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Telecom sector of Pakistan: Potential, challenges and business opportunities

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ABSTRACT

Pakistan has exercised major developments recently in the Telecom sector. The main focus is to extend maximum benefits to the general user in terms of having accessibility to the modern services and better quality of service as a result of competitive environment amongst the network operators. The international investors also have directly contributed towards the economy as a result of which further horizons for exploring and improving the broadband market have emerged. In this paper, we have presented the growing telecom access and statistics, investment opportunities in the sector, modern applications and the broadband developments in line with the changing orientation of the telecom industry of Pakistan.

1. Introduction

The global telecommunication sector has remained outstanding during the last decade, primarily due to technological advancements and growing trend of smart phone usage. In the same manner, Telecom sector of Pakistan has also grown mainly due to trade and investment liberalization, favorable policies and healthy competition (The future of Pakistan's mobile phone industry: bright or bleak?, 2014). The de-regulation and privatization of *Pakistan Telecommunication Company Limited* (PTCL) in 1997 resulted rapid expansion in network coverage and subscriber base of cellular industry. Government of Pakistan also supported the Telecom sector through tax relief of the activation tax, import duty and regulatory charges on import of mobile handsets. In the period of 2005–2008, Pakistan was ranked as most promising country for telecom growth according to *Business Monitor International* (BMI) (Key Telecom Growth Market, 2006). The huge investments by some successful telecom giants like Orascom, Etisalat, Telenor, China Mobile and Singtel vindicate this perception.

Due to rapid advancement in Mobile and telecom technologies, the lifecycle of personal communication is changing. The concept of using a utility on any device, anywhere by any network is rising. More and more GSM and internet enabled Tablet PCs and other mobile devices will be used during the next 10 years. According to PTA "Vision 2020", the competitiveness in Telecom sector would be measured by improved *Quality of Service* (QoS) in the Telecom system (Telecom sector remains a potential window for FDI, 2011).

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2. Telecom growth potential

The telecommunication sector has brought significant fiscal, social and economic benefits to Pakistan during the last decade. Its subscriber base has skyrocketed, reaching 137.7 million in April 2014, from only about 0.3 million in 2000 and 34.5 million in 2006. The Cellular teledensity is also grown up to 75.6% from that of 22% in 2005–06 as illustrated in Fig. 1 (Telecom Indicators, 2014).

Pakistan has been an investor's heaven especially in Telecom sector for the last few years. The telecommunication sector attracted more than USD 7.14 billion *Foreign Direct Investment* (FDI) between 2003 and 2012 while the telecom investment was more than USD 15.14 billion, generating revenue of USD 29.62 billion as well as thousands of jobs (PTA Annual Report, 2013, page 14). The graph shown in Fig. 2 illustrates the FDI and telecom investment data during the past decade (Telecom Indicators, 2014).

Telecom sector is one of the highest contributors to the National Exchequer. During the fiscal year 2012–13, Telecom sector contributed Rs.124 billion to the National Exchequer. *General Sales Tax* (GST) forms the major part of the contribution with Rs. 57.78 billion collected by *Federal Board of Revenue* (FBR) from Telecom sector. A huge sum of Rs. 53.52 billion has been paid by the telecom operators under various heads such as duties, withholding tax, fees etc. PTA has also received Rs. 6.8 billion from the operators under various regulatory heads and deposited into the National Exchequer till March, 2013 while Rs. 7.52 billion was collected under the Activation Tax head (PTA Annual Report, 2013, page 15). The major driving factors for this development were:

- Privatization of Pakistan Telecom Corporation into PTCL.
- Investment of cellular companies like Warid, Telenor and China Mobile.

The international research companies still consider Pakistan as an attractive market having huge portion of unmet demand in many areas that have business potential. Content service providers, Banks and Telecom operators are eager to introduce latest technologies like mobile banking and other 3G services in Pakistan (Telecom sector remains a potential window for FDI, 2011; Malik et al., 2009).

3. Challenges

Following the boom period, FDI continuously fell in the later years and at the closing of FY 2010–11; it was standing at merely USD 79.1 million and now it is on the negative side for the past 2 years. The continuous decrease in FDI for the last 4 years is primarily due to saturation in mobile market. The cellular operators have already invested in their infrastructure and now they are trying to just reap what they harvested. Political uncertainty in the country has also kept away the foreign investors to invest in Pakistan (PTA Annual Report, 2013, page 16).

The negative FDI of USD 408 million during the FY 2012–13 can possibly be turned around by conducting 3G/4G spectrum auctions to introduce new technology and resultantly bringing substantial foreign investment into the country. Currently, there are almost 1.876 billion 3G subscribers worldwide, which is about 26.6% penetration. Pakistan, with around 132.3 million mobile subscribers is amongst the top 10 countries that have more than 100 million mobile subscribers, as illustrated in Fig. 3. All of the other countries in that list have already implemented 3G services but Pakistan is yet to finalize the decision

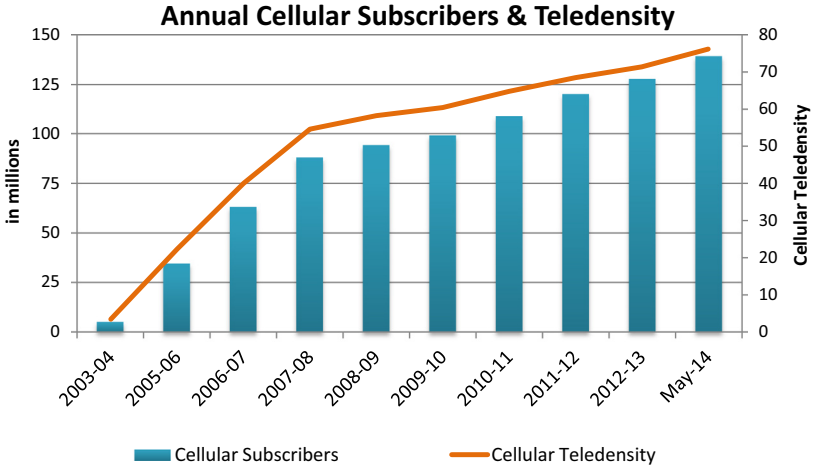

Fig. 1. Annual growth of cellular subscribers and teledensity.

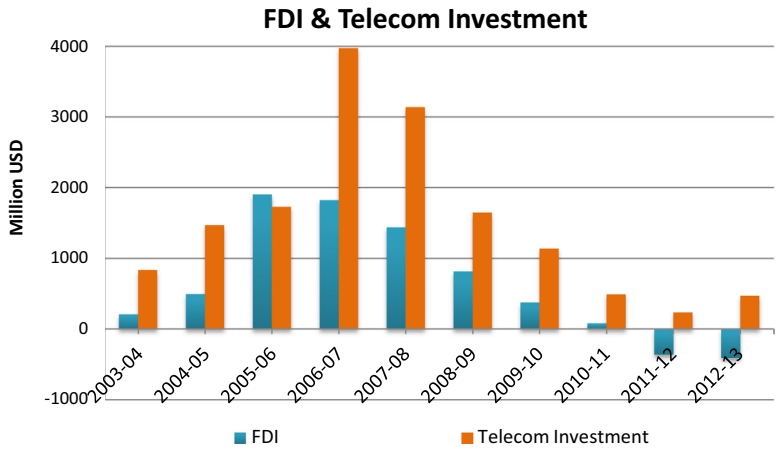

Fig. 2. Annual growth of Foreign Direct Investment (FDI) and telecom investment in the Telecom sector.

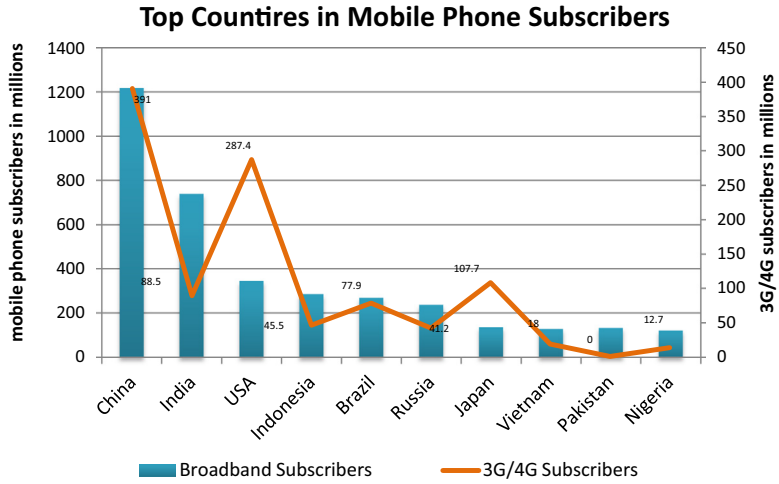

Fig. 3. Top 10 countries in number of mobile subscribers along with their 3G subscribers count.

about it (The 100 million club 2013: the top 14 mobile markets by number of mobile subscriptions and 3G/4G subscribers, MobiThinking, 2013).

Mobile Internet usage has increased rapidly during the last couple of years, especially in developing countries where majority of internet users rely on mobile based internet services e.g. in Egypt 70% people are using internet from mobile devices and they have rarely or never used computer based internet service. This turn around in the internet technology will pave the way for 3G/4G services to become the main driver that will provide high speed internet and will also increase the demand for 3G/4G enabled smart phones.

4. Business opportunities

During 2005–2008, when the Telecom sector was deregulated, a huge amount of investment was made by some successful telecom operators like Orascom, Etisalat, Telenor, China Mobile and Singtel which ultimately opened new highways for FDI into the country, generated huge amount of Revenue and a lot of job opportunities. These new cellular operators made heavy investments on infrastructure expansion, maintenance and marketing thus expanded the cellular coverage all over Pakistan and also developed a competitive environment which ultimately reduced the call rates thus attracting more customer base to their networks. As we have discussed earlier, that FDI continuously fell after the boom period of 2005–2008, now it is expected that though the auction of 3G licenses, Telecom sector can regain the same growth (Pakistan Cellular Industry – Strengths, Weaknesses, Opportunities, and Threats, 2009).

According to an estimate, a telecom company needs USD1 billion alone for the launch of 3G services which will create employment opportunities and widespread economic activities in the ICT sector. Table 1 shows the growth of global

Table 1
Current data and prediction of global smartphone and mobile phone internet users.

	2012	2013	2014	2015	2016	2017
Smartphone users (billion)	1.13	1.43	1.75	2.03	2.28	2.50
% of mobile phone users	27.6	33	38.5	42.6	46.1	48.8
Mobile phone internet users	1.58	1.91	2.23	2.50	2.75	2.97
% of internet users	66.8	73.4	79.1	83.6	87.3	90.1

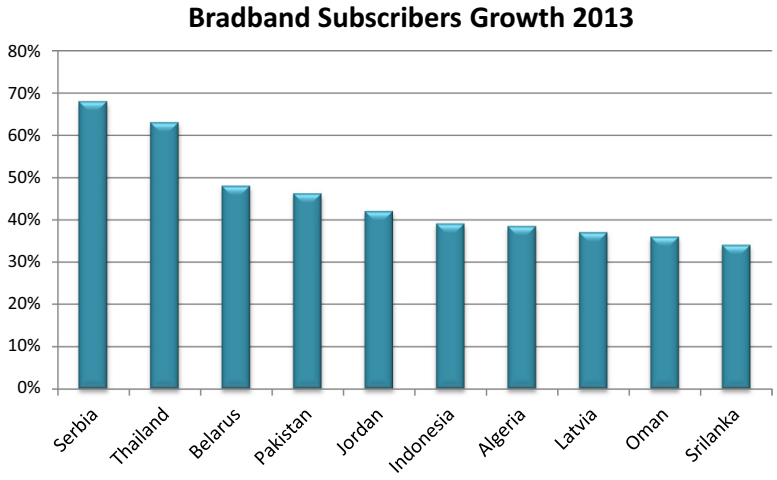

Fig. 4. Top countries in broadband subscriber's growth percentage during 2013.

smartphone users during the recent past and expected number of increase in the future. In 2012, there were 1.13 billion smartphone users which were 27.6% of the total number of mobile users. Currently this number has been increased up to 1.76 billion which is 38.5% of the total mobile phone users. This growth will further reach up to 2.50 billion by 2017 accumulating around half of the mobile phone users at that time. While by 2017, mobile phone internet users will be around 2.97 billion which would be around 90% of the total mobile phone users (Global mobile statistics, 2013).

Broadband is also expanding its network and infrastructure thus presenting a great potential of investment in this area. According to PTA, the number of broadband internet subscribers in Pakistan increased from 27,000 during 2005–06 to the current figure of more than 1.9 million. This recent expansion in broadband network has placed Pakistan in 4th position on World's top broadband growing countries, with growth of 46.2% during 2013 as shown in Fig. 4.

One major reason for this growth in Pakistan is due to enhanced deregulation policies introduced by PTA. Once the 3G license auction will be done, broadband usage and the demand of smartphones will also increase. Therefore, Smartphone manufacturing companies would capture huge revenue from Pakistan in the coming years (Pakistan: Key Telecom Growth Market, 2006; Pakistan 4th in Broadband Subscriber Growth, 2011).

5. Impact of 3G/4G services in social and corporate sectors

Almost two decades ago, Information Technology had not prevailed in Pakistan. This trend had especially penetrated with introduction of telecom industry which has not only created awareness about the use of technology equipments, but also created benefits for people. Initially, 3G/4G technologies are expected to be majorly utilized by urban population. However, due to an increasing demand of smartphones for the last couple of years, we can anticipate that within a year these services will be used all over the country. This new technology shift will fill the social and corporate gap within the field of Pakistan Telecom industry.

Once 3G/4G auction is done, 3G licensees are expected to invest around USD 3 billion for license and infrastructure due to the technology shifts in the next 2 fiscal years (Telecom Indicators, 2014). This investment will turn around the negative FDI and the exceeding demand for 3G enabled smart phones will generate more revenue. Government of Pakistan should encourage foreign investors to locally produce quality smartphone sets in order to generate huge amount of revenue and a lot of job opportunities as well.

Using 3G/4G technologies, there are many benefits for the government in delivering community services like Telemedicine, Small business development, Farming, Humanitarian aid, etc, especially to the rural areas. 3G/4G technologies can bridge the patient–doctor gap by providing remote access of paramedic staff to the citizens in their localities. Applications like remote patient monitoring through different sensors can reduce unnecessary visits to emergency rooms and clinics.

Such services could also enable medical professionals to get constant readings or even visual images of an injury and they can advise citizens to seek advanced help instead of waiting until a condition gets worst.

Applications related to education are a vast area of benefit. Teachers and instructors could use e-learning applications to teach students in different parts of the country. Skill development applications running on 3G/4G network could deliver training material like video lectures, eBooks, slides, etc.

As agriculture is the backbone of Pakistan's economy, there are numerous possibilities and potentials where mobile services can be offered to farmers and relevant industries in order to increase the quality of products. Smartphone applications could assist the farmers to share their information, knowledge and expertise about various issues with each other. 3G supported devices could educate farmers about different products and farming techniques and they could check weather updates and prices of different items online.

6. Future directions

Due to the adoption of 3G technology, it is expected to have a substantial growth in FDI and Telecom Revenue. Adopting some new policies, the Government of Pakistan can attract huge amount of FDI and thus can further boost this sector by:

(a) Drafting and implementing 3G policy for the Telecom sector.
(b) Auction of three licenses in mobile sector to open new avenues for business and job opportunities and FDI.
(c) Reducing the tax on telecom services and its related equipments that will lead to reduction of service cost, which ultimately will encourage more telecom usage.
(d) Encouraging foreign investors for indigenous production of quality mobile phone sets. This will not only create FDI and Revenue but will also provide new job opportunities.
(e) Improving the national image among the comity of nations, which is worst than reality.

7. Conclusions

Telecom sector of Pakistan is still in the growing stage as there are many areas where telecom services are yet to be deployed especially small towns and villages where the awareness about technology has significantly increased.

Among many developing countries, foreign investors spot Pakistan as a prospective market as there are many unexplored areas in the Telecom sector. With the introduction of 3G/4G service, many countries like India and China have enormously increased their broadband services. There are many unmet services that can be offered like mobile advertising, mobile commerce (Branchless Banking), e-education, e-health and even services like mobile agriculture for farmers and food production companies. If the government will be able to overcome the prevailing economic and political uncertainty, then the Telecom sector of Pakistan is expected to draw huge foreign investment, revenue generation and a lot of job opportunities.

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