



Telecom Sector Outlook and Spectrum Trading: the Case of Pakistan

Shahbaz Nasir

Pakistan Telecommunication Authority

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Outline

Pakistan: an overview

Pakistan's Telecom Market

National Spectrum Management Structure

Telecommunication Policy 2015

Spectrum Trading Framework Under Consultation

Pakistan : An Overview



Population, mil 195 (6th Largest Population)

Land Area 796,095 km²

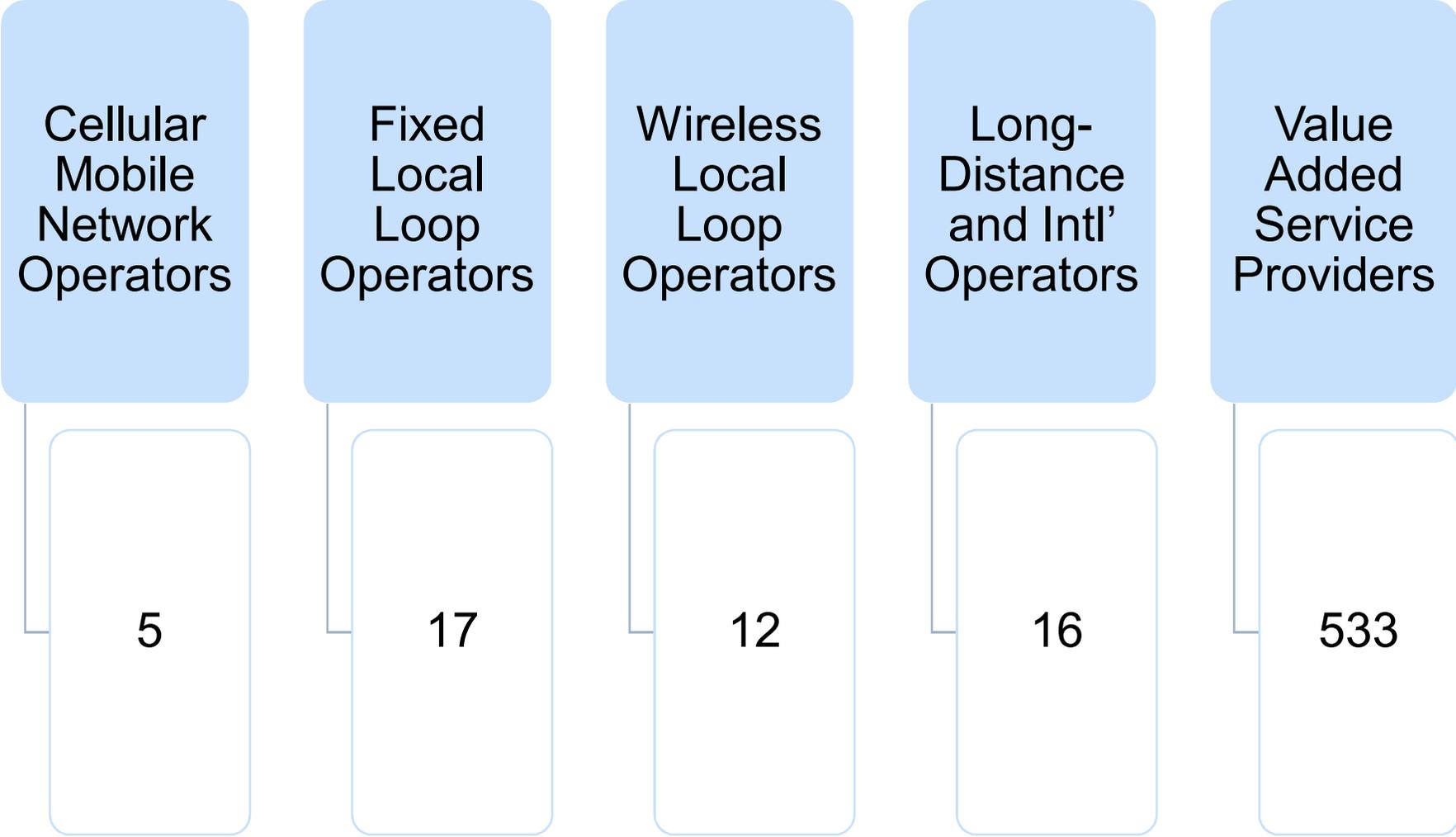
• 36th Largest Area

Key Stats

- Income /Capita US \$1560
- Literacy Rate 60%
- Median Age 21.2
- Geo-strategic Location

- Pakistan has the **6th largest population** in the world, making it an **attractive market** for global investors
- Gross Domestic Product (GDP): **USD 285 billion**
- **GDP Growth in 2016: 4.7%** (expected to cross **5.7%** in 2017)
- Population is **young** and becoming **more educated**
- **Urbanization** trend is expected to continue, reaching a level of **45%** by 2030

Telecom Market in Pakistan



All the five MNOs are providing mobile financial services

Telecom Market Size

USD 4.5 billion Telecom Market

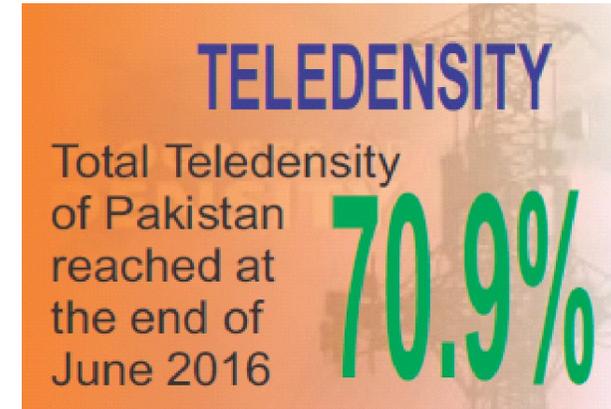
135 million Cellular Mobile Subscribers
(biometrically verified)

35 million 3G/4G Subscribers

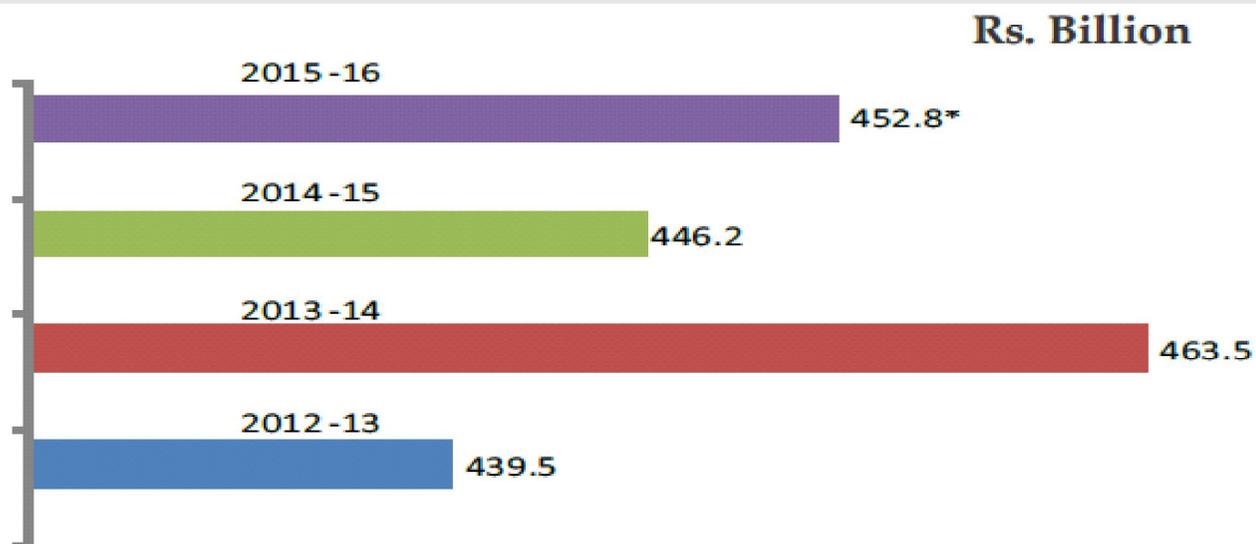
91% households own a mobile phone

15 million mobile banking accounts

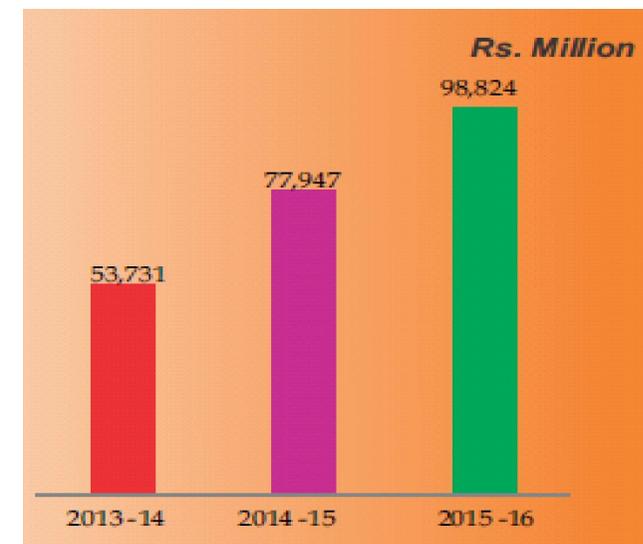
380,000 mobile banking agents



Telecom Revenues



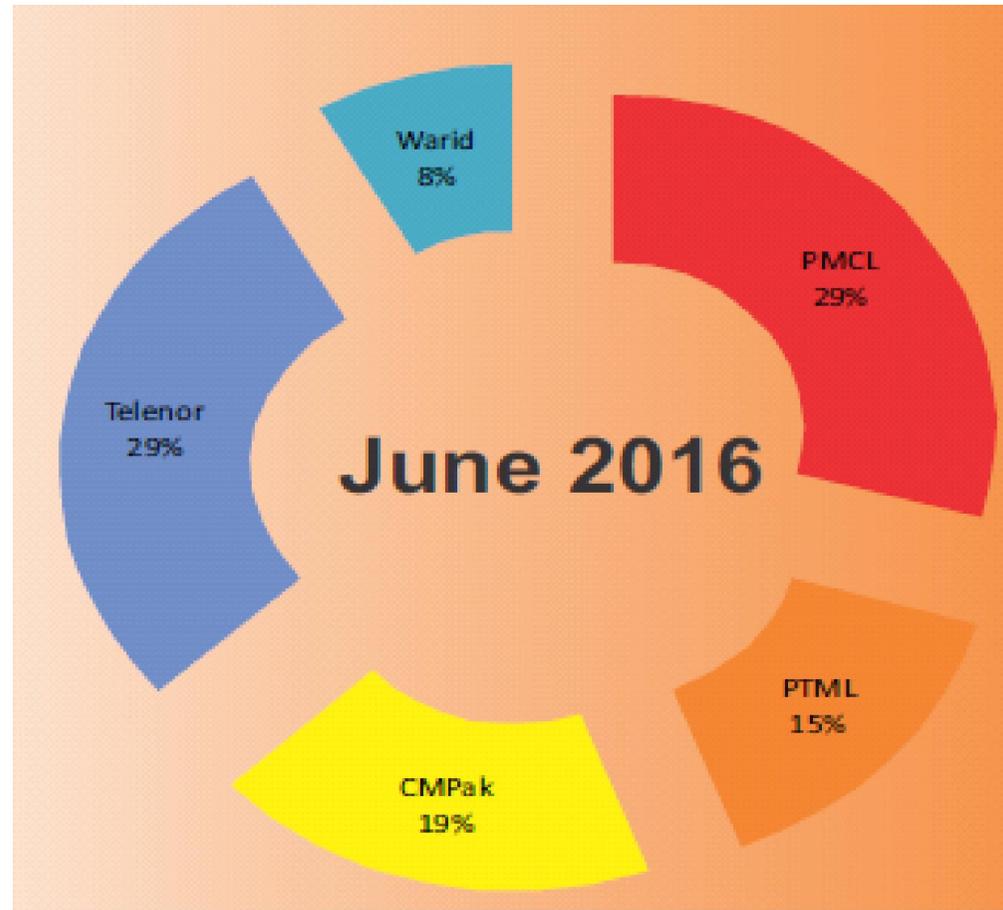
Data Revenues of Cellular Mobile Operators



Competitive Market



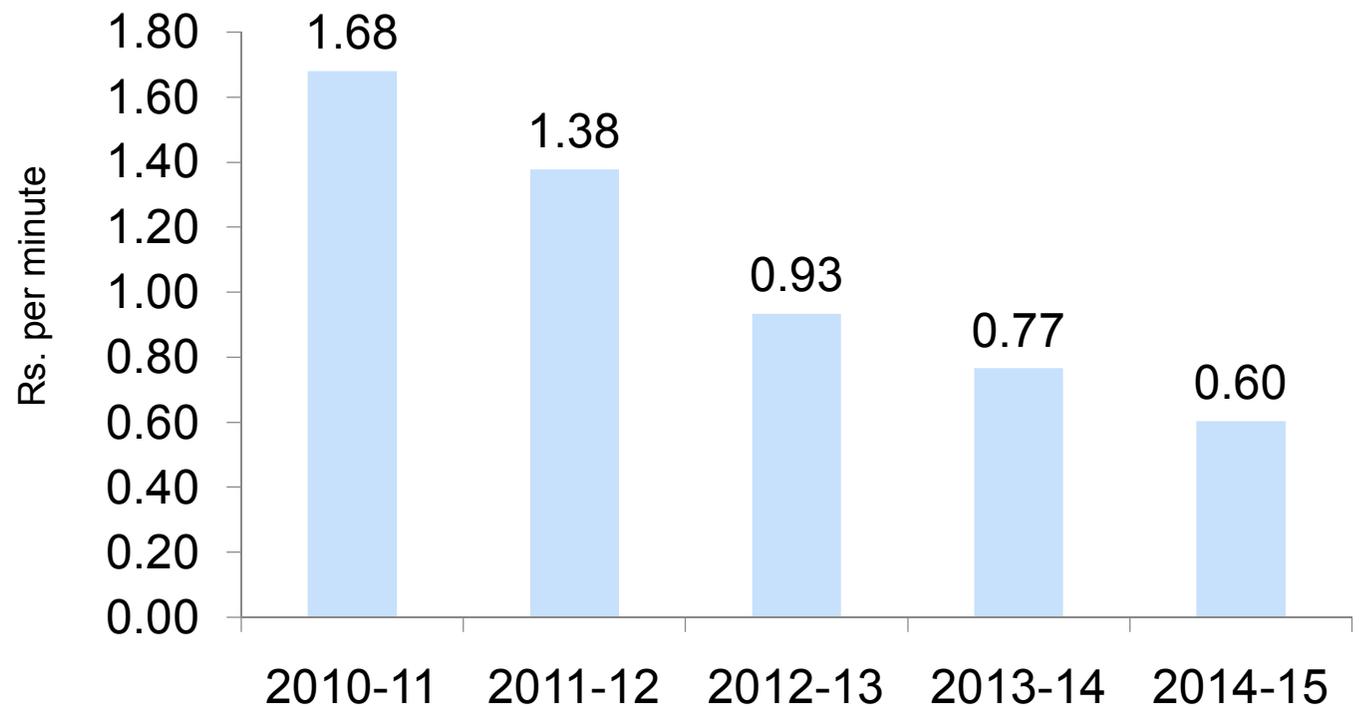
Cellular Mobile Market Share



Telecom Services in Pakistan are the most affordable in the World: consumers get benefited from competition

According to World Economic Forum Report (Network Readiness Index), **Pakistan is ranked No. 1 in affordability index.**

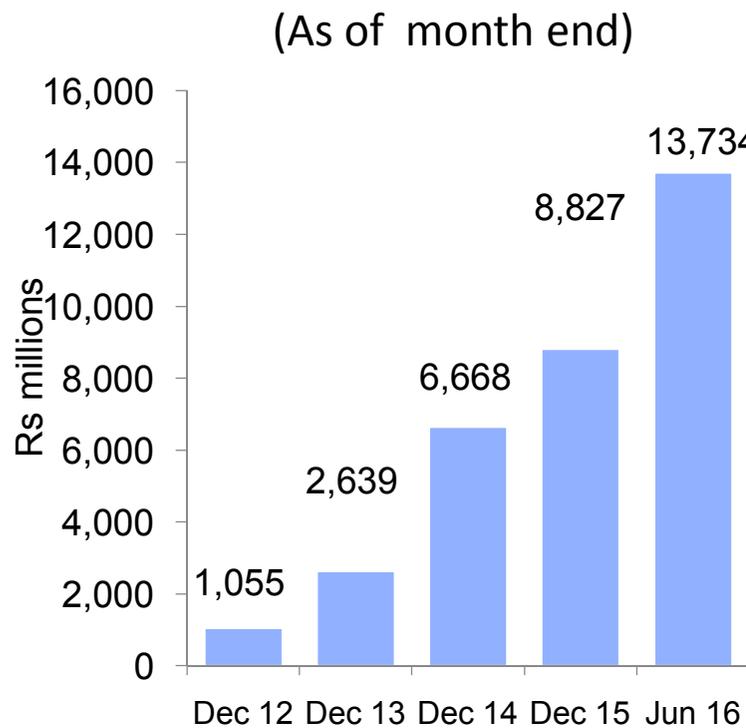
Cellular Voice Revenues (Price) per Minute



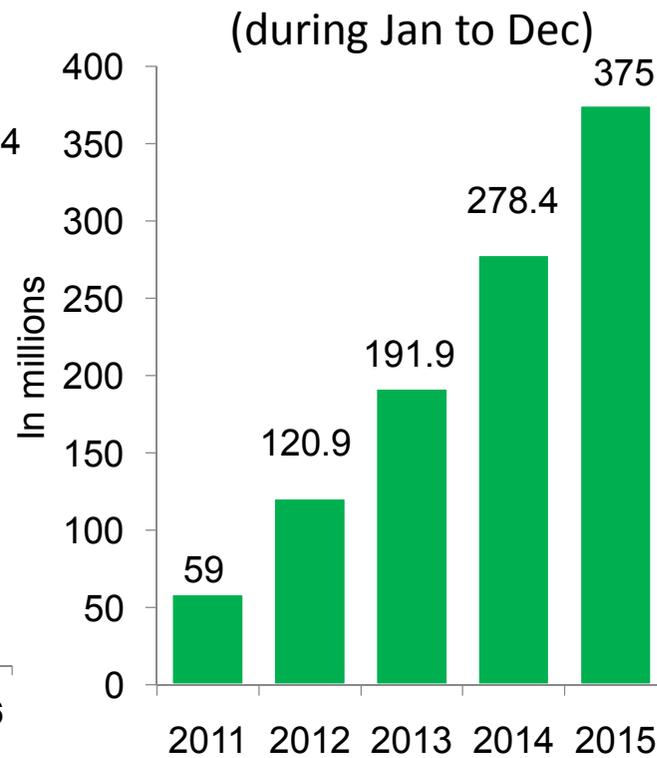
Cellular voice revenues per minute (Price per voice minute) have been calculated from the overall outgoing cellular minutes and cellular voice revenues. This approximately shows the average effective tariffs of voice calls per minute in the cellular mobile market of Pakistan.

THE M-BANKING MARKET IN PAKISTAN

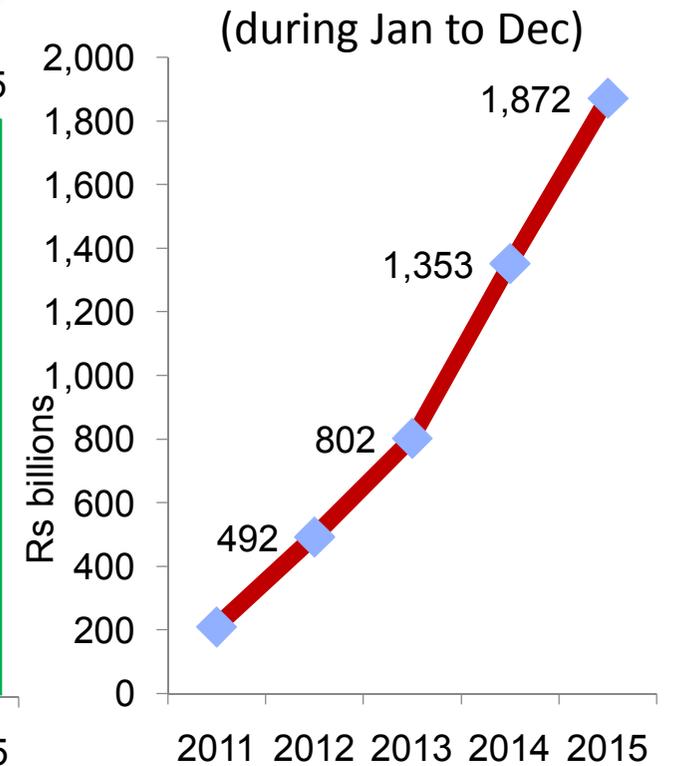
Deposits in m-banking accounts



No. of m-banking transactions



Amount transacted through m-banking accounts



Growth

105%

59%

45%

35%

Growth

135%

63%

69%

38%

Source: State Bank of Pakistan

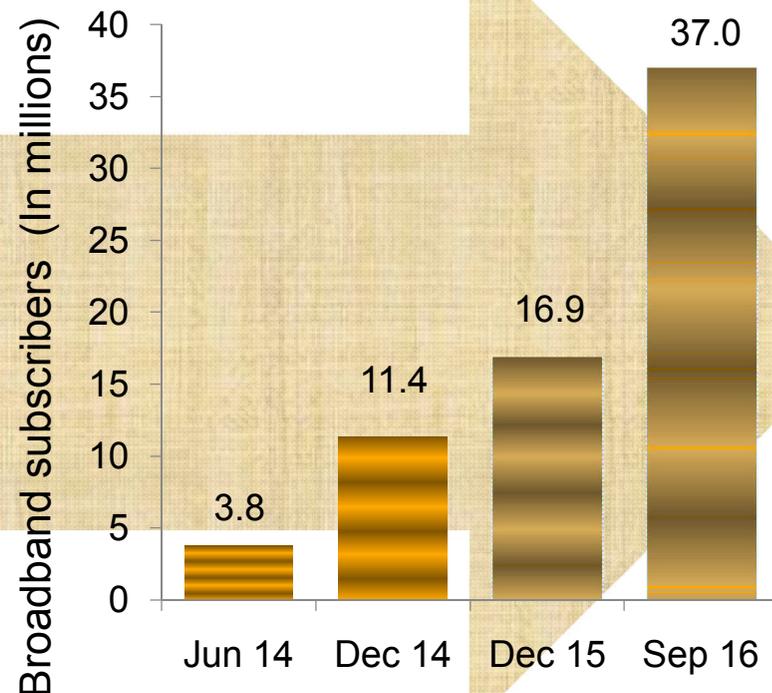
PROLIFERATION OF MOBILE BROADBAND IN PAKISTAN : ENABLING GROWTH IN DIGITIZATION OF SERVICES INCLUDING M- AGRICULTURE, M-COMMERCE)

PTA conducted successful spectrum awards in 2014 and 2016

2014

- Auction for spectrum of Next Generation Mobile Services (3G in 2100 MH and 4G in 1800 MHz) held on 23rd April, 2014
- Award of additional 40 MHz spectrum to Mobilink (10 MHz), Telenor(5MHz), Zong (10 MHz for 3G and 10 MHz for 4G) and Ufone (5 MHz) for 3G/4G services

Extra-ordinary response to 3G/4G services



2016

- Award of 10 MHz in 850 MHz for 3G/4G services to Telenor in July 2016.
- Telenor has started 4G services

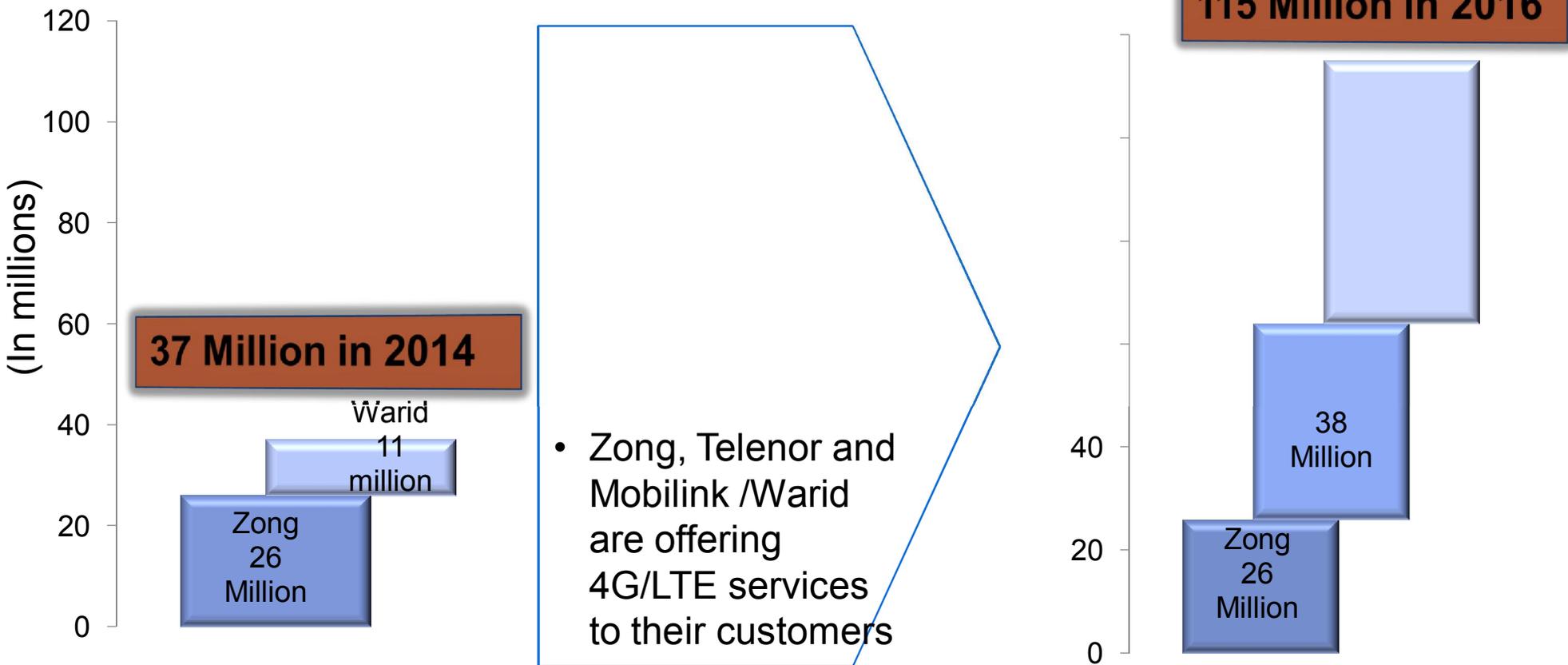
Warid also carved out 5 MHz spectrum out of the spectrum it had, to offer LTE services.

GROWTH OF MOBILE BROADBAND HAS BEEN FURTHER FACILITATED BY THE MERGER OF MOBILINK AND WARID

- Integrating network assets will create better quality mobile network, and new products and services at scale, e.g., mobile financial services, mobile apps, value added services
- Cost efficiencies will lead to investment for availability of broadband services in underserved areas
- The merger is expected to contribute to overall industry growth and competitiveness

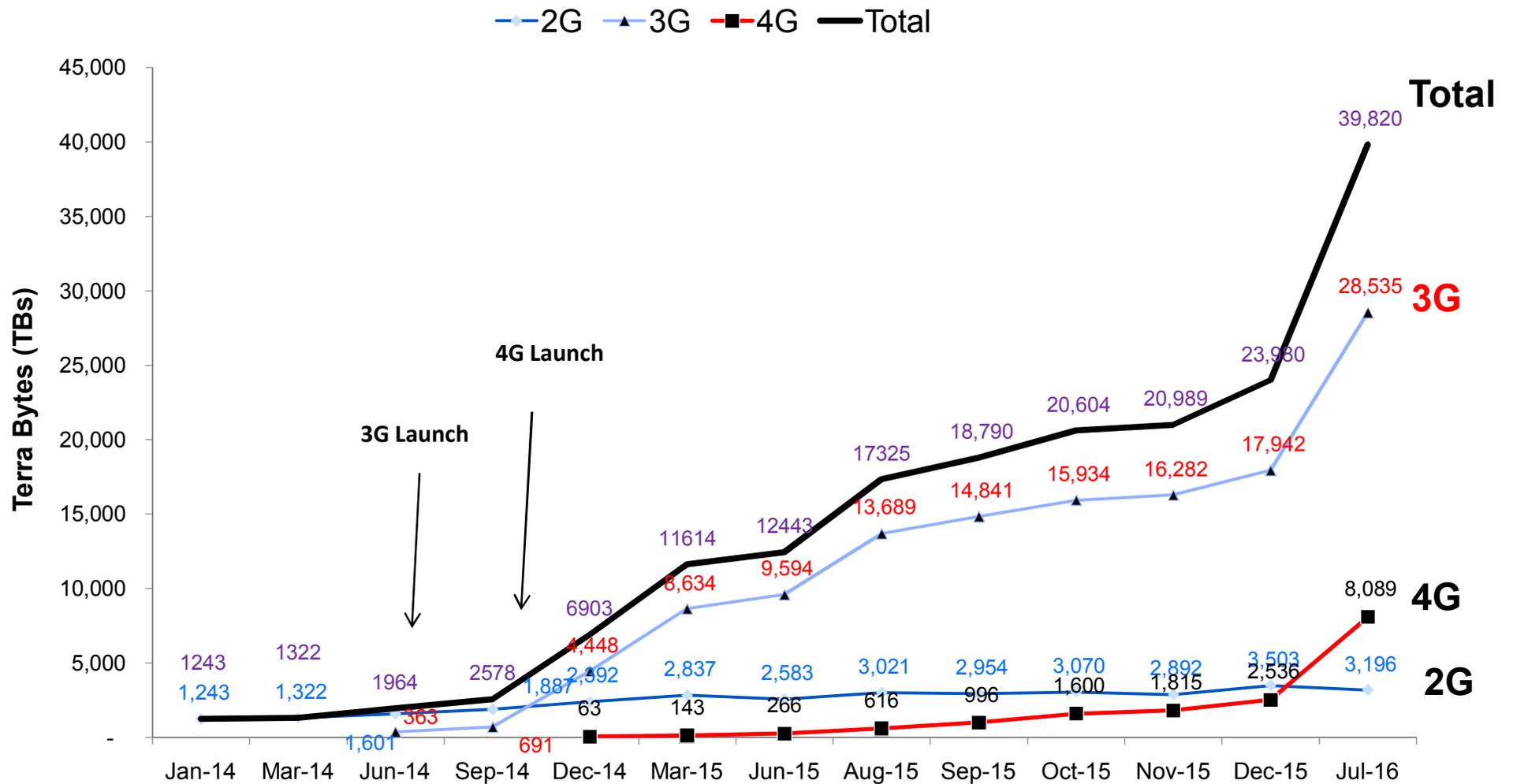
GROWTH OF MOBILE BROADBAND HAS BEEN FURTHER FACILITATED BY THE MERGER AND SPECTRUM AWARD 2016

Accessibility to 4G/LTE Services



Note: Accessibility is defined as total number of subscriptions that can avail or have access to 4G/LTE network 11

Extensive Data Usage on 3G Networks



SPECTRUM TRADING UNDER TELECOMMUNICATION POLICY 2015

- The purpose of spectrum trading is to allow markets to determine the best use of spectrum.
- Spectrum trading will be subject to license conditions and approval by PTA / PEMRA under intimation to FAB.
- A spectrum trading framework will be developed by PTA, PEMRA and FAB, and will be subject to policy level approval by Federal Government (MoIT). Factors like spectrum capping shall be considered while developing such framework.
- A Processing Fee and any other applicable fee will be levied to cover re-issuing of licenses.
- The decision to trade is a commercial decision for the license holder. The terms of the trade will be a commercial agreement between licensees.

SPECTRUM TRADING UNDER TELECOMMUNICATION POLICY 2015

- Spectrum trading will be permitted only for spectrum that has been acquired through a pricing arrangement that represents its market value (i.e. auction).
- Spectrum may be traded between holders of the same license type only. For example, spectrum trading may take place between LL licensees or mobile licensees but not between an LL licensee.

SPECTRUM TRADING UNDER TELECOMMUNICATION POLICY 2015

- Spectrum will not be traded by any licensee with the necessary license conditions until the licensee has fulfilled its payment and roll out obligations unless it also transfers its roll out obligations with the trade and same is verified and authorized by PTA.
- The acquirer of spectrum will be required to obtain (or already hold) the appropriate telecommunications license and to meet the terms of that license.
- The framework for spectrum trading will take into account the effects of such trading on competition, national security, public health and safety, compliance with the national laws and policies and compliance with international obligations and international relations.

SPECTRUM TRADING FRAMEWORK (2016) UNDER CONSULTATION

- Interested parties will apply to PTA, under intimation to FAB, on a prescribed form seeking permission for either category of spectrum trading.
- Spectrum may be traded between holders of the same license type only
- Spectrum trading will be permitted only for spectrum that has been acquired through a pricing arrangement that represents its market value (i.e. auction)
- Spectrum will be traded only if the relevant license that contains the spectrum assignment to be traded, permits trading. Spectrum assigned to a licensee without such a permit will not be traded unless Federal Government (MoIT) specifically authorizes the trade as being in the public interest.

SPECTRUM TRADING FRAMEWORK (2016) UNDER CONSULTATION

Permissible forms of spectrum trading:

- Outright sale of the rights and obligations (Transfer)
- Spectrum Leasing: sub-leasing not allowed to third party
- Spectrum swapping

Spectrum Cap: maximum 75% of the total spectrum held by a licensee

Trading Terms and Pricing: Spectrum trading is allowed on commercially agreed terms including prices between the parties

SPECTRUM TRADING FRAMEWORK (2016) UNDER CONSULTATION

Processing Fee:

Rs. 500,000 (almost USD 5,000) for cellular mobile licenses

Rs. 100,000 (almost USD 1,000) for Local Loop licenses

(Note: Processing fee levied on both transferor and transferee)

Spectrum trading shall not change the original period of spectrum assignment

Use of traded spectrum is based on technology neutral policy

SPECTRUM TRADING FRAMEWORK (2016) UNDER CONSULTATION

Procedure

The transferee and transferor will submit spectrum trading application to PTA.

The PTA may seek public opinion from all concerned regarding spectrum trading and its impact on competition, national security, public health and safety, compliance with the national laws and policies and compliance with international obligations.

Detailed assessment of whether the proposed transfer raises sufficient competition concerns.

In case, the transfer is executed, the transferor and the transferee shall surrender their licenses to PTA and PTA will issue new licenses reflecting the terms of the trade.

Thanks