plays an important role in the China-Pakistan Economic Corridor (CPEC) project, providing high-speed connectivity along the corridor ■

Mobile experience awards by Opensignal (Aug 2023)

Network Experience	Jazz	Zong	Telenor	Ufone
Video		●		
Live Video	●	●		
Games		●		
Download Speed		●		
Upload Speed	●	●		
Availability		●		
4G Availability	●			
Consistent Quality		●		

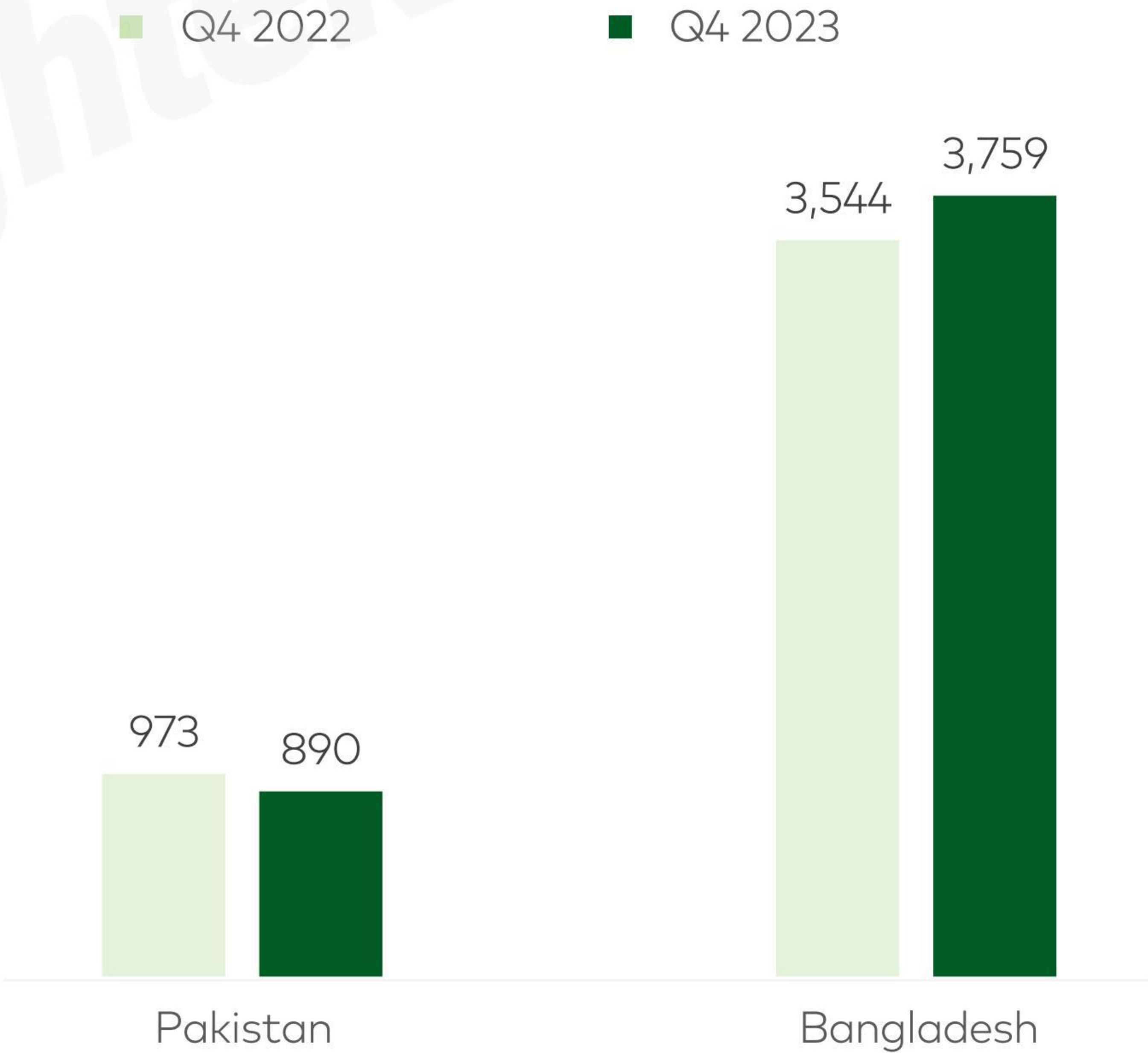
Source: Opensignal.

PTCL (owner of Ufone) plans to acquire Telenor Pakistan

Ufone is a wholly-owned subsidiary of Pakistan Telecommunication Company Limited (PTCL), a leading telecom and ICT services provider in Pakistan. PTCL maintained growth momentum in FY2023 with a 25.8% revenue increase. Its mobile operator brand, Ufone, achieved a 25.6% revenue growth, mainly due to 4G network upgrade.

Telenor is a Norwegian multinational telecom company. Telenor Pakistan launched commercial services in 2005. Telenor is restructuring its Asian businesses, and it is reported that PTCL will complete the acquisition of Telenor Pakistan. After the acquisition, Ufone's market share is expected to rise from approximately 13% to 37%, making it the second largest mobile operator by market share

Telenor’s service revenues in Pakistan and Bangladesh (in million NOK)



Source: Ufone.

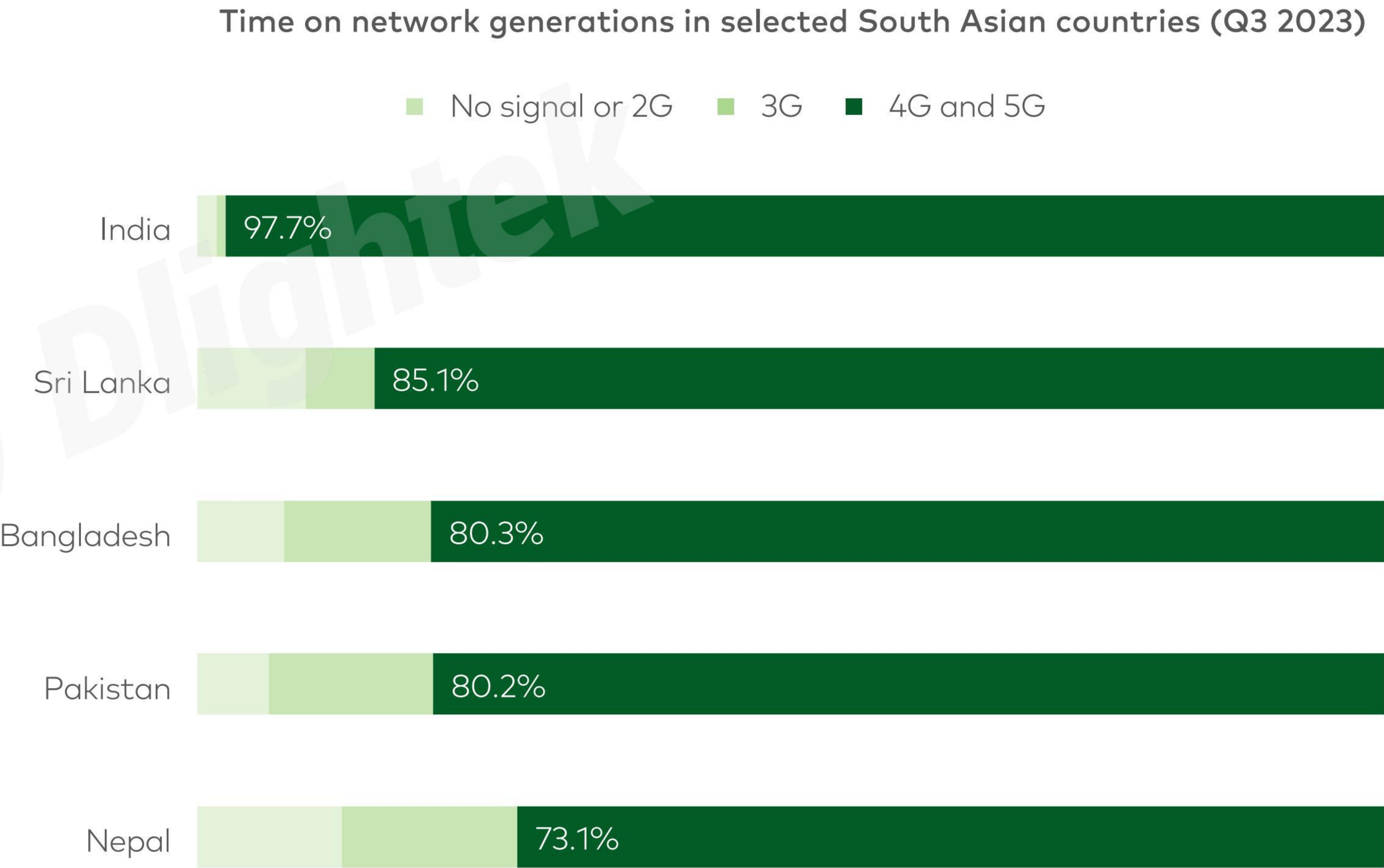


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TELECOM INDUSTRY TRENDS

Plan to launch commercial 5G services

The Pakistani government expects to launch 5G services in 2024. For the country, 5G services not only mean faster network speed and stronger connectivity, but also significant transformation in various fields such as agriculture, industry, and education, bridging the digital divide. In August 2019, Zong became the first operator in Pakistan to conduct 5G trials. In 2020, Jazz conducted 5G trials in Islamabad. In 2021, the government began formulating 5G policy guidelines. To accelerate the deployment, relevant departments and industry participants need to provide broader fiber network, reduce costs, address tax challenges, and offer a favorable investment and business environment ■



Source: PTA Annual Report; Opensignal.

Expand into non-telecom sectors such as fintech and entertainment

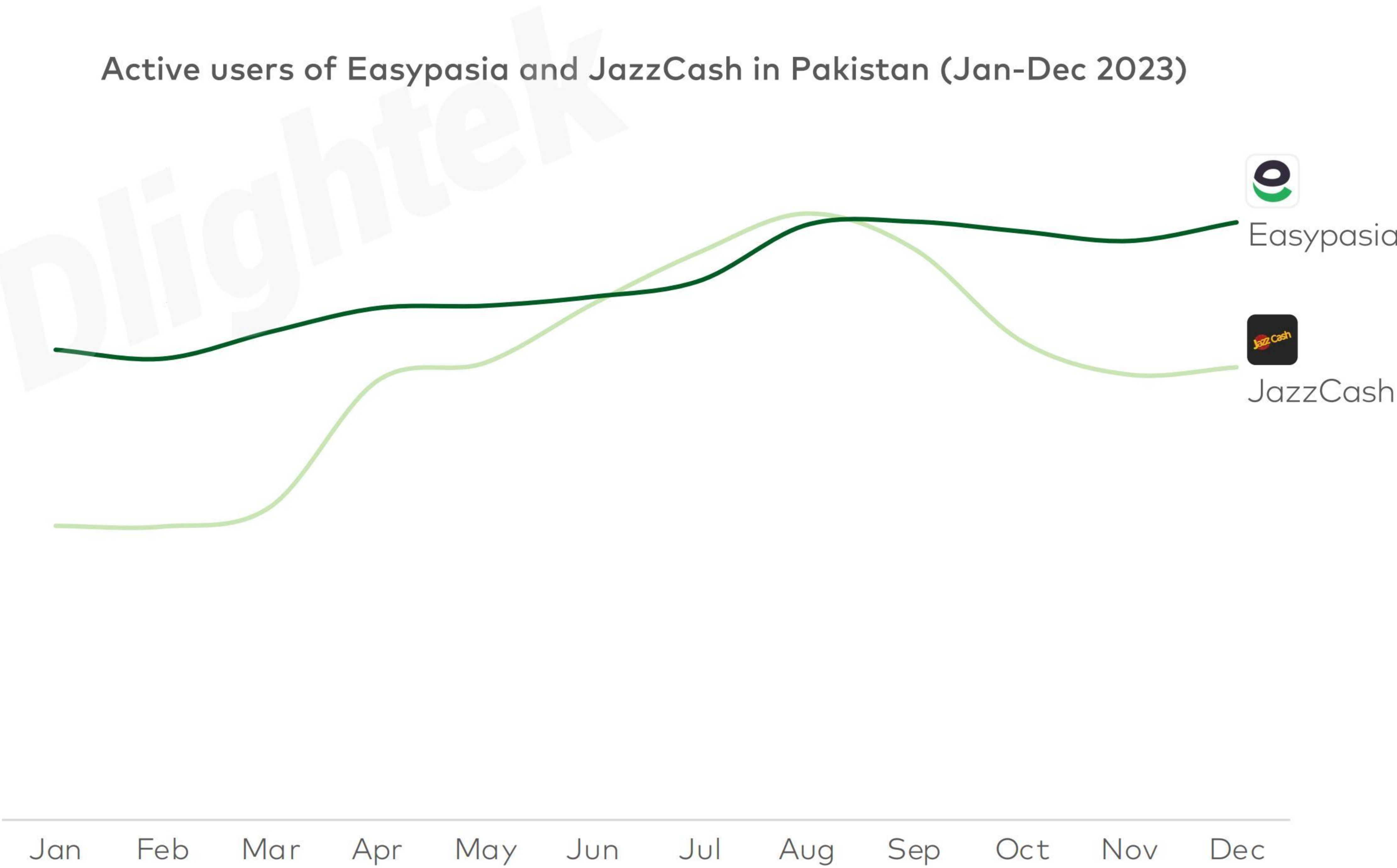
Leading operators are at the forefront of innovation, actively launching a series of mobile apps and services covering verticals such as fintech, entertainment, gaming, and social, etc.

Telenor and Jazz have respectively launched fintech services Easypaisa and JazzCash, which have become the two largest mobile payment applications in Pakistan, with active users in December 2023 increasing by 27% and 54% respectively compared to January of the same year. The introduction of fintech services has promoted the digitalization of payment-related businesses, effectively transforming Pakistan's financial landscape.

Jazz's entertainment platform Tamasha was launched in 2021 and has become Pakistan's largest local OTT platform, offering live streaming channels and video-on-demand content, such as cricket tournaments ■

Source: Jazz; DataSparkle.

Active users of Easypasia and JazzCash in Pakistan (Jan-Dec 2023)





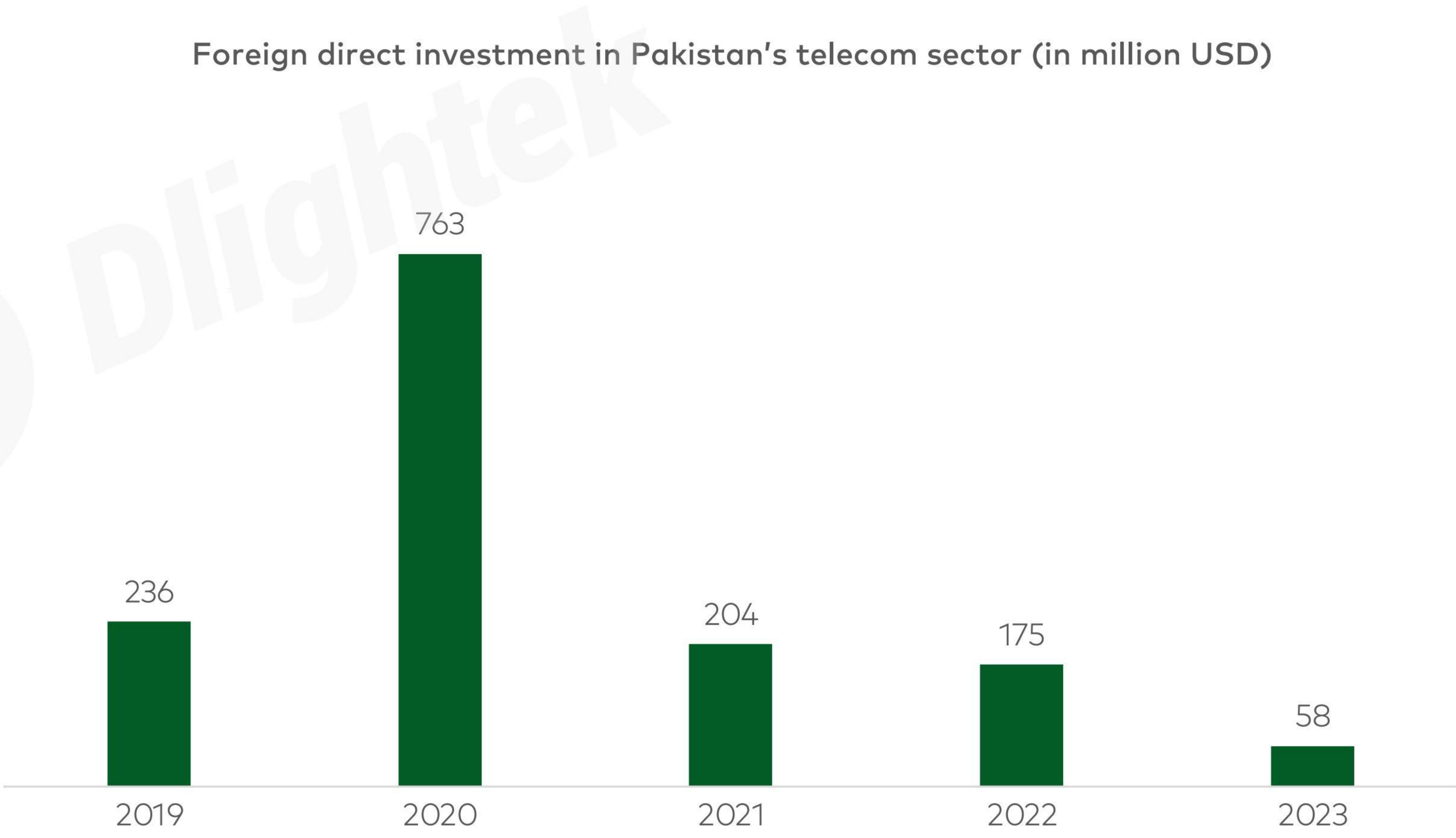
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INDUSTRY OPPORTUNITIES & CHALLENGES

Address challenges and reduce uncertainties

The main regulatory bodies for the telecom sector in Pakistan include the Ministry of Information Technology and Telecommunication (MoITT) and the Pakistan Telecommunication Authority (PTA). The MoITT is responsible for formulating policies and legal framework for the ICT sector, while the PTA oversees the establishment, operation, and maintenance of the telecom systems nationwide.

In recent years, foreign investment in Pakistan's telecom industry has declined, while the exchange rate has brought significant uncertainties to telecom operations. As a pillar of the digital economy, the telecom industry requires measures to reduce uncertainties, in order to further promote investment in digital infrastructure and the growth of the digital economy ■



Source: World Bank. *2019 in the figure represents the fiscal year 2018-19, and so on.

Conclusion



As a pillar of the digital economy, the progress of the telecommunications industry is crucial for the nation's digital competitiveness. Leading operators in Pakistan have experienced different development phases, launched a series of digital services in various vertical domains to meet the diverse needs of users, and redefined the digital landscape. In the face of upcoming 5G opportunities, all stakeholders need to work together to drive investment, enhance technological capabilities, and reduce uncertainties. This joint effort will help unleash the potential of the telecom industry and realize the vision of promoting socio-economic growth through digital transformation ■

Navigate the emerging market landscape.