Annual Report 2013

PTA

Pakistan Telecommunication Authority

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PTA VISION

"Create a fair regulatory regime to promote investment, encourage competition, protect consumer interest and ensure high quality ICT services"

2013 Annual Report

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PTA ANNUAL REPORT 2013

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1. PTA - Annual Report 2012-13

AAR	Approved Accounting Rate
AJ&K	Azad Jammu and Kashmir
ALF	Annual License Fee
APC	Access Promotion Contribution
ARPU	Average Revenue Per User
ASR	Approved Settlement Rate
BISP	Benazir Income Support Program
CGAP	Consultative Group to Assist the Poor
CMO	Cellular Mobile Operator
CNIC	Computrized National Identity Card
CSAF	Cellular Subscriber Agreement Form
CVAS	Class Value Added Services
CVCT	Cellular Village Connection Trial
DSL	Digital Subscriber Line
FAB	Frequency Allocation Board
FDI	Foreign Direct Investment
FED	Federal Excise Duty
FLL	Fixed Local Loop
G2P	Government-to-Person
GB	Gilgit Bultistan
GDP	Gross Domestic Product
GST	General Sales Tax
GVA	Gross Value Added
ICH	Interconnect Clearing House
ICT	Information & Communication Technologies
IMEI	International Mobile Equipment Identity
IN	Intelligent Network
IP	Internet Protocol
IPv6	Internet Protocol version
ITU	International Telecommunication Union
KPIs	Key Performance Indicators
KPK	Khyber Pakhtunkhwa
LDI	Long Distance & International
LL	Local Loop
M&RITT	Monitoring and Reconciliation of International Telephone Traffic
MNO	Mobile Network Operator
MNP	Mobile Number Portability
MoU	Memorandum of Understanding
MTR-I	Mobile Termination Rate – International

MVNO	Mobile Virtual Network Operator
NGN	Next Generation Network
OTC	Over-the-Counter
P2A	Person-to-Application
P2P	Person-to-Person
PTCL	Pakistan Telecommunication Company Limited
QoS	Quality of Service
RFP	Request for Proposal
RIR	Regional Internet Registries
SAFIR	South Asian Foundation for Infrastructure Regulation
SAMENA	South Asia Middle East and North Africa
SBP	State Bank of Pakistan
SCO	Special Communications Organization
SIM	Subscriber Identity Module
SMS	Short Messaging Service
SOP	Standard Operating Procedure
TPSP	Third Party Service Provider
USF	Universal Service Fund
VAS	Value Added Services
WAP	Wireless Application Protocol
WCDMA	Wideband Code Division Multiple Access
WLL	Wireless Local Loop

Syed Ismail Shah Ph.D
Chairman

Mr. Tariq Sultan
Member (Finance)

Barrister Zafarullah Khan
Member (Compliance & Enforcement)

On behalf of the Authority, it is my pleasure to present the Annual Report of Pakistan Telecommunication Authority (PTA) for the fiscal year 2012-13. Recently assuming the office of Chairman PTA, I believe that telecom sector of Pakistan requires extensive collaboration of the Authority and private sector in order to resolve the challenging issues of the present times. My prime focus lies in expediting the long awaited auction of Wireless Broadband Spectrum / Licenses through a transparent and fair regulatory process. The protection of telecom consumers is also among my top priorities. It is imperative for us to adopt a reconciliatory approach where regulatory decisions are made with consensus of relevant stakeholders while remaining within the boundaries of Policy Directives issued by the Government of Pakistan and the regulatory framework of the telecom sector. The Vision for ICT growth will be kept at priority while performing my services as the Chairman PTA.

The telecom sector continued to grow on a steady pace during FY2012-13 with telecom services covering 92% of the land area and 75% of the population. Cellular mobile, local loop and broadband services continue to grow while mobile banking is also growing at a steady pace. PTA has rolled out some major initiatives in the last fiscal year in the area of mobile SIM verification, quality of service, revising the regulatory framework and consumer protection.

My vision for telecom sector for Pakistan boasts of an advanced, technology driven, consumer oriented and business friendly environment where fair competition, affordable tariffs, high quality of services and extended land coverage will be the success benchmarks. However, big challenges are to be tackled before this vision could be achieved. I am confident that with a dedicated team at PTA, support of the stakeholders and under the valuable guidance from Federal Government of Pakistan, we will convert the challenges into opportunities and position PTA as the best telecommunication regulator in the world as it was once well known.

In the end, I would like to appreciate the efforts of the Economic Affairs team in compiling an excellent report within the stipulated time frame. I hope this report will further augment your knowledge about the telecom sector of Pakistan.

Syed Ismail Shah Ph.D
Chairman, PTA

Pakistan Telecommunication Authority (PTA) performed its regulatory duties and responsibilities with professional approach in accordance with the changing dynamics of the telecom sector of Pakistan. Protecting consumers and maintaining an enabling business environment for telecom companies remained to be the key priorities of the Authority during the last year. Although the non-presence of PTA Authority (Chairman and Members) for part of the year slowed down progress on various important issues where the Authority approval was required, the officers of PTA performed their day to day duties efficiently. The constitution of new Authority is on the fast track the process and expedite the resolution of pending issues.

PTA has been actively involved in curbing the menace of "unauthorized SIMs" i.e. SIMs which are registered on credentials of subscribers without their knowledge/consent due to identity theft issues. In this connection, modalities have been finalized among relevant stakeholders for deployment of biometric verification mechanism at sale channels of mobile operators which is expected to be completed by August 2014. In the meanwhile, SIM sale as well as verification procedures are being kept under scrutiny through periodic surveys by PTA. The long standing issue of cross border signal interference with India and Afghanistan has also been highlighted to the relevant Ministries and LEAs. To ensure quality delivery of services, PTA carried out broadband QoS survey in the federal and provincial capitals this year. The technical survey was also coupled with a customer experience survey to ascertain the actual user feedback about broadband services. The results showed that the operators are generally providing good broadband services and resolving complaints within reasonable time frame. A similar QoS survey was conducted for QoS performance assessment of EDGE/GPRS i.e. mobile internet for the first time ever by the Authority. Survey results in the major cities of Pakistan showed that the service quality of cellular operators is within the satisfactory range as defined in the GPRS/EDGE Quality of Service Standards Regulations, 2010.

PTA is also working with CMOs to develop an action plan in case of communication breakdown. The issue of blasphemous and derogatory content on the Internet has also been dealt with seriously by the Authority and PTA blocked 15,380 websites/links on the recommendation of the Inter Ministerial Committee. PTA also reviewed the framework for Class Value Added Services Licensing framework to further streamline the regulatory processes.

Telecom economy witnessed some growth in the fiscal year 2012-13 with major indicators showing improvement from last year. Teledensity of the country reached 75.21% (135 million subscribers combining Cellular, WLL & LL) with major contribution from cellular sector and revenues of Rs. 445.7 billion. Telecom sector contributed Rs. 124 billion to the national exchequer while the investment reached US $472 million in the FY2012-13. However, FDI remained on the negative side of the scale while the telecom imports reached at US $918 million in the current fiscal year.

Mobile penetration has reached to 71.7% with 128.93 million subscribers at the end of June 2013. CMOs together added 8.1 million new subscribers to their networks. Cellular operators cover 92% of the land area via 35,889 cell sites across Pakistan.

Local loop sector has performed well as the total teledensity of both FLL and WLL services combined reached 3.6% at the end of FY 2012-13. WLL segment has grown considerably over the past year while FLL subscribers have also risen slightly. Currently, there are 6.38 million subscribers of both FLL and WLL combined, at the end of June, 2013 as compared to 5.87 million at the end of same period last year. PTCL has more than 95% share in the FLL subscriber base while in the WLL sector, it holds close to 37% of the market share.

Broadband sector also showed reasonable growth with 2.72 million subscribers and 30% growth during the FY2012-13. The penetration level remains low at 1.52%. However, the remarkable growth of wireless technologies is an encouraging sign for the sector. PTCL currently leads the broadband market by a long margin with its EvDO services. Due to this, wireless technologies now own major share in the overall subscriber base as compared to fixed line for the first time ever in Pakistan.

Cellular mobile companies have actively engaged in joint ventures with commercial banks for the provision of financial services in Pakistan. PTA has been actively working on the promotion of mobile banking and has collaborated with State Bank of Pakistan to constitute the 'Technical Implementation of Mobile Banking Regulations". Unprecedented growth has been witnessed in M-banking indicators such as M-banking agents registered a growth of 141.6 percent, increasing from 26,792 to 64, 716, and the growth in m-wallet accounts was 126.4 percent, increasing from 1.4 million to 2.4 million. M-banking segment of Pakistan has vast potential for growth in the coming years if the operators and the two regulators (PTA & SBP) keep moving in the right direction.

PTA has developed procedures and mechanisms for receiving complaints and their subsequent satisfactory redressal. During the FY2012-13, PTA received 31,266 complaints against telecom operators, 98% of which were successfully redressed. Most of the complaints pertained to the CMOs and PTCL with misuse of service, MNP and faults / disruption in service.

1 Current Issues / Areas of Focus

PTA remained focused on realigning its strategic plans towards meeting the changing paradigms of the telecom sector. With increasing subscriber base and emerging facets of the telecom sector, PTA performed its regulatory duties with professional approach. Moreover, protecting consumers and maintaining an enabling business environment for telecom companies remained to be the key priorities of the Authority during the last year. Some of the major activities in FY 2012-13 are highlighted in the ensuing pages:

1.1 Launch of Next Generation Wireless Networks (NGWN) and Services

PTA has always been keen to bring latest telecommunication technologies at affordable prices to the people of Pakistan. The auction of spectrum / license(s) for Next Generation Wireless Network (NGWN) services will be the pinnacle of technological advancement of cellular mobile services in Pakistan. PTA has accelerated the process of NGWN spectrum / license(s) auction and advertised to hire a consultant(s) of international repute to advise PTA on the whole auction process including the auction methodology and execution. The Government of Pakistan is very keen to launch NGWN services in the country in line with its vision for a technologically modern and financially stable Pakistan. The new leadership at PTA has made NGWN spectrum / license(s) auction as one of their top most priorities and it is expected that the spectrum / licenses will be issued in the near future. NGWNs will bring innovative services to the telecom consumers of Pakistan including, information, education, business, entertainment and financial services, in addition to the enhanced voice communication at faster speed.

1.2 Documentation and Biometric Verification for SIM Sale

PTA has been striving to streamline Mobile Phone SIMs sale documentation and verification processes. The illegal use of mobile SIMs in terrorist and fraudulent activities has been a nuisance for the Law Enforcement Agencies (LEAs) and PTA alike and concerted efforts have been made by Joint Committees of relevant stakeholders including PTA to come up with plausible solutions to the issue. PTA has already been playing its role actively in the fight against illegal sale of SIMs and activation of unauthorized SIMs. In this regard, a number of projects including Subscribers Verification System (789) and SIM Information Systems (667) and (668) were launched by PTA in consultation with Cellular Mobile Operators. In 2012, PTA also launched another project for Automation of Pre-Sale Documentation. The project has not only helped to minimize identity theft but also enables real time tracking of sale of mobile phone SIMs. PTA has also amended its Subscribers Antecedents Verification Regulations in July 2012. Now operators are entitled to sell SIMs only through their Customer Service Centers (CSCs), Franchisees and Registered Retailers having a Unique Identification Code, namely Unique ID.

In November 2012, a high level meeting of the Honorable Prime Minister of Pakistan was held with the CEOs of mobile companies in the presence of PTA and other Government Officials. It was decided in the meeting that a verification system would be deployed at CMOs' sale points. One of

the systems under consideration was "Biometric Verification System" as well but there were serious challenges to this idea such as NADRA's capability for verification of thumb impressions in real-time and high capital and operating costs. However, these barriers have been overcome and a Joint Working Group (JWG), comprising of representatives from Ministry of Interior, Ministry of Information Technology, NADRA, IB, FIA, PTA and CMOs, has finalized modalities and timelines for deployment of biometric verification mechanism at CMOs' sale outlets. The implementation would be carried out in a phased manner starting from CSCs and Franchisees initially and subsequently moving towards retail outlets by August 2014. Once deployed, mobile phone SIMs would be issued and activated only after online verification of purchasers' thumb/finger impression from NADRA thereby eliminating the phenomenon of "unauthorized SIMs".

1.3 Monitoring of Sales Channels of CMOs

To assess the ground situation and ensure compliance of PTA's procedures on SIM Sale & Verification, by CMOs' sale outlets (CSCs, Franchisees and Retailers), PTA carries out surveys on periodic basis. In this connection, six such surveys were carried out during last year and actions were initiated against the sale outlets found violating the laid down procedures, as per law.

1.4 Quality of Services (QoS) Surveys

Broadband QoS Survey

PTA carried out nation-wide QoS and Quality of Experience (QoE) surveys of Broadband Service Providers and users during the past fiscal year. The survey was conducted by PTA zonal offices in Lahore, Karachi, Quetta, Peshawar, Rawalpindi/Islamabad and Muzaffarabad.

The QoS of following operators were tested:-

Table 1 QoS Tested Operators

ZONES	OPERATORS
Karachi	Cyber Net, CubeXs, Multinet, NTC, Satcom, FiberLink FariyaNet, Connect Communication, Ebone Tech, WorldCall, Wateen, Mobilink Infinity, Qubee & Wi-Tribe
Lahore	Wateen, NTC, WorldCall, Wi-Tribe, Qubee, Cyber Net & Nexlinx
Islamabad/Rawalpindi	Cyber Net, Micro Net, NayaTel, Qubee, PTCL, Wateen & Wi-Tribe
Peshawar	COMSATS, Cyber Net, GOL, Wateen, WorldCall, NTC & PTCL
Quetta	Wateen, Cyber Net, PTCL, Link Dot Net & Geo Net
Muzaffarabad	SCO & SkyTel

During the survey, the performance of different offered packages i.e. 512kbps, 1Mbps & 2Mbps will measured at different times i.e. Peak time, Off Peak hours and Medium / Normal Traffic Time for two consecutive days for each operator. The Key Performance Indicators (KPIs) measured include Network Availability, Link Speed, Service Availability, Retain-ability, Download / Upload Speed, Round Trip Time, Jitter and Packet Loss. Besides technical parameters, three months' data of non-technical parameters i.e. response time of assistance service, billing and service provisioning complaint resolution time was obtained and analyzed.

In addition, QoE, sometimes also known as quality of user experience, a purely subjective measure from the user's perspective of the overall value of service, was sought & measured through a questionnaire developed for the purpose. PTA's Zonal offices called a sample of customers to fill the questionnaire, which were selected covering all areas where an operator is providing its services.

The survey results showed that the QoS performance of the broadband operators is generally good as they scored high marks in majority of the tested KPIs. In addition, the operators are mainly complying with the deadlines of resolution time given against each type of complaint.

EDGE/GPRS QoS Survey

PTA conducted first ever QoS Survey for General Packet Radio Service (GPRS) / Enhanced Data Rate for GSM Evolution (EDGE) of Mobile operators. The survey was conducted in major cities of Pakistan (Karachi, Lahore, Rawalpindi / Islamabad, Peshawar and Quetta) and AJ&K (Muzaffarabad).

The survey was carried out in accordance with the "GPRS / EDGE Quality of Service Standards Regulations, 2010". The regulations provide quality of service parameters for EDGE / GPRS service and are applicable to all the cellular mobile licensees. During the survey, following Key Performance Indicators (KPIs) pertaining to GPRS / EDGE services were monitored: Network Accessibility, Service Availability, Network Latency, Link Speed, Throughput, Downlink Speed, Uplink Speed, With EDGE Mobility and Retain-ability. Overall results of all the CMOs by and large were found to be satisfactory in the light of categorization mentioned in the GPRS / EDGE Regulations, 2010.

1.5 Mobile Banking

SBP and PTA aim to provide an enabling environment for mobile banking services in the country. During the period under review, both the regulators continued their joint efforts on the regulatory framework for m-banking services. Current m-banking services are being governed by the SBP's Branchless Banking Regulations 2008, amended in 2011. The proposed mobile banking regulations to be issued by PTA and SBP are in line with the above Regulations, and will facilitate the existing m-banking arrangements.

During the period under review, the two Regulators also jointly organized a workshop on `Future of Branchless Banking, Payment Systems and Financial Inclusion' in December 2012 at Karachi. The event was organized in collaboration with the Consultative Group to Assist the Poor (CGAP) of the World Bank. The workshop highlighted the importance of mobile banking for financial inclusion and expansion of payment ecosystem of the country. There is a need of a robust payment system to be in place to get the benefits of mobile banking in the country. CMOs, banks and other stakeholders need to develop long term partnerships to have innovative payment solutions while minimizing the risks associated with mobile banking. Ensuring high standards and provision of secure banking will increase the consumer confidence, which will result in the expansion of mobile banking services.

With an enabling regulatory environment, the cellular mobile companies are actively pursuing their mobile banking initiatives in collaboration with the financial institutions. Easy-paisa and Omni are the major agent based mobile banking services in the country and are in operation since 2010 with country-wide network of 30,000 agents. Recently, Mobilink and CMPak have also launched their agent based mobile banking services. Mobilink is providing its m-banking services in affiliation with Waseela Microfinance Bank and CMPak has collaboration with Askari Bank. Ufone has also acquired Rozgar Microfinance Bank in order to launch its mobile banking setup throughout the country and also signed MoU with National Bank of Pakistan (NBP) for facilitating old and retired pensioners. In February 2013, SBP has issued a nationwide microfinance banking license to U Microfinance Bank Limited (formerly Rozgar Microfinance Bank) to operate at national level. Ufone has also launched its m-banking services.

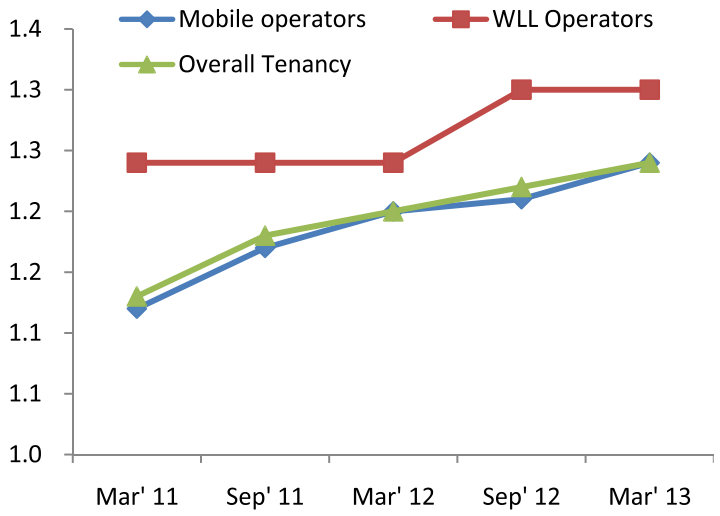
New players in the m-banking market can substantially expand the existing base of m-banking network if a healthy competition in the market reduces the cost of m-banking transactions and new products and business models are launched while considering the consumer requirements. Internationally, the m-banking model of m-paisa has been widely quoted for its success as it has reached more than 65 percent of Kenyan households. However, achieving a imilar success in Pakistan with different regulatory frameworks is a challenge. Mobile banking segment of Pakistan has vast potential for growth in the coming years provided that mobile operators and banks keep up with their innovations and the regulators remain proactive to facilitate this process.

1.6 Infrastructure Sharing

To encourage infrastructure sharing in the telecom industry, an MoU was signed between CMOs and PTA in Aug 2010. Later PTA issued an SoP in Sep 2010 for tower sharing to all CMOs and WLL operators. Target for the first two years was to achieve tenancy ratio of 1.3 by September 2012. After active persuasion of PTA, infrastructure sharing has now become an integral part of business processes in the WLL and cellular mobile segments, and tenancy ratio has improved considerably over the last two and half years.

As of March 2013, the overall tenancy ratio has reached 1.24. Although, the ratio is slightly lower than the target of 1.3, there has been significant improvement compared to the ratio of 1.02 in Aug 2010. The WLL operators

Figures 1: Tenancy Ratio

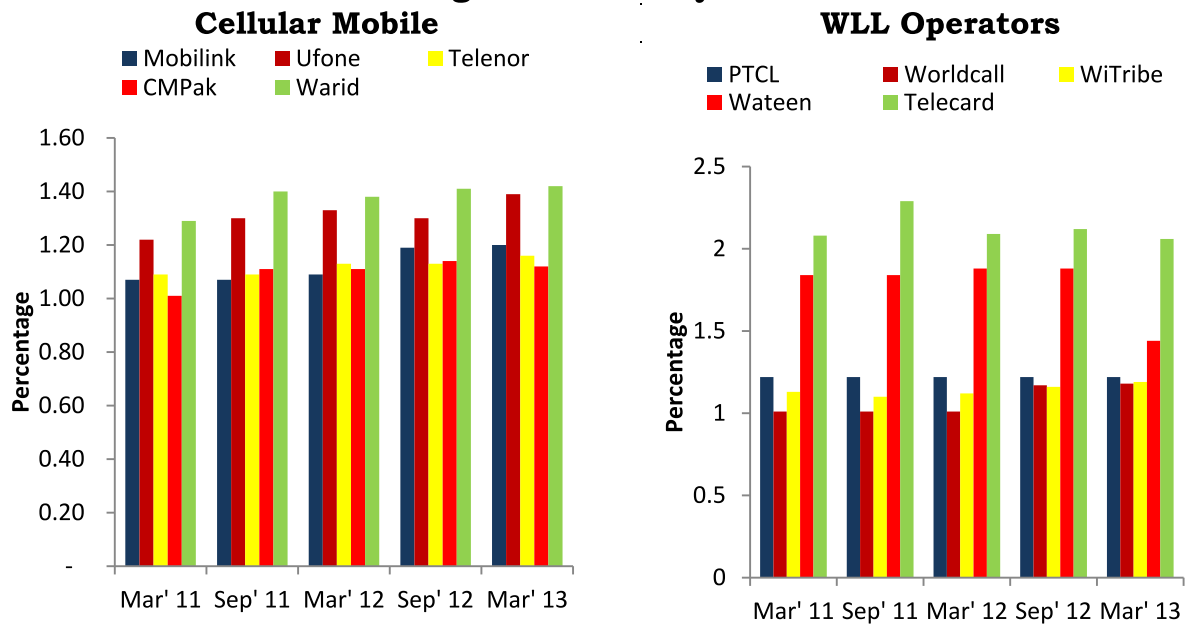


have achieved the target of 1.3, whereas CMOs with their tenancy ratio of 1.24 need to come forward to bring the overall sector segment ratio close to the target level of 1.3. Amongst mobile operators, Warid has the highest tenancy ratio of 1.44 followed by Ufone 1.3. Mobilink, Telenor and CMPak are still behind with their ratios below 1.3. In WLL segment, Telecard and Wateen have the highest ratio of shared towers with tenancy ratio of 2.12 and 1.44 respectively. As compared to these small WLL operators, the large players including PTCL, Witribe and Worldcall still need to improve the tenancy ratio.

Table 2: Tower Sharing (Mar 2013)

	Total Towers	Shared Towers	Tenancy Ratio
Overall	34168	8213	1.24
Mobile	31405	7519	1.24
WLL	2763	694	1.30

Figure 2: Tenancy Ratio



The CMO segment has 7,519 shared towers, which are only 24 percent of the total number of towers. Small operators should be encouraged to share the large operators' networks, in particular in areas where small operators do not have their service.

1.7 Telecom Tariffs & Packages

Approval of Various Tariffs/Packages

PTA licensees except for PTCL can levy any type of charges provided they have given an advance notice of seven days to the consumers as per Telecom Consumer Protection (Amendment), Regulations, 2010. Therefore, telecom operators introduce new tariffs / packages from time to time in order to attract more business. Following are some of the major activities performed by PTA during the period under review:

PTCL

Being the only SMP in telecom sector, PTCL is bound to take Authority's approval before introducing new / revised tariff or packages. Following packages and call rate revision were approved by the Authority during the period after detailed analysis:

- Single Play Package (for voice only customers)
- Double Play (for voice and DSL customers)
- Revision of International Call Packages

Cellular Mobile Operators

Cellular Mobile Operators are empowered to introduce new / revised tariffs and packages subject to advance notification to the consumers. The following packages were reviewed by the Authority during the period:

- Ufone U Advance
- Ufone 28 location based packages
- Mobilink's Jazz One

1.8 National Security Measures

PTA works in close coordination with LEA to curb the heinous acts of terrorism and enforce national security plans. Following activities were performed by PTA during the period under review:

Cross Border Interference and Sale of Afghan SIMs

Cross border interference occurs along the borders of Pakistan with India and Afghanistan and PTA is taking prompt measures to curb the interference with the neighboring countries. It was observed that signals of Indian and Afghan mobile operators are spilling over into the Pakistan territory due to close proximity of cell towers along the border areas. Based on the observations of FAB and PTA's analysis, relevant Ministries and Law Enforcement Agencies have been notified to take up the issue with their counterparts in India and Afghanistan. Similarly, sale of Afghan SIMs in the border areas has also been reported to the Authorities. Moreover, Ministry of IT is also in the process of signing MoUs with India and Afghanistan for mutual collaboration and amicable rectification of the issue.

Action Plan for Implementation on Communication Breakdown

Ensuring high quality communication continuously is one of the key responsibilities of PTA and regular efforts are exerted by operators to bring uninterrupted telecom services to the consumers. In 2011, the Mobile Switching Centre (MSC) of Mobilink met with an accidental fire and services to the customers in north region of Pakistan were completely blacked out for almost 24 Hours. The inquiry report on the matter was forwarded to Cabinet Division and MoIT as required.

In order to prevent such incidents happening in the future and based on suggestions / recommendations received from MoIT, a consultation paper was prepared to recommend action plan for implementation on Communication Breakdown. PTA is contemplating different plans for action, in consultation with the cellular mobile operators, including Pre-Planned National Roaming Services and fast track MNP on selected numbers. Action plan will be finalized and implemented after mutual consensus of all the relevant stakeholders.

1.9 Review of IPLC, IP Bandwidth, DPLC, and Line Sharing Charges

Broadband proliferation in Pakistan is one of the top priorities of PTA. PTCL is the current leader in broadband market in terms of market share and also owns three of the four international submarine fiber optic links to Pakistan. PTA issued Determination on PTCL's charges for International Private Leased Circuits (IPLC), IP Bandwidth, Domestic Private Leased Circuits (DPLC) & Line Sharing services in 2006. Since broadband market dynamics have changed a lot since that time, therefore, fresh review of PTCL's bandwidth tariffs was carried out by PTA in consultation with the industry. In this regard, a consultation paper was circulated to the industry for comments on the following sections:

- International Private Leased Circuits (IPLC)
- IP Bandwidth
- Domestic Private Leased Circuits (DPLC)
- Line Sharing Charges

In each section, tariffs of PTCL are compared with regional countries such as India, Bangladesh and Sri Lanka so that PTCL charges could be rationalized accordingly. However, very few comments were received and after detailed in-house analysis, it was decided that no fresh Determination on the subject is required.

1.10 Framework for Class Value Added Services

Existing Class Value Added Service (CVAS) licensing regime was reviewed by the Authority keeping in view the emerging market trends and best international practices. A comprehensive framework was prepared for CVAS licensing in future. The main emphasis was on merging the two broad categories i.e. Voice CVAS and Data CVAS as well as Registration in order to simplify the regulatory process ensuring better support to the industry as well as the consumers. The proposed framework also recommends modifications to the fee structure (introduction of a performance guarantee fee along with Initial license fee) and service provisioning mechanism to provide better clarity and ensuring better license compliance from the operators.

2 Telecom Sector Review

2.1 Pakistan's Economy during FY2012-13 [1]

Pakistan's economy remained under severe pressure from a host of issues such as energy shortage, floods and rains, earthquakes, law and order situation and other factors that hindered the investment and economic activity during the last fiscal year. The power crisis wiped off two percentage points from the GDP growth although the economy of Pakistan grew at 2.9% annually on average for the last five years. GDP growth has been estimated at 3.6% as compared to 4.4% in the previous fiscal year, as per the new base year of 2005-06. The Services sector has a share of 57.7% of the GDP while Agriculture holds 21.4% followed by 20.9% by the Industrial sector. The per capita income increased from US$1,323 (FY2012) to US$1,368 (FY2012-13) registering a growth of 3.4% during the last fiscal year. Although total investment in the country decreased to 14.22% of the GDP, Foreign Direct Investment (FDI) showed growth of 29.7% to reach US $853.5 million during July 2012 to April 2013. Inflation rate by Consumer Price Index (CPI) stood at 7.8% during July 2012 to April 2013 as compared to 10.8% in the corresponding period last year. Inflation has been kept in check by better supply of crops, decreasing prices of items in international market and effective monitoring of prices locally. Trade Balance showed slight improvement in the FY2012-13 although the gap between exports and imports is still humongous. Rupee depreciated by 4% during April-June, 2013. State Bank of Pakistan adopted an expansionary Fiscal Policy in the last two years as the policy rate fell to 9.5% in December, 2012 as compared to 13.5% in August 2011.

With the election of new Government in Pakistan and the announcement of Federal Budget for 2013-14, there are encouraging signs that the economic situation of the country will improve in the coming year. The Government has vowed to bring the energy crisis to an end and resolve the issue of circular debt while also embarking on a scheme to lend small loans to the young people. Similarly, Federal Board of Revenue (FBR) has been given more powers and taxation targets have been raised to Rs. 2,475 billion for the next fiscal year.

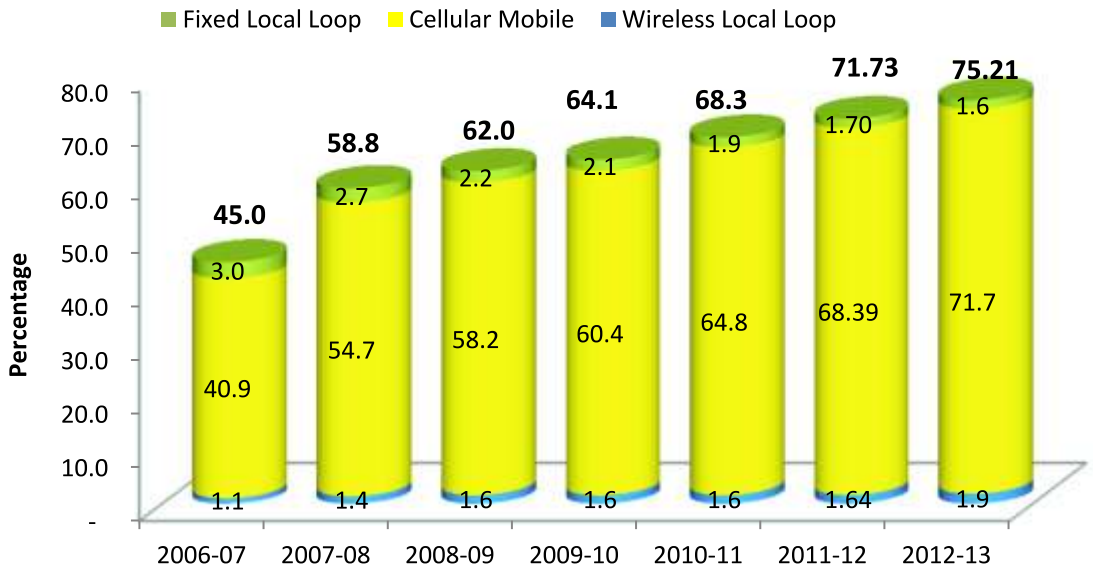
Telecom Sector grew stronger in the fiscal year 2012-13 with major indicators showing improvement from last year. Teledensity of the country reached 75.21% with main contribution from cellular sector and revenues were at all time high of Rs. 438 billion. However, the sector's investment situation calls for an immediate influx of innovation in the form of 3G technology Auction which can further improve the sector's economic standing.

Teledensity

Teledensity of Pakistan stood at 75.2% at the end of FY2012-13 as compared to 71.73% in the FY2011-12 depicting growth of almost four percentage points over the previous year. The main contributor to the teledensity figure is cellular mobile sector covering 71.7% of the population. Fixed and Wireless Local Loop services constitute the rest of the figure with 1.6% and 1.9% shares respectively. The cellular mobile sector dominance in the telecom sector of Pakistan is the result of the extraordinary efforts of the cellular sector ease of getting connections, Quality of Service and the continued focus of PTA.

[1] Information in this section is based on 'Pakistan Economic Survey 2012-13, Finance Division, Islamabad'

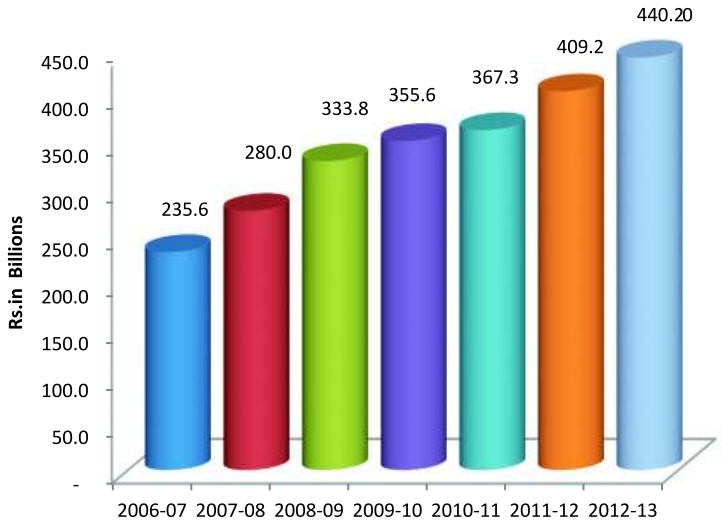
Figure 3: Teledensity



Telecom Revenues

The telecom revenues have been reached an all time high of Rs. 440.20 billion in the FY 2012-13 with a growth of 7.0% achieved over the last fiscal year. The increasing revenues from the telecom sector indicate the strength and size of the market despite the economic difficulties and tough competition, especially in the cellular sector. Telecom operators are now exploring new avenues to earn from, reducing dependence on the voice channels alone. It is expected that influx of 3G technology into the telecom market will further boost the revenues of the sector.

Figure 4: Telecom Revenues (Rs. in Billions)



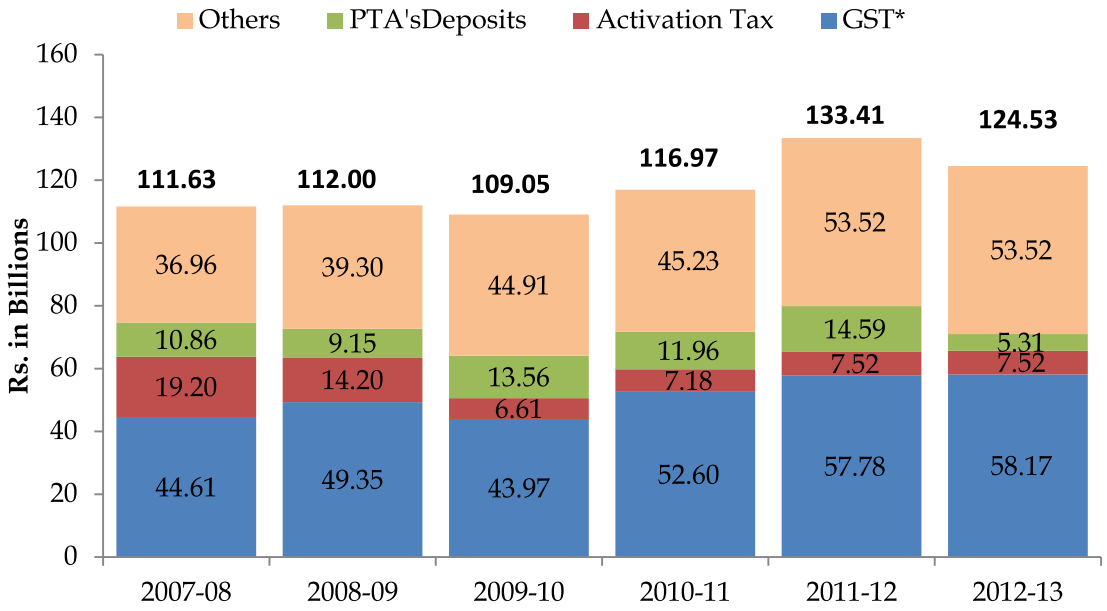
Note: CVAS Revenues FY 2012-13 are estimated

Telecom Contribution to National Exchequer

Telecom sector is one of the highest contributors to the National Exchequer, putting Rs. 119 billion per year in the National Kitty on average for the last five years. The fiscal year 2012-13 has seen slightly lesser contribution to the National Exchequer from telecom sector i.e. Rs. 124 billion as

compared to Rs. 133.41 billion deposited by telecom sector in FY2011-13. General Sales Tax (GST) forms the major part of the contribution with Rs. 57.78 billion collected by 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.

Figure 5: Telecom Sector Contribution to National Exchequer



***GST for the province of Punjab is estimated for the fiscal year 2012-13**
Source: ***Federal Board of Revenue and Pakistan Telecommunication Authority.***
Note: PTA's contributions comprise of all its receipts including Initial and Annual License Fee, Annual Radio Frequency Spectrum Fee, Annual Spectrum Administrative Fee, USF and R&D Fund Contributions, APC for USF, Numbering Charges, License Application Fee, etc.
Others include custom duties, WH Tax and other taxes.

Telecom Investment

With 188 million population and 128.93 million cellular mobile subscribers, Pakistan's telecom sector provides enormous opportunities for foreign and local investors. International telecom companies have significant presence in Pakistan. These companies are successfully doing business in all over the country. Telecom sector of Pakistan has attracted substantial foreign investment after the deregulation. During FY 2005-06 to FY 2011-12, telecom sector attracted over US$ 12 billion of investments including US$ 6 billion FDI.

As telecom companies have already established most of their networks, companies have reduced their investments in the last two years. During FY 2012-13, a total of US$ 451.40 million investment

has been reported in the telecom sector, showing 47 percent growth over the investment of US$ 240.3 million in the year before. This increase in investment is mainly contributed by the cellular

Table 3: Telecom Investment

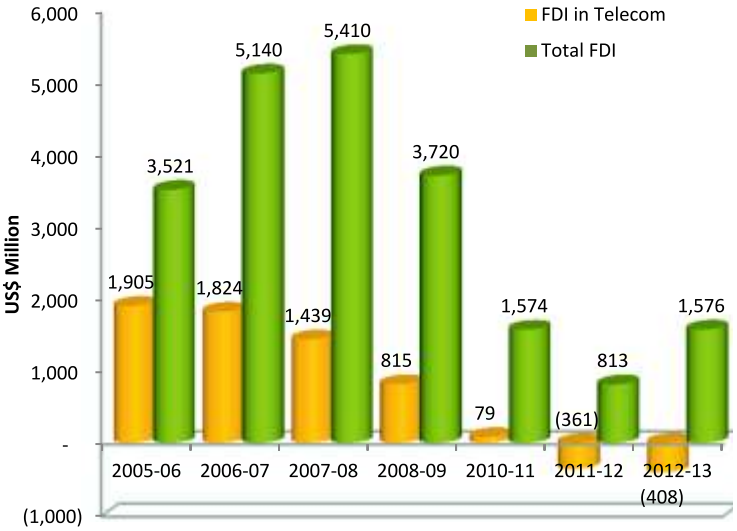
US$ (Million)

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Cellular	2,337.7	1,229.75	908.8	358.6	211.8	421.5
LDI	403.9	276.75	183.1	108.7	13.3	1.9
LL	342.1	57.37	22.5	18.2	5.0	16.1
WLL	52.8	82.11	23.0	7.6	7.3	11.9
Total	**3,136.4**	**1,645.98**	**1,137.51**	**493.25**	**237.5**	**471.4**

mobile segment followed by FLL and WLL segments. Recently, cellular mobile companies have also increased investments in their networks in anticipation of up-coming 3G/4G services in the country.

Despite the excellent growth in overall investment, Foreign Direct Investment (FDI) still remained on the negative side of the scale due to more capital outflows by companies than inflows. The negative FDI of US $408 million during the FY 2012-13 can possibly be turned around by conducting further spectrum auctions such as 3G auction to introduce new technology in the country and resultantly bringing substantial foreign investment into the country.

Figure 6: Foreign Direct Investment



Source: Source: www.sbp.org.pk/ecodata/netinflow-EcoGroup.xls

Telecom Imports

During the FY2012-13, import of telecom equipments and telephone/cellular handsets reached US$ 918.4 million, declining slightly from the figure of US$ 954.05 million during FY2011-12. The import of cellular mobile handsets increased to US $467.1 million from US $465.3 million at the end of previous fiscal year. The rise in the demand for smart phones in the country has substantially increased the import bill of handsets. Government of Pakistan has recently imposed the duty of Rs. 1,000 per handset on the import of smart phones. This may not be helpful in reducing the demand for handsets; however, it may encourage smuggling and sub-standard Chinese handsets in the market. In order to curtail the burden on import bill, Government should encourage the private sector and multinationals for local manufacturing / assembly of handsets and telecom equipment.

Table 4: Telecom Imports

US$ (Million)

	2008-09	2009-10	2010-11	2011-12	2012-13
Cellular Mobile sets with Battery	129.7	169.23	218.2	465.3	467.1
Other Telecom Apparatus	570.4	556.45	548.1	488.7	451.3
Total Telecom Imports	700.0	725.68	766.3	954.05	918.4

Source: State Bank of Pakistan

2.2 Cellular Mobile Services

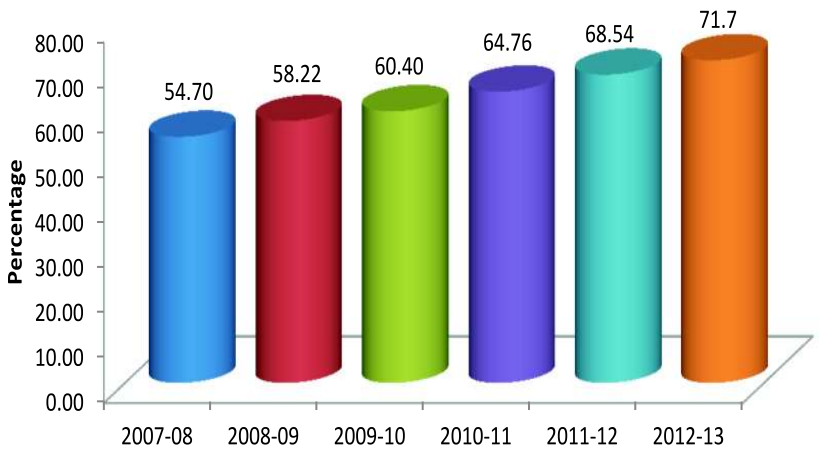
Telecom sector of Pakistan, after the liberalization policy introduced in 2004 has been progressing steadily and for the last couple of years overall healthy competition has been witnessed particularly in the cellular mobile segment and continued the same trend during the year ending in June 2013. Cellular services are playing a pivotal role in our social and economic activities. Network coverage of cellular services has crossed 92% of Pakistan's total land area and mobile services are being availed nearly by every Pakistani regardless of his or her income level and social status. This service not only serves the basic purpose of communication but is in fact helping the business concerns and economic well being through a range of mobile applications and value added services.

During the fiscal year 2012-13 a mixed tendency was witnessed in the cellular mobile segment. The cellular teledensity marginally grew by 4.6% and total cellular Mobile teledensity registered 71.7% by the end of June 2013. Subscribers growth remained slow at 6.74% during the reported period with total number of cellular mobile subscribers reaching at 128.93 million at the end of June 2013, however, cellular mobile operators continued to expand their networks despite lower ARPUs but overall remarkable growth in national traffic has been reported compared to previous year for the same period.

Mobile Penetration

To gauge the growth in telecom market, penetration is considered a highly effective tool. Mobile penetration has reached 71.7% at the end of June 2013 with growth rate of 4.61%. The rate of penetration slowed down during FY 2012-13 owing to various factors but mainly due to strict Government policy for sale of SIMs only through customer

Figure 7: Cellular Penetration in Pakistan

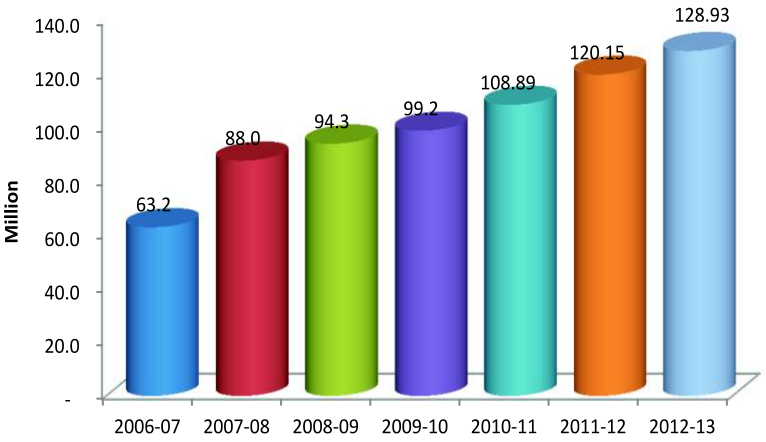


service centres and franchises of the operators. Other important factor could be movement of the market towards maturity.

Cellular Subscription

The subscribers of cellular mobile in Pakistan attained the level of 128.93 million at the end of June 2013 compared to 120.15 million as of end June 2012, revealing a growth of 6.74% compared to the growth of 10.3% during the corresponding period of last year. One of the major reasons for this slower growth could be associated to the restrictions on the sale of SIMs from retail outlets and fewer number of sale points.

Figure 8: Cellular Subscribers



Addition of new Subscribers

During the FY2012-13, the cellular mobile operators of Pakistan due to their aggressive marketing, attractive packages and special offers were able to capture 8.8 million new subscribers in the subscription base. This is approximately 2.44 million lesser subscription compared to the

Table 5: Operator Wise Net Addition in Cellular Subscribers

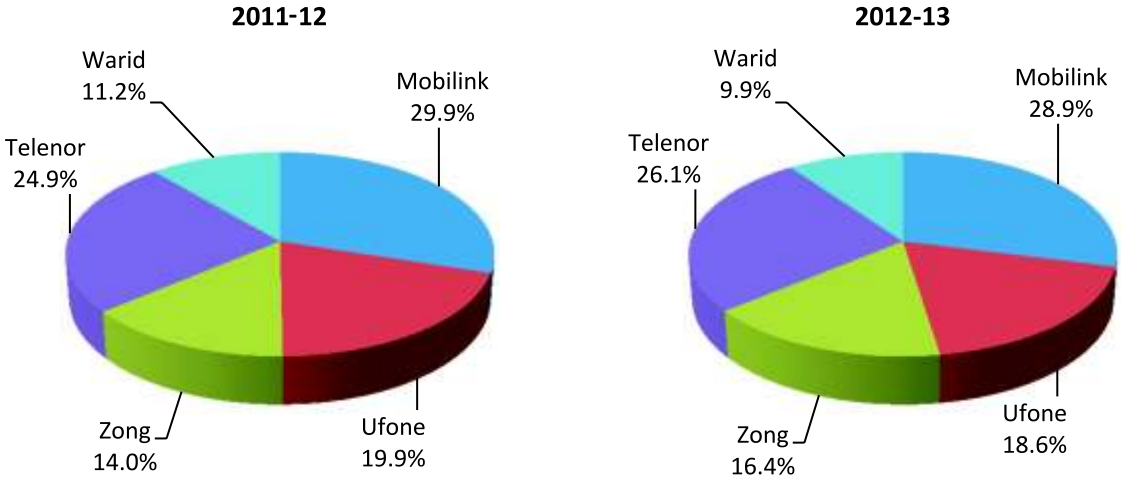
	Mobilink	Ufone	CMPak	Telenor	Warid	Total
2008-09	-2,895,524	1,904,267	2,435,813	2,767,940	2,396,878	6,609,374
2009-10	3,065,708	-455,607	317,717	2,905,092	-955,049	4,877,861
2010-11	1,175,614	984,687	4,223,405	2,868,858	456,111	9,708,675
2011-12	2,575,273	3,363,474	5,909,290	3,296,644	-3,887,962	11,256,719
2012-13	1,168,437	678,767	4,207,336	3,552,100	-793,482	8,813,158

corresponding period in the last fiscal year. The lower net addition in subscribers has been witnessed owing to maintaining market as well as additional requirements by the regulator for SIM registration and other controls for prohibiting the illegal sale. Among the five cellular mobile operators in Pakistan, the youngest cellular operator, CMPak, has taken the lead in attracting new subscribers by adding 4.2 million during the reported period. Telenor also added a respectable number of 3.5 million subscribers followed by Mobilink and Ufone with 1.1 and 0.67 million net additions respectively. Warid, however, dropped 793,482 subscribers during the last fiscal year due to subscriber churn and tough competition in the market.

Market Share

During the period of FY2012-13 a mixed competition in cellular segment has been witnessed. Due to tough competition, the market structure with respect to subscribers seems shifting its position.

Figure 9: Cellular Subscribers Share

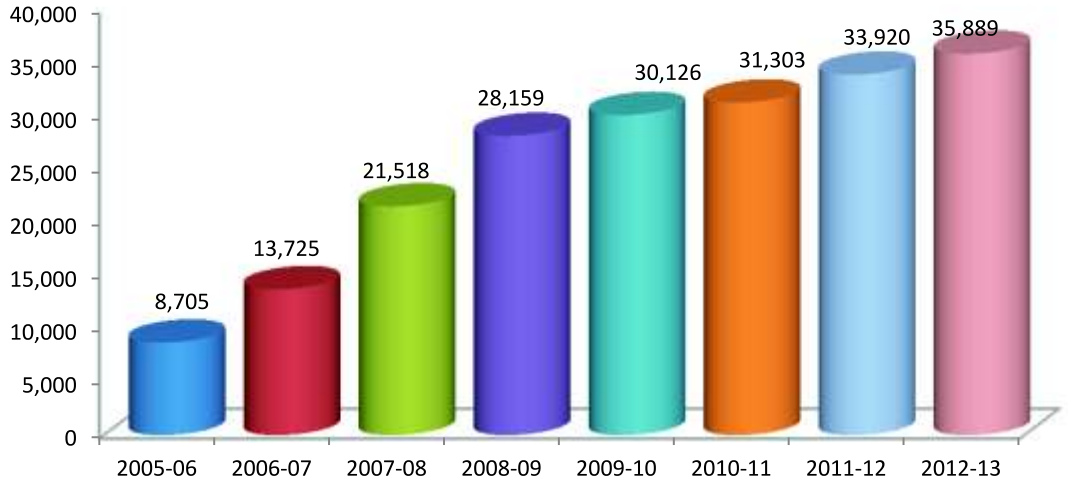


Relatively newer players in the market i.e. CMPak and Telenor, kept the momentum of competition in the cellular industry. Mobilink, which has been the largest player of the mobile segment, has been losing its market share over the years. The market share of Mobilink, which was more than 50% at the time of deregulation in 2004, has now declined to 28.9% at the end of June 2013, whereas, Telenor was viewed as second largest player in cellular segment with market share of 26.1% followed by Ufone with market share of 18.6% and CMPak, with market share of 16.4% due to subscriber churn and tough competition in cellular segment. Conversely, Warid gradually has been losing considerable number of subscribers since FY2008-09 and is currently lagging behind with lowest market share of 9.9% among all the cellular mobile operators.

Network

The cellular mobile operators' network coverage has crossed 92% of the total land area of Pakistan. During Jul 2012 - Jun 2013, the number of cell sites grew by 5.8%, slightly lesser than that in FY2011-12. The total number of cell sites reached 35,889 at the end of June, 2013 as compared to 33,920 in FY2011-12. Among operators, Ufone has shown remarkable expansion in its network with growth rate of 17.33% followed by CMPak with growth rate of 4.10%. Among the other operators, CMPak expanded its coverage by 3.10%, while Warid erected 3.23% more cell sites during the period under review.. Mobilink is the leader in the overall market with respect to its cell sites in Pakistan with total number of 9,057 cell sites despite the growth of 1.3% during FY2012-13. With the passage of time, mobile operators have expanded their network and covered higher number of Tehsil Headquarters, and Mobilink by continuing its tradition is still maintaining the largest network coverage by covering maximum Tehsil Headquarters.

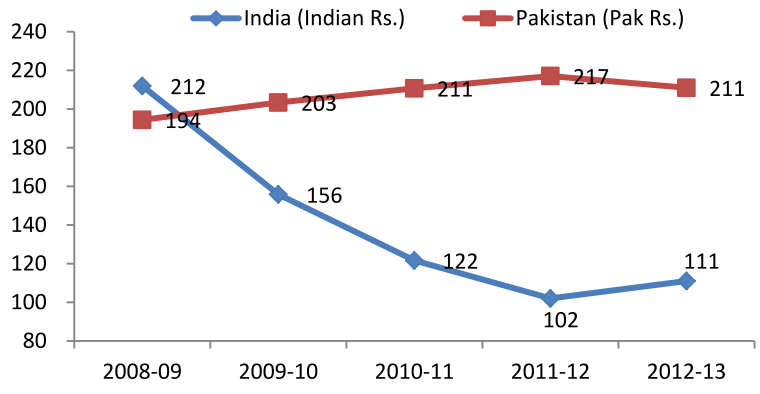
Figure 10: Cell Sites



Average Revenue per User

To appraise the financial stability of any sector, Average Revenue per User (ARPU) is highly effective and useful tool. Owing to hard economic conditions of Pakistan and tough market competition in cellular industry, Average Revenue per User slightly declined to PKR 211 for the fiscal year 2012-13 whereas, the ARPU for corresponding period of the previous year was PKR 217 per month. Most likely the operators were not able to uphold their per subscriber revenue due to tough competition and further addition of low income users in the mobile subscriber base and aggressive price competition in the market. Cellular mobile operators can increase ARPUs through additional data revenues by offering non-voice services like mobile banking and other associated offers. Despite being low and having dropped, Pakistan's ARPU was still almost double the ARPU in India at the end of FY2012-13. With the launch of next generation wireless networks and services, it is anticipated that the operators would be able to improve their data revenues and thereby ARPUs can rise again in upcoming years.

Figure 11: Cellular Mobile Average Revenue per User (ARPU) per Month

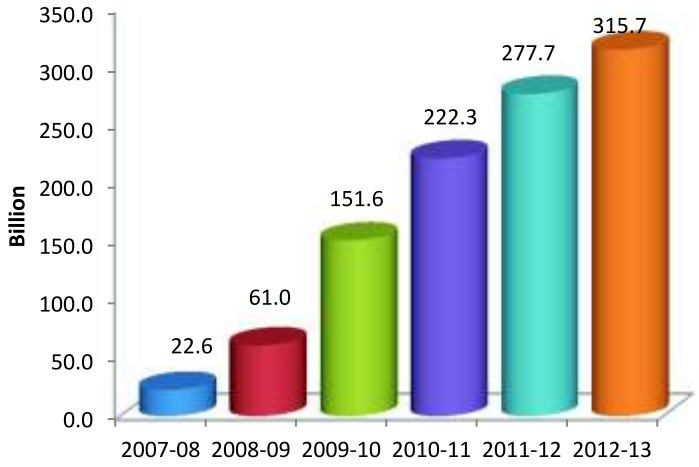


Source: PTA and Cellular Operators Association of India
Note: Estimated Indian ARPU for the year 2012-13

Traffic

The cellular mobile operators adopted aggressive promotional strategies for winning competition from each other by offering attractive packages for Voice, Data and SMS including free calls and unlimited SMS. These marketing tactics resulted in more business for companies mainly from voice calls and SMS. Both the voice and SMS traffic has risen during the FY2012-13 owing to bundled packages and SMS offers. During Jul 2012-Jun 2013, a record 315.7 billion SMSs were exchanged by the mobile consumers, showing an increase of 13.68% from previous year, though the growth rate is lower than corresponding period of previous year but the total figure of SMS exchanged is impressive.

Figure 12: SMS by Cellular Mobile Operators



During Jul 2012 - Jun 2013, a record national cellular mobile outgoing traffic of 294.2 billion minutes was generated. Particularly, cellular mobile national outgoing traffic to cellular network has shown a tremendous growth and shown a boost up of 52.51% which is 12.4% higher growth for the same period of previous year which was 192.9 billion minutes for the FY 2012-13. This massive growth in national cellular mobile outgoing traffic was also contributed by new subscribers in the cellular network during the year and very attractive packages offered by cellular operators to win the subscribers from each other. Lucrative cellular tariff packages with un-limited call offers and discounted minutes have become a major attraction for the cellular subscribers. The national

Figure 13: National Cellular Mobile Outgoing Traffic

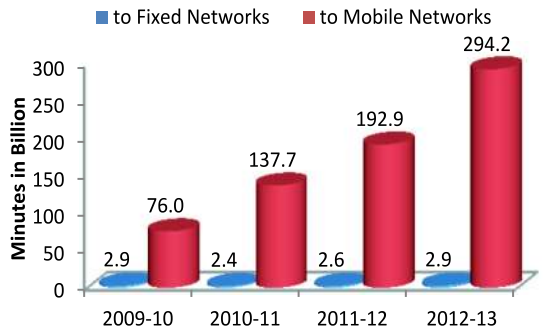
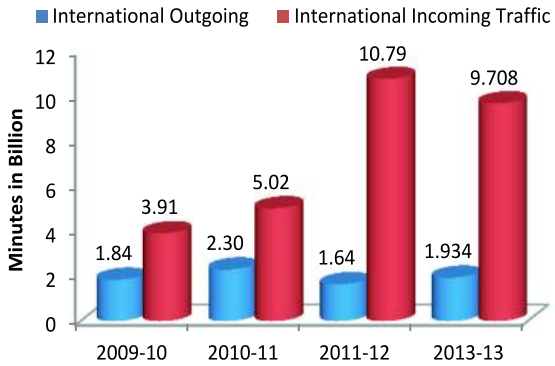


Figure 14: International Cellular Mobile Traffic



outgoing traffic from mobile to fixed networks remains very low as compared to traffic from mobile to mobile networks. This is mainly due to low tariffs being offered on the same network by operators as well as the huge difference in cellular and fixed line subscriber numbers.

International outgoing traffic from cellular network has gradually increased and shown a healthy growth of 17.92% by the end of June 2013 contrary to sharp decline of 28.69% for the same period of FY 2011-12.

International incoming traffic on cellular network somewhat declined and shown a negative growth of 10.02% for the FY 2012-13 compared to FY 2010-11. The decrease in international incoming traffic could be due to increase in Access Promotion Contribution (APC) change during FY2012-13 from 1.25 US cents to 2.90 US cents, which discouraged LDI operators to offer lower settlement rates to attract additional incoming traffic in the country. In August 2012, Government of Pakistan through Ministry of IT issued a Policy Directive to establish one international gateway for international incoming traffic to Pakistan. This resulted in an increase of international call rates for international incoming traffic to Pakistan and a huge drop in the traffic has been witnessed.

The voice and SMS ratio per subscriber per month has also notably improved. Average cellular mobile subscriber in Pakistan, is making voice calls of 203 minutes per month whereas, generating 214 SMS. An incredible growth of 43.97% in voice traffic average per user has been witnessed while growth of 7% in SMS use per subscriber was noted.

Figure 15: Average SMS/Subscriber/Month

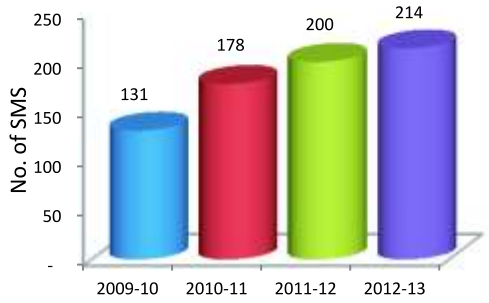
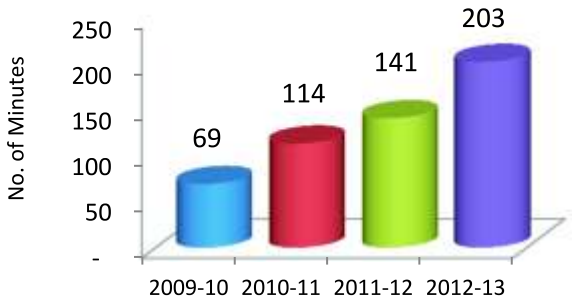


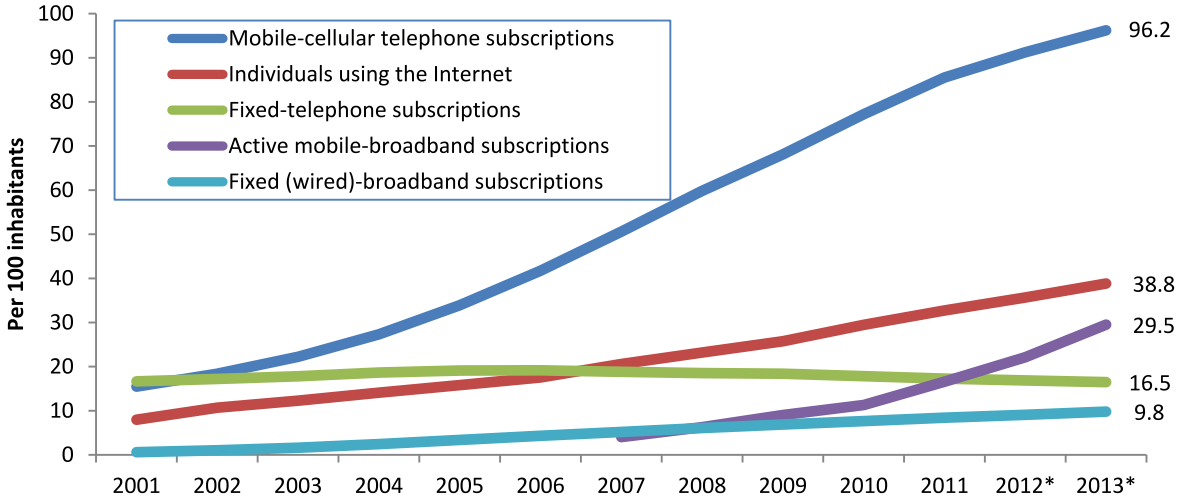
Figure 16: Average Outgoing Minutes /Subscriber/Month (National & International)



2.3 Basic Services

Fixed Line services are the pioneer communication medium since the time voice started travelling on the cords. LL services were perceived to be the only true option for communicating over long distances even a few decades ago, when wireless means of communication began to surface around the world. If we look at ITU's statistics as given in Fig-17, fixed line subscriptions were slightly more than cellular subscriptions back in 2001, but now the gap between the fixed line and cellular subscriptions is huge as cellular subscriptions are close to 96% penetration in Pakistan while fixed line stands at only 16.5%. In fact, among all of the major ICT indicators, fixed line

Figure 17: Global ICT Developments, 2001-2013



Note: * Estimate
Source: ITU World Telecommunication /ICT Indicators database

subscriptions is the only indicator moving towards a gradual decline. The main reason behind this downfall is the tremendous uptake of cellular mobile services around the globe thereby diminishing the demand for fixed line subscription.

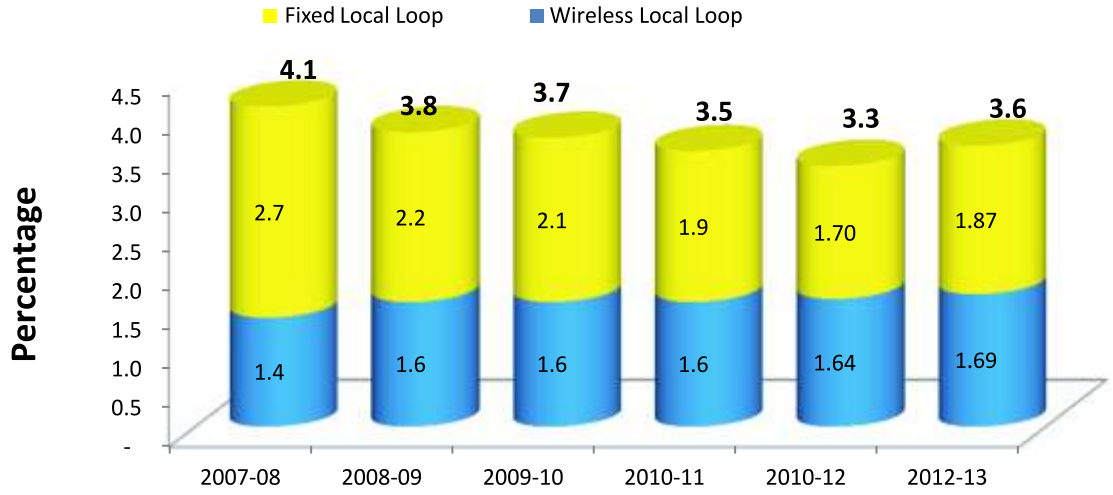
The global trend has been replicated in Pakistan as well in the past decade or so. Basic services in Pakistan include Fixed Local Loop (FLL), Wireless Local Loop (WLL) and Long Distance International (LDI) services of Pakistan. Although the current level of LL penetration is quite low, the LDI segment has shown considerable improvement over the last few years. However, the FLL and WLL segments are still being ruled by PTCL, the incumbent. PTA has been watchful of the developments in the segment and making all possible efforts to raise the penetration of local loop services.

Local loop segment has performed well as the total teledensity of both FLL and WLL services combined reached 3.6% at the end of FY 2012-13. WLL segment has grown considerably over the past year while FLL subscribers have also risen slightly. Currently, there are 6.38 million subscribers, both FLL and WLL combined, at the end of June, 2013 as compared to 5.87 million at the end of same period last year. PTCL has more than 95% share in the FLL subscriber base while in the WLL sector, it holds close to 37% of the market share.

Local Loop Teledensity

Teledensity of fixed and wireless local loop services stood at 3.6% as at the end of FY2012-13 as compared to 3.3% at the end of FY2011-12. After five years of continuous decline, the penetration of LL sector has reversed which is a healthy sign for the sector. Fig-18 shows yearly performance of the LL sector since FY2007-08 and it is evident that the FY2012-13 is the best performing year for LL sector in the recent past. WLL sector is the main contributor behind this achievement as the penetration of WLL services has increased to 1.87% at the end of FY2012-13 as compared to 1.7% in

Figure 18: Local Loop Teledensity



the previous year. FLL penetration also rose slightly to reach 1.69% this year, which is still very low. PTCL is the main contributor to the increase in teledensity of both the FLL & WLL segment since the company also holds 95% share in the FLL segment and 37% of the WLL segment.

Local Loop Subscribers

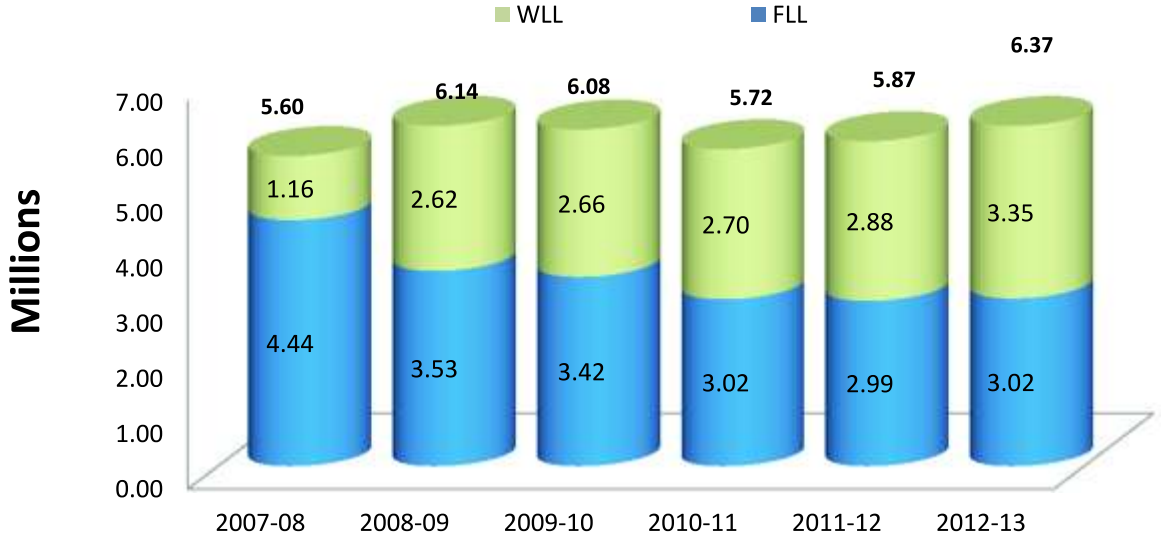
The subscriber base of local loop sector has reached 6.38 million at the end of FY2012-13 as compared to 5.87 million as of June, 2012. The overall subscriber base has increased by 8.7% with 512,392 net additions over the last fiscal year as depicted in Figure 19. Sector-wise analysis shows that FLL subscriber base increased by just 1% over the last fiscal year and stood at 3,024,288 as compared to 2,985,633 as of last fiscal year. However, WLL sector performed remarkably well as it added 473,737 new subscribers to reach 3,346,572 subscribers as of June 2013 with growth of 16%. This huge addition of subscribers by WLL sector has brought a new lifeline to the local loop sector and hopefully, the growth pattern will be sustained in the years to come.

The dominance of PTCL in the local loop sector is still very much intact despite the fact that the company performed poorly in the local loop sector during FY 2013. PTCL's total local loop subscriber base stood at 4,118,937 (Jun 2013) as compared to 4,271,648 (Jun 2012). This resulted in the loss of 152,711 subscribers with decline of 3.5% during the last fiscal year. The share of the incumbent in the local loop subscriber base has also dropped to 64% by the end of FY2012-13 as compared to 73% in FY2011-12. The main reason behind this fall of PTCL figures can be attributed to WLL segment of its operations where subscriber cut of 190,258 occurred which nullified the positive addition of 37,547 subscribers by PTCL FLL. The incumbent still holds more than 95% share in the FLL segment of the overall local loop sector.

The main operators who have contributed in the remarkable performance of WLL sector in FY2012-13 are PTCL, Wateen, Wi-Tribe and Telecard. Telecard is the second biggest operator after

PTCL with 763,330 subscribers and 30% growth in the FY2012-13. WorldCall has 582,007 subscribers from both of its fixed and wireless services at the end of June, 2013. However, the Company showed negative growth during the period. Wateen's subscriber base has been improving since the Company was revamped in 2011 and the company almost doubled its subscribers in FY2012-13. Wateen's subscriber base increased to 519,148 at the end of FY2012-13 as compared to 294,056 as of previous year showing 76% growth in the period under review. In the FLL sector, NTC is the second largest operator with 119,862 subscribers as of June, 2013 as compared to 116, 260 (Jun 2012) showing 3% growth over the last fiscal year.

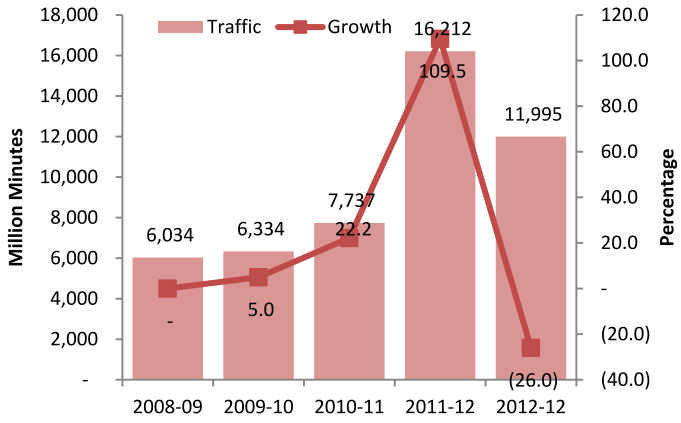
Figure 19: Local Loop Subscribers



2.4 Long Distance and International Segment

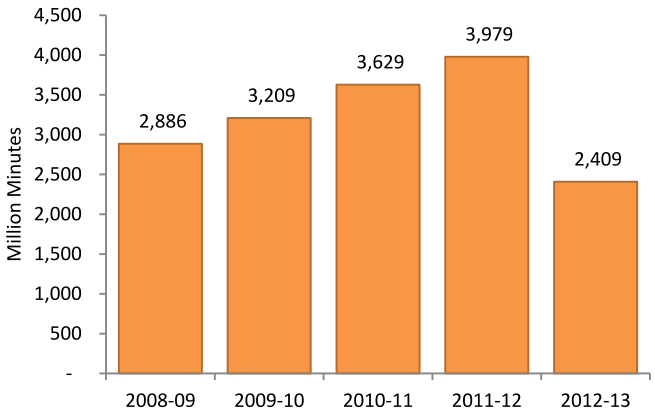
Long Distance and International (LDI) segment is an essential component of Pakistan's telecom structure as it has the responsibility of providing affordable and reliable medium of communication for worldwide telecom access. LDI operators are authorized to carry voice traffic from one telecom region to another and also connect Pakistan with the rest of the world. However, these operators are not authorized to initiate and terminate the traffic within the region as this can only be done by Local Loop operators. For efficient

Figure 20: International Incoming Minutes by LDI Operators



international connectivity, LDI operators have the right to obtain access to submarine cable systems and to install earth station for satellite transmission, subject to reaching agreement with the operators of such facilities.

Figure 21: International Outgoing Minutes by LDI Operators

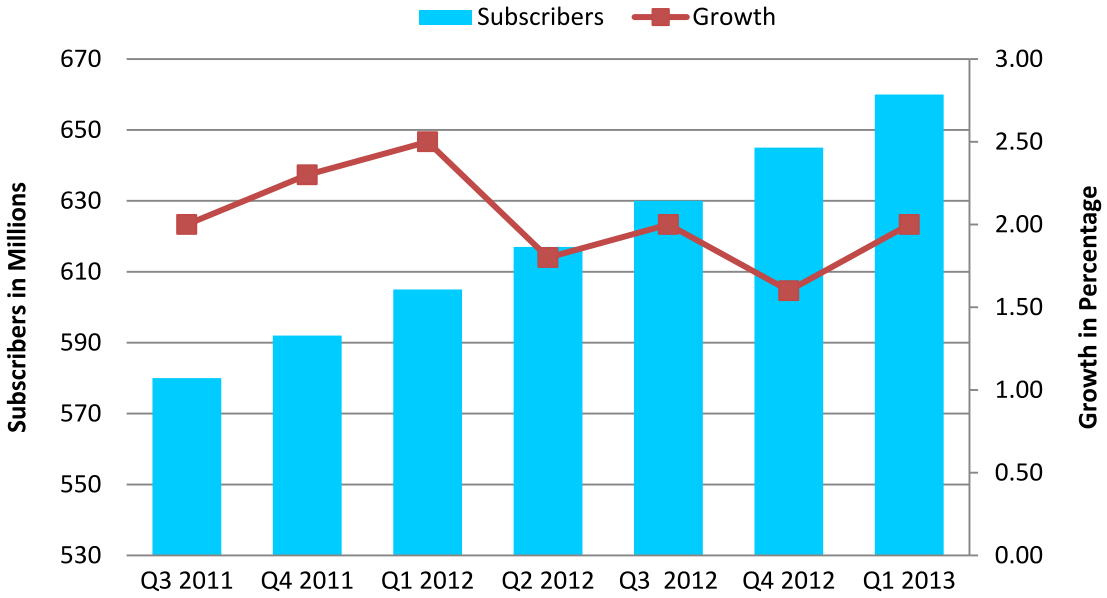


During the fiscal year 2012-13, the total international traffic carried to and from Pakistan remained on the lower side as compared to last year. By the end of reported period, total international traffic was recorded to be 14.4 Billion minutes as compared to 20.2 Billion minutes in the previous year thereby showing a 29% decline. Analyzing the constituents of total international traffic, the incoming international traffic on the LDI networks reduced by 26% with total 11.9 billion minutes in FY2012-13 whereas outgoing international traffic reduced by 39% from last year with a total output of 2.4 billion minutes. The decline could be attributed to various factors such as advancement of technology, establishment of International Clearing House (ICH), increasing trend of gray traffic etc. Technology innovation has provided different sort of alternative ways to interact with global community, these include VoIP, Skype, What's App, Tango and Viber etc. are commonly used for voice as these mediums are comparatively cheaper and easily accessible. Moreover Facebook, LinkedIn and Twitter etc are being used widely and heavily for communication in addition to many email mediums. The cost of call to and from Pakistan is under continuous review by the Authority and it is expected that concrete steps will be taken in the near future to rationalize the call charges and increase traffic on the LDI networks.

2.5 Broadband

Information and Communication Technologies (ICT) have revolutionized the very fundamentals of our social, legal and economic systems. The unprecedented growth of information technologies has reduced dependence upon traditional communication medias and paved way for a true 'Global Village' where effective information is the essential ingredient of all decisions at any level. Most of the countries have a specific ICT road map for information connectivity requirements and subsequent solutions. The economic impact of ICT has also been recognized by the Governments since a direct relationship between ICT expansion and GDP growth has been established through various studies. Many developing countries have started Information and Communication Technology (ICT) initiatives including e-Government, e-Learning, e-Health, and other schemes that are designed to boost the adoption of ICT based applications within public and private sectors as well as creating a knowledge society. The use of mobile and broadband platforms to carry out social, financial and educational activities has spiked enormously over the last decade or so.

Figure 22: Global Broadband Trends

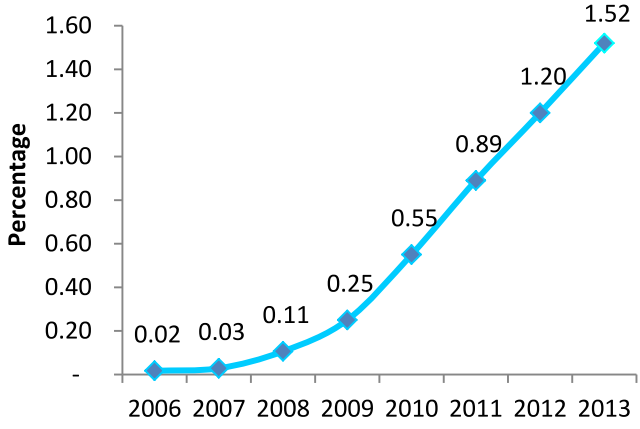


On the global front, broadband subscribers have reached 654.6 million at the end of March, 2013 adding 12.5 million new subscribers during the QE March 2013.[2] Figure – 22 shows the subscriber number and quarterly growth rate for the past two years. China is the undisputed leader in broadband race with 184.6 million subscribers followed by United States at 93.9 million. Japan, Germany, Russia take the next three positions respectively. Among these broadband subscribers, East Asia continues to dominate by largest market share i.e. 37% and the highest net additions among all the regions of the World. In terms of technology, Copper has been dominating the broadband technology arena for a long time, however, the world is shifting towards optic fiber since the copper subscriptions have dropped while the fiber adoption rate has gone up in the recent past.

Penetration

Broadband penetration levels are moving up very slowly despite the best efforts by all relevant stakeholders. Currently, 1.52 individuals out of 100 have subscribed to broadband services in Pakistan on the average at the end of FY2012-13 as compared to 1.20 percentage as of June, 2012. The slow growth of broadband penetration is a matter of concern for PTA, but some of the important factors in the equation for broadband proliferation are beyond the

Figure 23: Broadband Penetration



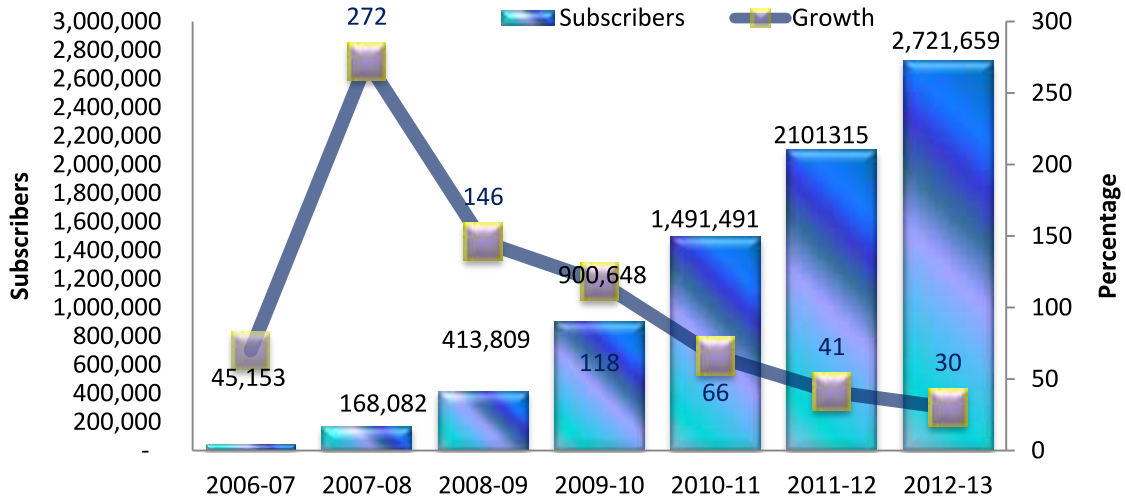
[2] http://point-topic.com/wp-content/uploads/2013/02/Point-Topic-Global-Broadband-Statistics-Q1-2013.pdf

Authority's control such as low literacy, rate, power shortage and high Cost of PC/laptops etc. Although the average annual subscriber growth rate is still high, unless all the factors are taken care of, broadband penetration level may remain low in Pakistan.

Subscriber Mix

Broadband subscriber base reached 2.72 million at the end of FY2012-13 as compared to 2.1 million at the end of FY2012 depicting 30% growth compared to last year. More than half a million i.e. 620,344 new subscribers have joined the broadband platform. Whereas PTCL added maximum new subscribers, the other operators kept struggling with subscribers churn during the period. The growth pattern of broadband industry in Pakistan is typical of any market as the growth starts to drop as the subscriber numbers moves up the ladder. However, the satisfying thing is that the average annual growth rate is still above 100% in the broadband sector. It may also be kept in mind that one subscription can be catering to broadband needs of a number of people in a house/business facility; therefore, broadband users are far more in reality. Taking an average family size of 4 people, the broadband users, based on the number of broadband subscriptions of 2.72 million can be said to be around 10.88 million. This number can reasonably be believed to be higher than this as corporate subscriptions of broadband are also use by multiple users.

Figure 24: Broadband Subscribers



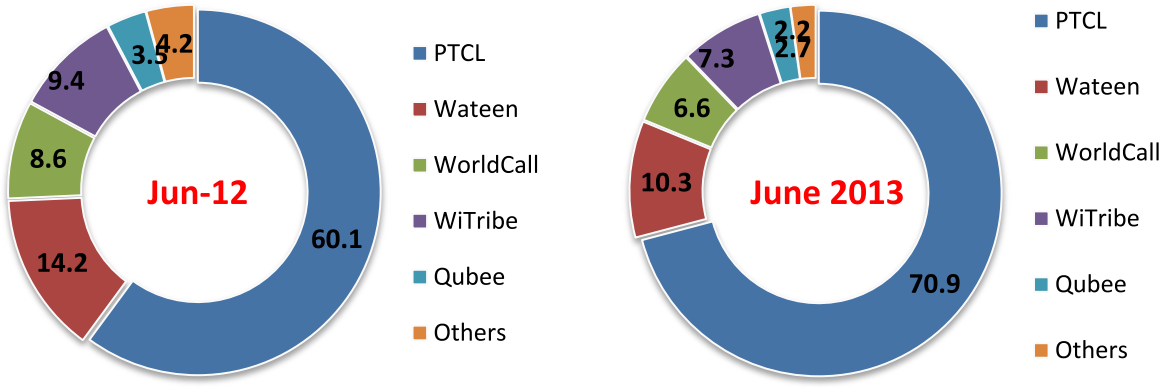
Major Broadb and Players

PTCL, the only SMP in the Pakistan's telecom sector, further solidified its grip on the broadband market by gaining more than 10% market share in the FY2012-13. PTCL has completely outplayed every other operator in the sector with a huge margin this year as both of its broadband operations i.e. DSL and EvDO have shown remarkable growth in the past year. Currently, market share of the incumbent has reached 70.9% with 1,930,591 subscribers at the end of June, 2013 as compared to

60.1% share and 1,262,732 subscribers as of June, 2012. The overall subscriber growth of the Company stood at 53%, owing to strong growth in EvDO subscriptions. PTCL has successfully shrugged off its competitors by adopting a smart marketing approach. The incumbent soon realized that banking on its fixed line DSL services will not be enough to maintain a stronghold in the market, therefore, PTCL quickly launched wireless broadband services i.e. EvDO services as well. This two-pronged strategy paid off to PTCL as the customers who are reluctant to use PTCL landline services, opt for its on-the-go wireless solution. Hence, the overall customer retention figure keeps on rising. Another smart move by PTCL was that the company regularly introduced new value added services and/or updated bandwidth/volume for its existing and potential broadband customers. Therefore, this business strategy not only attracted new customers but keeps the buzz alive round the year through the promotional campaigns and events.

At the time of its launch, Wateen was viewed as a major threat to PTCL's dominance; however, the company struggled to live up to the expectations despite a recent re-launch attempt. The market share of Wateen has dropped to 10.3% as of June, 2013 as compared to 14.2% owing to continuous subscriber churn and presence of other strong competitors in wireless broadband market. WorldCall has managed to keep its subscriber base relatively stable at 180,382 but the market share of the company has dropped due to better growth by PTCL. The technologically diverse operator's market share stands at 6.6% at the end of FY2012-13 while it was 8.6% at the end of FY2011-12. Wi-Tribe is the only other operator among top five of broadband operators in the market which has managed to add up customers during the FY2012-13. Wi-Tribe currently holds 199,786 subscribers with 7.3% market share, down from 9.4% as of June, 2012. Qubee, the WiMAX operator which entered the market last year, also lost some of its share and now holds 2.7%of the broadband market as opposed to 3.5% share in June 2012. Rest of the market share is being held by other small operators.

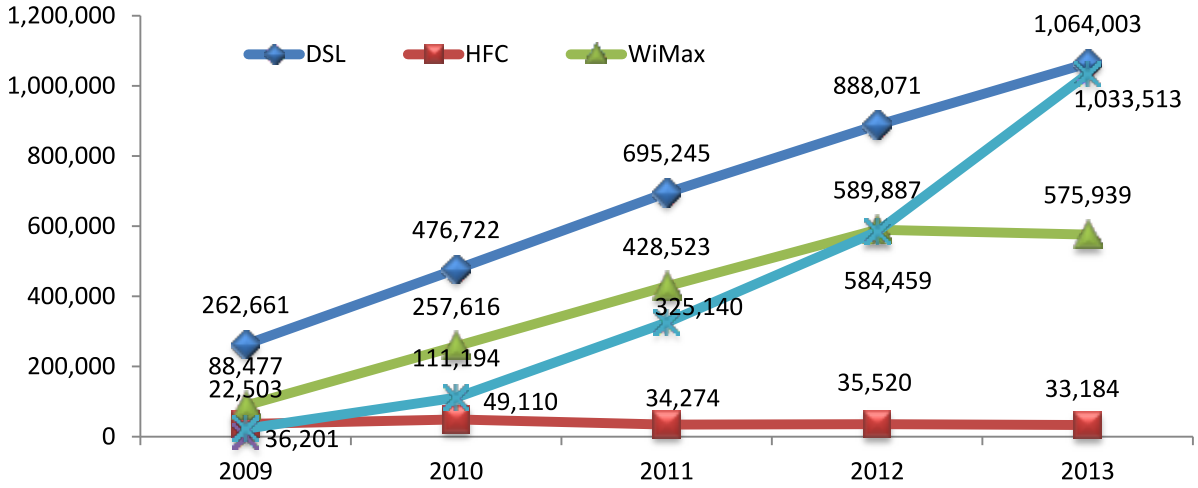
Figure 25: Broadband Operators - Market Share



Broadband Technology Trend

Broadband can be delivered by various means, modes and media depending on the business model of the company and customer preference. Pakistan has a widespread fixed line

Figure 26: Broadband Technology Trends

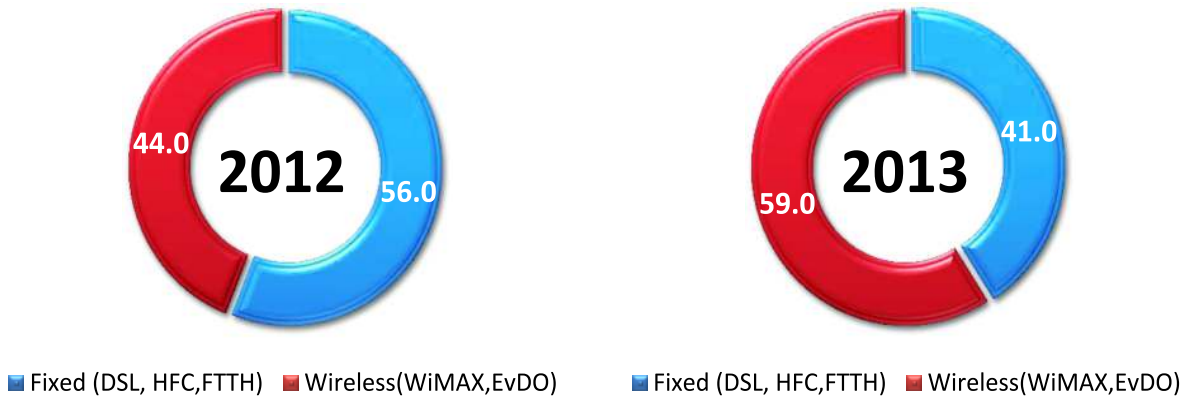


infrastructure owned by the incumbent operator, PTCL but the rising trend of employing wireless solutions has changed the market dynamics drastically. Currently, there is a range of fixed and wireless technologies such as DSL, WiMAX, EvDO, HFC, FTTx, Satellite links etc creating stiff competition among the operators for market share.

Figure – 26 depicts the subscriber trend of the major broadband technologies in Pakistan over the last five years. It is evident from the subscriber trend that the wireless technologies have grown rapidly since their launch while growth of DSL has been steadily perpetual. However, market dynamics have changed over the last fiscal year as EvDO has taken off while WiMAX has dipped, although being at the same spot last year.

Currently, DSL leads the subscriber figures with 1,064,003 at the end of FY2012-13 followed closely by EvDO at 1,033,513 subscribers. EvDO subscribers have almost doubled in the last fiscal year

Figure 27: Broadband Technology Share



owing to the success of PTCL's EvO and related packages. WiMAX services stood at number two spot last year but slipped to number three this year with 575,939 subscribers. HFC growth is also stagnant with 33,184 subscribers at the end of FY2012-13 as opposed to 35,520 in June, 2012.

In terms of fixed and wireless technologies, the wireless technologies have finally taken over the leading position in the market with 59% share while fixed line technologies hold 41% share. The instant success of wireless technologies in Pakistan is likely to bring more investment in the wireless arena, especially EvDO services since DSL services need further improvement to gain customer confidence.

Broadband Tariff & Offers

Broadband operators are facing stiff competition in the market although the sector penetration is still quite low. The back-to-back entry of various broadband operators, mostly wireless, instigated fierce competition among the players to position themselves in the customer's mind. The list of Broadband Operators with the Active Subscribers status is given in Annexure - 8. Therefore, apart from focusing on the technology and service quality, tariffs and offers were continuously worked upon by the operators. The consumers gained the most from this situation as a lot of monthly charges and bundle packages were churned out by the operators. However, the cost of Customer Premises Equipment (CPE) and installation charges remained on the high side. PTA encouraged the operators to look at this aspect of the equation as well by conducting multi- stakeholder meetings and organizing various broadband forums.

Broadband operators came up with interesting and exciting offers to match their competitors and increase customer awareness. PTCL launched a special campaign for its EVO subscribers where any EVO subscriber who had not recharged EVO account since 1st of August 2012 could enjoy 100% FREE balance for a specific period on immediate recharge. In a similar offer, PTCL announced that its new EvO customers can enjoy one month of usage free of cost. Wi-Tribe launched 'Pakistan Developers Challenge 2012' where shining application and game developers from all across Pakistan got a chance to win cash prize while Wi-Tribe promoted its online software portal through the competition. Wi-Tribe also offered 'Double Volume' to its new customers where the data volume of the availed package will be doubled for the first two months of service. Qubee offered Triple Dynamite offer where all new & existing customers could enjoy with three times the volume of their chosen package.

3 Telecoms in AJK & GB

Introduction

Telecommunication in Azad Jammu and Kashmir (AJ&K) and Gilgit Baltistan (GB) has long been the responsibility of Special Communications Organization (SCO). SCO stands as the largest telecom service provider focusing on urban and rural areas of AJK & GB. SCO services include landline telephony (PSTN), Wireless Local Loop (WLL), cellular mobile (GSM), Broadband Internet (DSL), Digital Cross Connect (DXX), Long Distance International (LDI), Domestic Private Leased Circuit (DPLC), and co-location facilities to telecom sector players operating in AJK and GB region.

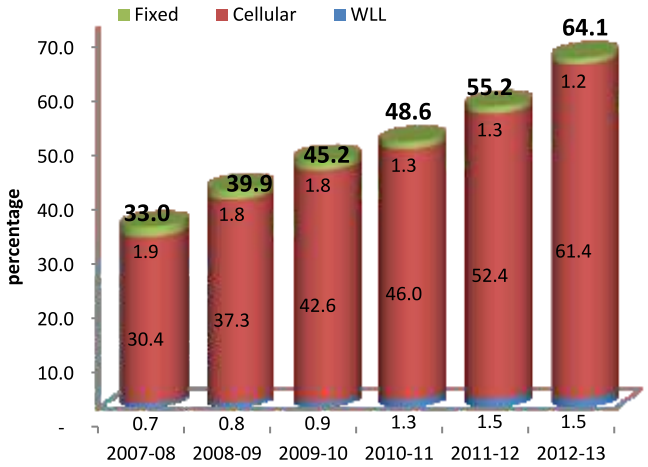
SCO provided telecom services to 3.5 million people of AJK and 1.5 million residents of GB, thus covering a combined area of 85,289 Sq. kilometers. In addition to the wired landline services SCO is also providing Code Division Multiple Access (CDMA) services. It is also providing cellular mobile service under the brand name of SCOM, the first ever GSM service of AJK & GB Digital Subscriber Line (DSL) and Dialup Internet services are provided under the brand name of SNET.

After Earthquake on 8th October, 2005 in AJ&K and Northern Areas, Government of Pakistan decided the deregulation of telecommunication in AJK & GB in 2006. PTA issued licenses to Cellular, FLL and WLL companies, hoping that the step would augment the government efforts to extend and access affordable telecom services to the underserved areas. Uptil 2006, SCO maintained its monopoly being the single largest telecommunication network provider in AJK and GB.

Teledensity in AJK & GB

At the end of FY2012-13, the total teledensity including cellular mobile, Local Loop (LL) and Wireless Local Loop (WLL) increased to 64.1 percent, showing growth of 8.9 percentage points. Steady growth in AJK & GB has been observed since the de-regulation of the area by PTA, bringing competition in the market. Resultantly, coverage expanded, tariffs dropped and the cellular mobile connection became affordable to a common man in AJK & GB. Currently, cellular mobile has 61.4% penetration in the area followed by 1.5% of WLL and 1.2% by FLL sctor.

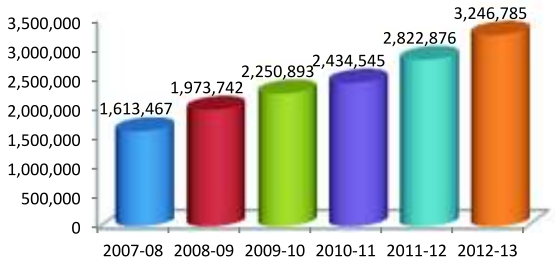
Figure 28: Teledensity in AJK & GB



Cellular Subscribers' Growth

Cellular mobile subscribers reached 3.2 million at the end of FY2012-13 as compared to 2.7 million in the previous year. All six mobile operators combined together added 423,909 subscribers with 17% growth during FY2012-13.

Figure 29: Cellular Mobile Subscribers in AJK & GB



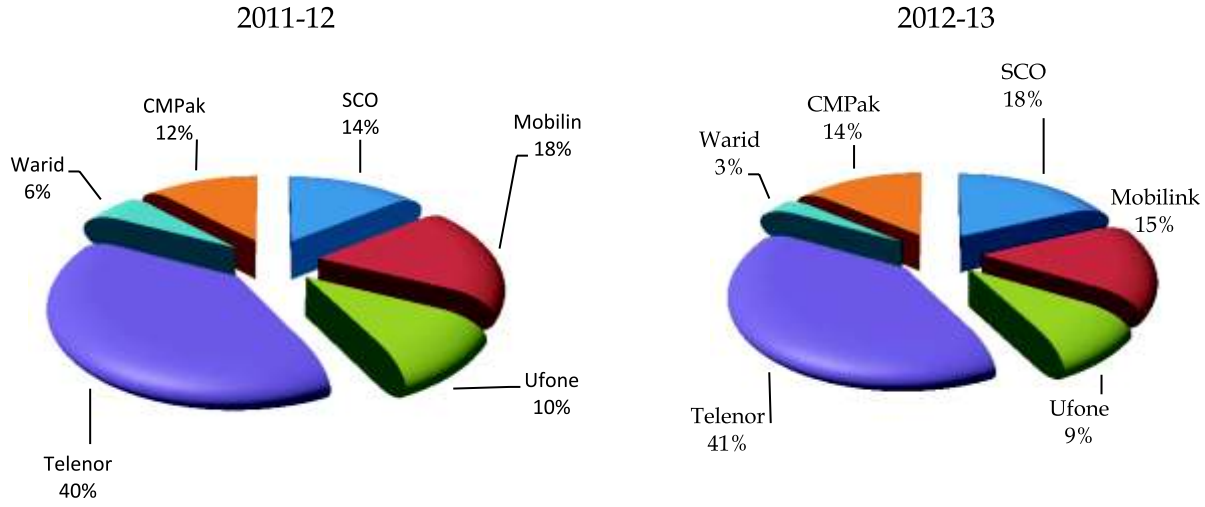
Cellular mobile growth in AJK & GB was a direct result of PTA's decision to deregulate the sector and introduce competitors to the already established SCO network. The influx of five more cellular operators changed the entire telecom scenario of AJK & GB as the new operators quickly gained market share and the proliferation of cellular sector blossomed.

In the FY2012-13, the sector added 423,909 subscribers with Telenor leading the way having added 216,930 subscribers. SCO stood at the second spot with 143,480 subscribers followed by CMPak with 121,048 as of June, 2013. However, Warid, Ufone and Mobilink lost some subscribers during the last year owing to subscriber churn.

Market Share

Telenor has a strong hold on the cellular sector in AJK & GB with 41% market share followed by SCO with 18% as of June, 2013. Mobilink holds the third spot with 15% share while CMPak is close behind with 14%. Ufone (9%) and Warid (3%) are yet to establish a recognizable share.

Figure 30: Cellular Market Share in AJK & GB



Geographical Coverage

Cellular mobile operators (CMOs) in AJK & GB have been expanding their networks despite difficult business and rocky terrain. During FY2012-13, all CMOs expanded their networks in the region as the total cell sites reached 1,409 as compared to 1,208 at the end of FY2012. Out of these, 1,055 cell sites have been erected in the AJK while 354 belong to GB. Telenor, having the highest number of subscribers, also leads the coverage by 429 cell sites. In 2011-12 there were 962 cell sites in AJK while GB was covered by 246 cell sites. CMPak has the second highest number of cell sites in AJK & GB with 266 followed by Ufone with 238 and Mobilink 232. Despite being the oldest telecom operator in AJK & GB, SCO has only 151 cell sites while Warid has 93 cell sites in the area.

Table 6 : Cell Sites by operator in AJK & GB

	2011-12			**2012-13**		
Company	AJK	GB	Total	**AJK**	**GB**	**Total**
Mobilink	152	29	181	201	31	232
Ufone	153	15	168	172	66	238
CMPak	175	63	238	193	73	266
Telenor	317	75	392	329	100	429
Warid	63	28	91	65	28	93
SCO	102	36	138	95	56	151
Total	962	246	1,208	1,055	354	1,409

4 Consumer Protection and Complaint Handling

Pakistan Telecom (Re-Organization) Act, 1996 entrusted upon PTA the responsibility to protect telecom consumers. To fulfil this responsibility, PTA has developed procedures and mechanisms for receiving complaints on issues that could not get resolved in the first instance by the users' complaints to the telecom operators, and their subsequent satisfactory redressal. For this purpose, the Authority has a fully functional Directorate for complaints handling and pursuing the telecom operators to resolve complaints at the earliest possible. Telecom consumers can register their complaints through online complaints management system, email, telephone or conventional mail. With the aim to continuously improve the process, the Authority takes all complaints on priority basis and has a commitment to reduce the time lag in the redressal of complaints.

4.1 Analysis of Consumer Complaints

PTA keeps a regular watch on the nature and trends of consumer complaints of telecom sector. The authority identifies major problems faced by telecom users and devises mechanisms for possible long term solutions for such complaints.

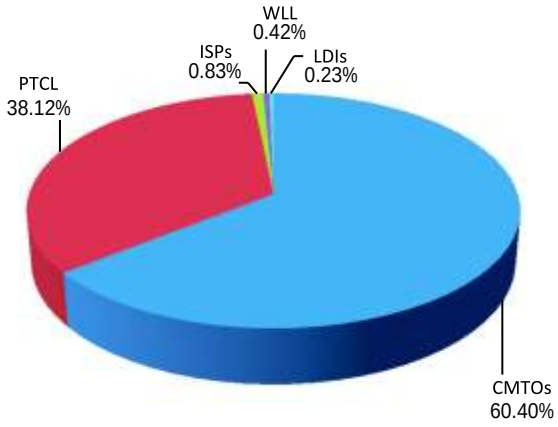
During the FY2012-13, PTA received 29,714 complaints against telecom operators including CMOs, PTCL, LLs, LDIs, WLL, ISPs and CVAS compared to 33,310 complaints during the previous year. The complaints were pursued with the concerned operators and almost 98% complaints were resolved. The number of complaints against CMOs has the highest share (60%) in total complaints followed by PTCL (38%). With respect to current 128.93 million cellular subscribers, the number of complaints against CMOs is a small ratio, compared to complaints vs. subscriber base ratio of PTCL. Interestingly, the number of complaints against CMOs during FY2012-13 has dropped by 3% compared to FY2011-12, whereas complaints against PTCL (the fixed line incumbent operator) have increased by 11% during the same period. PTA in collaboration with operators has taken appropriate actions to reduce the problems faced by cellular mobile users.

During the reported period, PTA received 29,714 consumer complaints against mobile operators, PTCL, LDIs, WLL, and ISPs. Figure

Table 7: Summary of Consumer Complaints
Received and Resolved 2012-13

Service Providers	Received Complaints	Resolved Complaints
Cellular Mobile Telecom Operators (CMTOs)	17,948	17,083
PTCL	11,327	11,168
Internet Service Providers (ISPs)	248	229
Wireless Local Loop (WLL)	124	115
Long Distance International (LDIs)	67	55
Total	29,714	28,650

Figure 31: Summary of Consumer Complaints
Received 2012-13

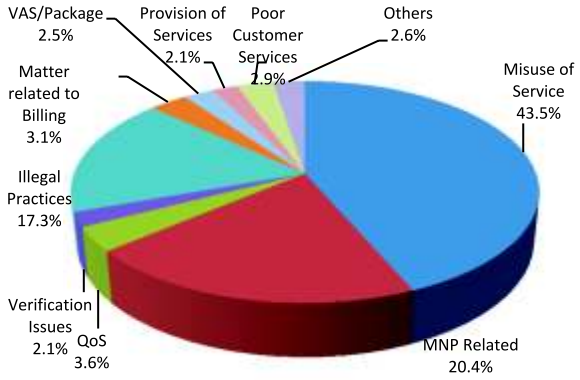


31 shows percentage of total complaints during the FY2012-13 against each service.

A deeper analysis of the cellular complaints reveal that out of the 9,930 complaints received against mobile services and Mobile Number Portability (MNP), 43.5% were related to misuse of mobile services followed by MNP (20.4%). Over the last two years, complaints related to mobile number portability (MNP) issues have also decreased by 10% of the total cellular mobile complaints received by PTA. Although the uptake of cellular mobile services has profound benefits for the country, the low literacy rate and some mischievous elements trouble the customers with wrong calls, obnoxious and unwanted communication. Therefore, this category has the highest rate of complaints in the cellular sector. Illegal practices such as obnoxious, fraudulent calls / SMS constitute 17.3% of the complaints while billing, QoS, VAS, poor customer issues were about illegal practices and others form the rest.

Looking at the complaints received against each cellular operator, the maximum number of complaints 4,245 were against Mobilink since it has the highest subscriber base as well, followed by Ufone, Telenor, Warid and CMPak with 4,056, 3,982, 2,722 and 2,119 complaints respectively. The ratio of complaints against each operator as opposed to its total subscriber base is very low which is an encouraging sign for the sector. The percentage breakup of the total complains by each operator received by PTA shows that Mobilink had the highest number of complaints at 25%

Figure 32: Share of Complaints by Category (CMTOs & MNP) FY 2013



Note: Others includes Miscellaneous Issues, Refund of Amount, Non Provision of services, Misleading Statements

Figure 34: Mobile Operators Complaints Share FY2012-13

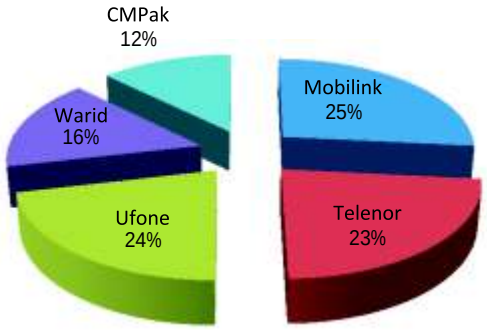
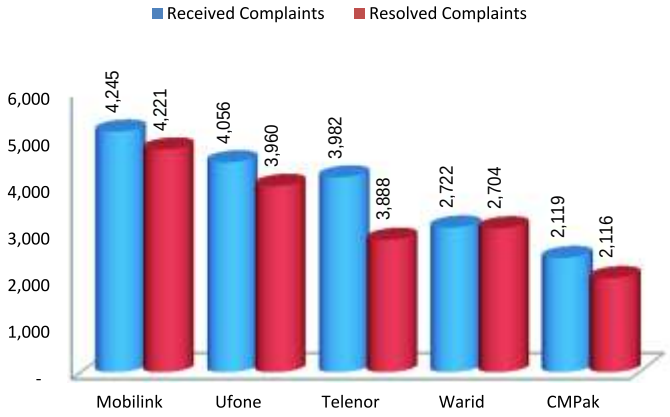


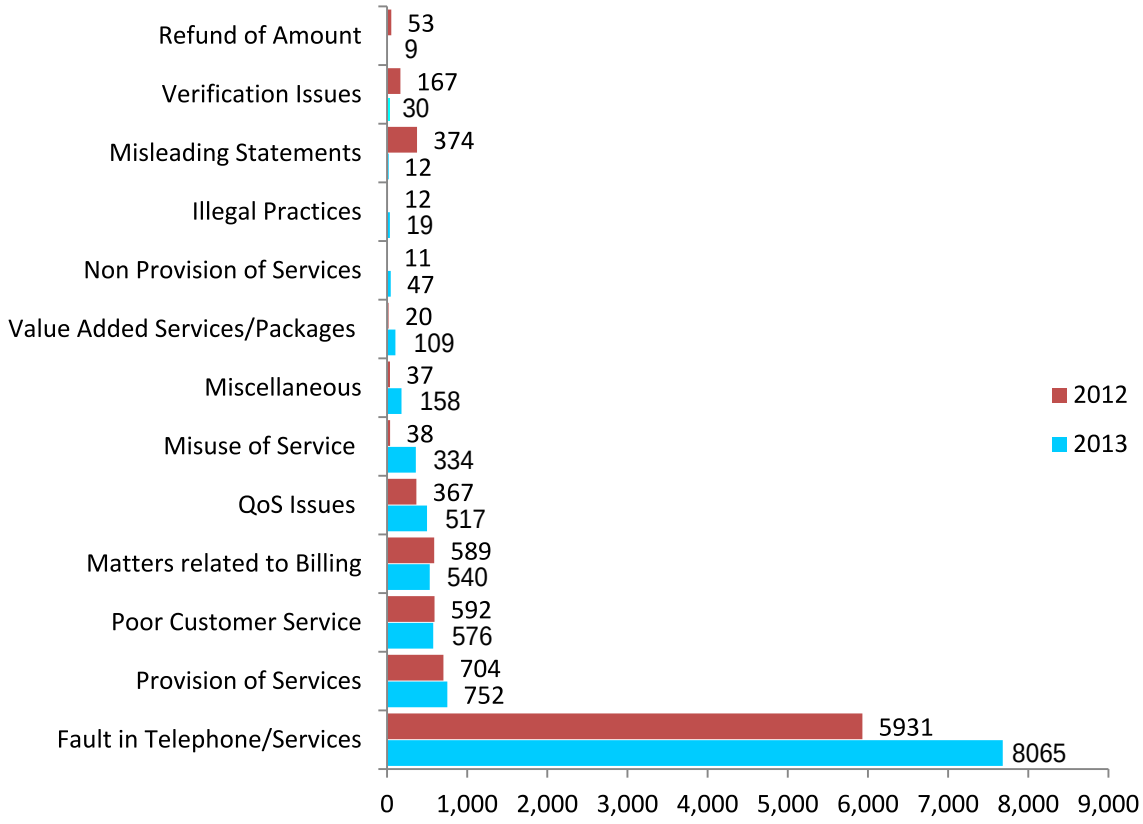
Figure 33: Complaints' Received and Resolved (Mobile Operators) FY2012-13



followed by Ufone 24%, Telnor 23%, Warid 16% and CMPak 12%. PTA successfully resolved 99% of the total complaints received against mobile operators.

PTCL has virtual monopoly over fixed line sector. Therefore, the nature and number of complaints against the company depicts the overall state of the local loop sector in Pakistan. The Authority received 11,168 complaints against PTCL in various categories. However, faults / disruption in service constitutes the major chunk of the complaints. The infrastructure of the incumbent needs immediate attention to curb this major portion of complaints. Provision of service, QoS, billing issues and other complaints make up the rest of the complaints.

Figure 35: Analysis of Consumer Complaints (PTCL 2012 and 2013)



4.2 IMEI Blocking

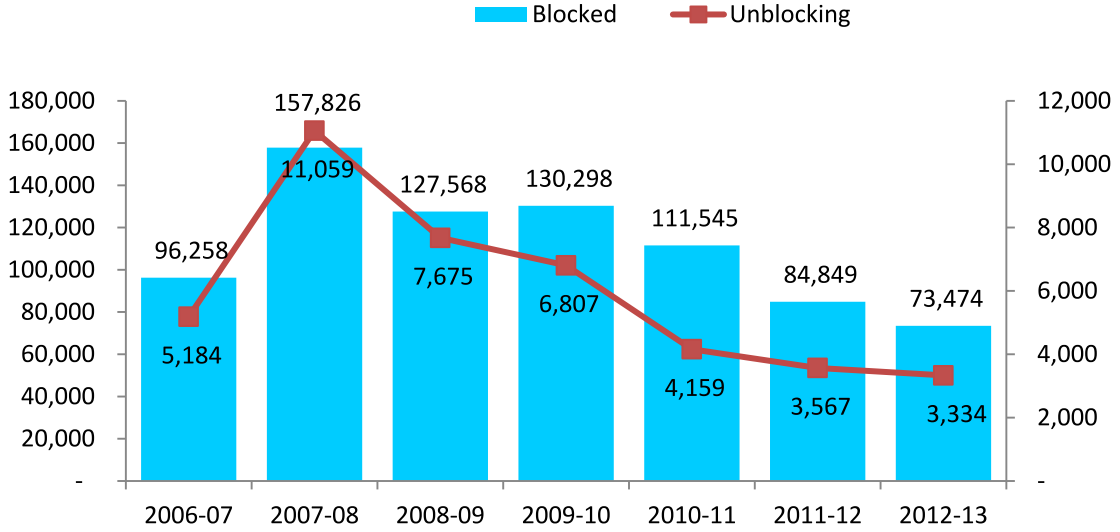
The International Mobile Equipment Identity or IMEI is a number, usually unique, to identify GSM, WCDMA, and iDEN mobile phones, as well as some satellite phones. It can be checked on the phone by entering *#06# into the keypad on most phones.[3] PTA launched IMEI blocking facility in 2006 to prevent the stolen, lost and snatched mobile phones from being used by culprits on any cellular network in Pakistan. Since the launch of this faculty on 30th September 2006, a significant

[3] http://en.wikipedia.org/wiki/International_Mobile_Equipment_Identity

drop in the mobile related crimes has been seen. However, if the blocked handset is found by the consumer, he / she can also get it unblocked after following the SOPs.

A total of 781,818 IMEIs have been blocked out of which 44,897 IMEIs were involved in Grey cases, and 41,785 IMEI were unblocked upto 30th June 2013 since the start of the service. During FY 2012-13, a total of 73,474 IMEIs were blocked and 3,334 were unblocked and 5,057 IMEIs involved in Grey Traffic were blocked as per directives of PTA. Further details are given in Figure – 36.

Figure 36: IMEI Blocking and Unblocking



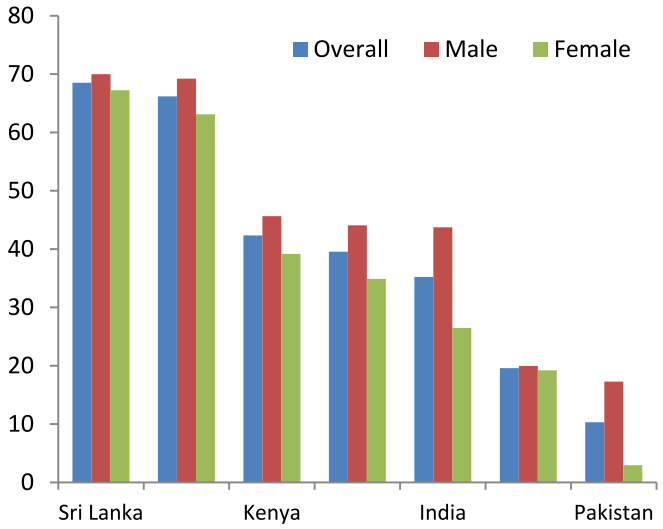
5 Mobile Payments

5.1 Introduction

In recent years, mobile cellular networks have revolutionized the concept of many social and economic services; among these, financial services' landscape is fast changing with the introduction of innovative mobile payments (m-payments) systems. Cellular mobile companies and financial institutions in Pakistan have introduced some of the best m-payments models. Over the last three years, cellular mobile companies have actively engaged in joint ventures with commercial banks for the provision of financial services. It has resulted in the expansion of m-payment services across the country through an expanded network of m-payments agents and above 2.4 million m-wallet account holders. M-payment systems are particularly important for the financial inclusion of poor and unserved in the formal financial system, and thereby can play a vital role for an inclusive growth and poverty reduction in Pakistan.[4]

Pakistan's financial infrastructure is under-developed with respect to access of its population to formal financial system; only 10 percent of its population has bank accounts. In comparison, 68 percent of the population in Sri Lanka has bank accounts,

Figure 37: Population with Account at a Formal Financial Institution (% age 15+)



Source: Global Findex, the World Bank.

***Box 1: Market Initiatives during** FY2012-13*

The m-banking industry in Pakistan remained active during the FY2012-13 and Mobile companies initiated several projects and joint-ventures.

- Mobilink started the commercial operations of '*Mobicash*' in a joint venture with Waseela Microfinance Bank Limited.
- CM-Pak launched its financial product '*Timepey*' in collaboration with Askari Bank Limited.
- Telenor through its Tameer Microfinance Bank launched a new product '*Easypaisa Khushhal*' to attract small savings from its customers.
- U-fone in collaboration with its U-Microfinance Bank entered in the m-payments market with its pilot launch in March 2013 and commercial operations in July 2013. Earlier, PTCL/U-fone acquired 100 percent shares of Rozagar Microfinance, later on, re-named as U-Microfinance. U-Microfinance has also signed an MoU with National Bank of Pakistan for its m-banking services.
- Warid Telecom extended its technical support to Bank Alfalah to launch its m-banking services. Warid has come into an agreement with the Habib Bank Limited to facilitate a technical solution for its m-payment transactions.

[4] The terms of m-payments and m-banking are sometimes used alternatively.

whereas this figure is 39.6 percent in Bangladesh and 35.2 percent in India (Figure – 37). A closer look at the figures reveals that only 3 percent of the females in Pakistan have bank account. This situation calls for serious efforts from the regulators and the private sector to reach out to the financially excluded population through well developed m-payments / m-banking systems in the country, which an eventually help increase the savings made by people and channelizing their disposable incomes through the banking system.

Development of successful m-payments systems needs coherent strategy, coordinated efforts and defined responsibilities among all stakeholders. These strategies should have clear roadmap for access, usage and quality of the m-payments. A careful risk assessment of m-payment models and consumer protection are important steps to take in the process. A comprehensive approach by the financial and telecom regulators for active collaboration of private sector will ensure not only expansion of m-payments systems but will also increase the usage and adoption of m-payment facilities.

5.2 Market Structure and Growth Trends

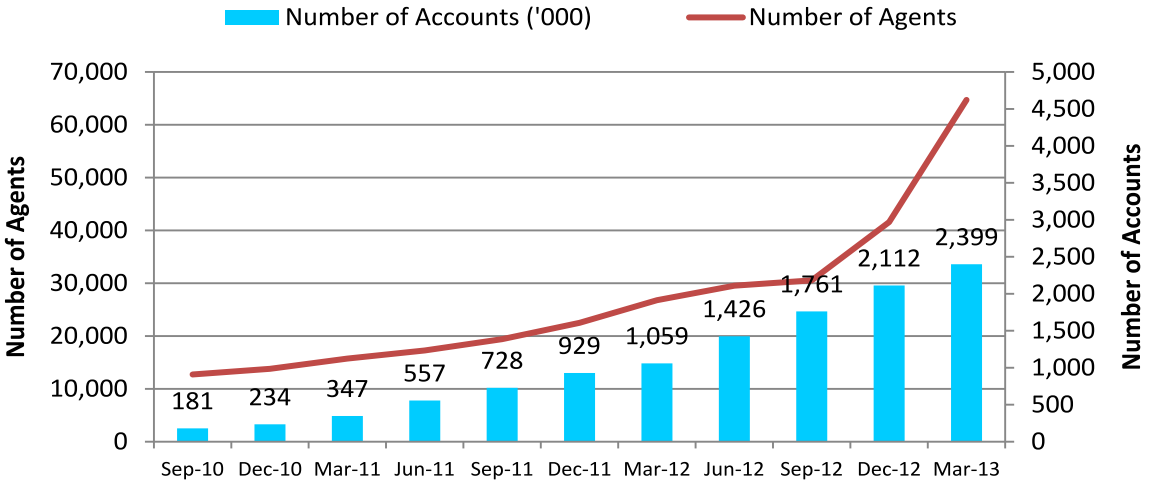
All mobile operators are actively playing their role for the expansion of m-payments systems in the country. The market is currently dominated by two major players, Easypaisa and Omni (a product of United Bank Ltd. only under the Bank led model). These projects are in operation since 2010 and have large network of mobile banking agents across the country. During FY2012-13, Mobilink's Mobicash, CMPak's Timepay, and Ufone's Upaisa had commercial launch of their operations whereas Warid had pilot launch of its m-payment services in collaboration with Habib Bank Ltd. under the brand name Express (see details in Box 1). These new initiatives along with established players, Omni and Easypaisa, have made Pakistan a thriving market in the region. The unique feature of Pakistan's m-payments market is that the three main mobile operators (Telenor, Mobilink and U-fone) have launched their m-payments systems through their micro-finance banks.

M-payment systems in Pakistan are currently bank-led models as stipulated in State Bank of Pakistan's Regulations for Branchless Banking. Easypaisa, Omni, Mobicash, Timepay, Upaisa are mainly based on agents network. Mobile Banking agents provide basic infrastructure for the provision of m-payments services in Pakistan and more than 96 percent of m-banking transactions are carried out through these agents. Cellular operators are configuring mobile banking services on basic handsets using various technical platforms / bearer channels including SMS, Unstructured Supplementary Service Data (USSD) and Sim Toolkit (STK). At present, SMS is the most commonly used bearer channel. Mobile payments are used in Pakistan to provide a variety of services including fund transfers from account-to-account (A2A), person-to-person (P2P), account-to-person (A2P), person-to-account (P2A), and bill payments, merchant payments, mobile top-ups, cash-in and cash-out deposits, loan repayments, donations, balance inquiry etc. Cellular mobile operators and banks are continuously innovating to provide new services and to increase the excess of financial services to a greater number of Pakistanis.

5.3 Agents Network and M-wallet Accounts

The network of m-payments systems has a total of 64,716 agents and 2.4 million m-wallet accounts. During the last one year (Mar 2012 to Mar 2013), an unprecedented growth has been witnessed in these basic infrastructure indicators: agents registered a growth of 141.6 percent, increasing from 26,792 to 64, 716, and the growth in m-wallet accounts was 126.4 percent, increasing from 1.4 million to 2.4 million (see Figure 38). The growth in agents is attributed to the new players (Mobicash and Timepay) because they have added substantial number of new agents in the existing network. On the other hand, the increase in m-wallet accounts is still contributed by the established players (Easypaisa and Omni). Further, these players have tapped the opportunity of relaxed SBP regulatory requirements for the opening of basic level accounts (Level 0).

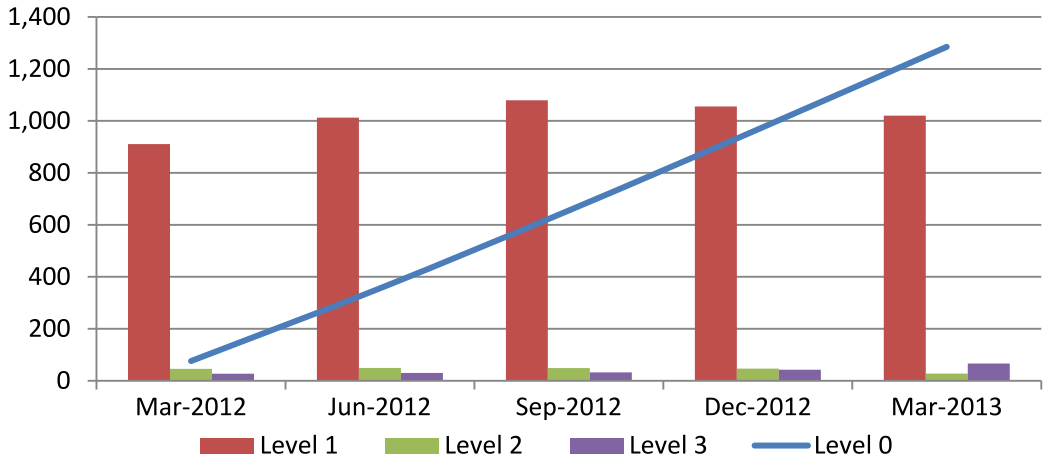
Figure 38: Agents Network and M-wallet Accounts



Source: State Bank of Pakistan

Figure 39 shows the composition and growth of m-wallet accounts along different levels (Level 0, 1,

Figure 39: Growth across Type of M-wallet Accounts (000)



Source: State Bank of Pakistan

2, 3). During Mar 2012 to Mar 2013, Level 0 accounts have increased from 76,000 to 1.7 million, increasing its share in the total m-wallet accounts from just 7 percent to 54 percent. This substantial increase in Level 0 accounts has altogether changed the composition of m-wallet account mix. Now, the largest concentration is in the Level 0 accounts. As discussed above, this has been due to relaxation by SBP in the minimum account opening requirements.

Table 8: M-wallet Accounts

Account Level	Level 0	Level 1	Level 2	Level 3
Description	Basic Branchless Banking (BB) Account with low Know Your Customer (KYC) requirements and low transaction limits.	Entry Level account with adequate KYC requirements commensurate with transaction limits.	Top level account for individuals as well as businesses offering all BB facilities and subject to full KYC requirements.	Account specific for merchants, businesses, banking agents, technology service providers and corporations. These accounts may also be utilized for various disbursements like salaries / payrolls, pensions, grants, donations etc.
Transaction Limits	Rs. 15,000 per day, Rs. 25,000 per month, Rs.120,000 per year	Rs. 25,000 per day Rs. 60,000 per month Rs. 500,000 per year	The financial Institution (FI) must set limits commensurate with each customer's profile and FI's own capacity to monitor activities in such accounts.	
Maximum Balance Limits	Rs. 100,000	No Limit	No Limit	No Limit

Source: SBP Branchless Banking Regulations (2011), available on the website of State Bank of Pakistan at www.sbp.org.pk

As of March 2013, Easypaisa is the market leader in terms of agents' network with market share of 46%, followed by Mobicash (28%), Omni (17%) and Timepey (9%). Easypaisa has 50% share in the total m-wallet accounts followed by Omni with 48% account. New players have yet to attract subscribers for their services, though they have established reasonable agents' network.

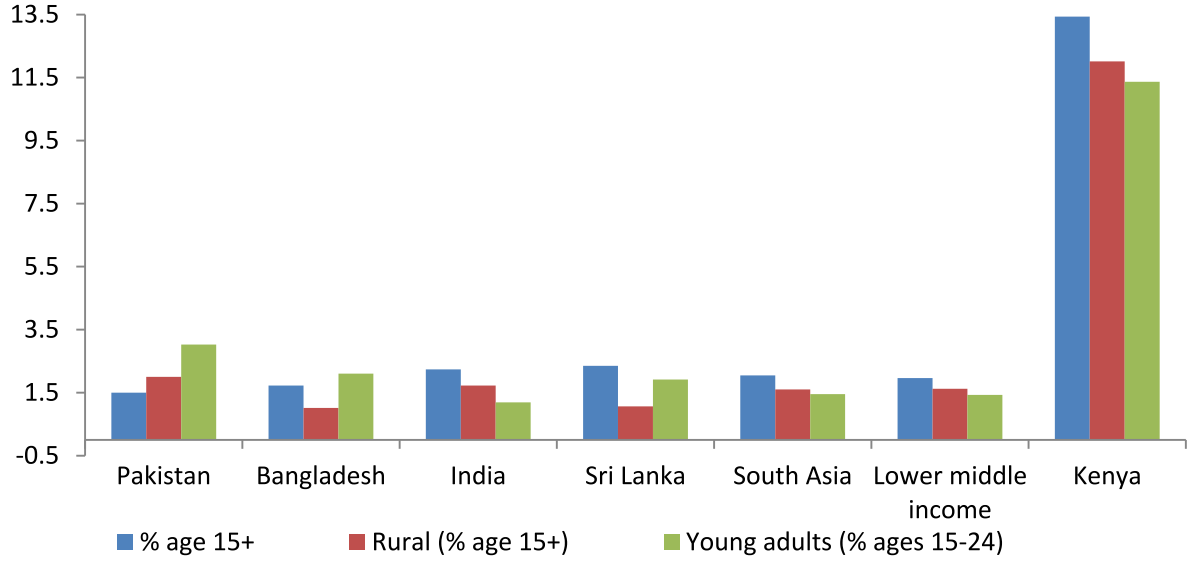
5.4 Mobile Payment Adoption and Usage

M-payments systems are currently in the development stage and mobile companies / banks are continuously innovating to expand their services. To better understand the market growth and demand for m-payments, a regular monitoring of the usage and adoption patterns in the market is essential. This section provides useful insights on the adoption and usage patterns of m-payments among different groups of people. These are mostly demand side indicators. First set of information provides cross-country analysis based on a recent survey by the World Bank.[5] The cross-country information is helpful in understanding Pakistan's position among its peer countries and best examples in developing countries. The second part is derived from a recent and more detailed survey of the Bill Gates Foundation on a sample of Pakistani households.

5.5 Cross Country Analysis

The use of mobile phones to pay bills has increased in Pakistan. However, it is still low compared to other South Asian countries. Only 1.5 percent of population (age 15+) use mobile phones to pay bills compared to South Asian average of 2.0%, India (2.2%) and Sri Lanka (2.4%) (Figure 40). Nevertheless, Pakistan's m-payments market has two particular usage patterns: (a) the use of mobile phone to pay bills in the rural areas of Pakistan is higher than all other South Asian countries and the average of middle income countries. Interestingly, the rural usage of mobile phone to pay bills is even higher than the urban usage in Pakistan. There are two main reasons for this uptake in rural areas: first, there are limited formal bank branches in the rural areas and people are required to travel long distances to pay bills. Secondly, Easypaisa and Omni have expanded their network in rural areas and their outlets are much more in number than the bank branches, and he is involved to pay bills through these m-payments services is easier. (b) Another particular feature of Pakistan's market is that the usage of mobile phone among young (age 15-24) population is also highest among all the South Asian countries and the average of the middle income countries. These patterns are also in line with the overall high usage of mobile communication among Pakistani youth. On the other hand, females and the elder population are less likely to use mobile to pay bills in Pakistan.

Figure 40: Mobile Phone Usage to Pay Bills

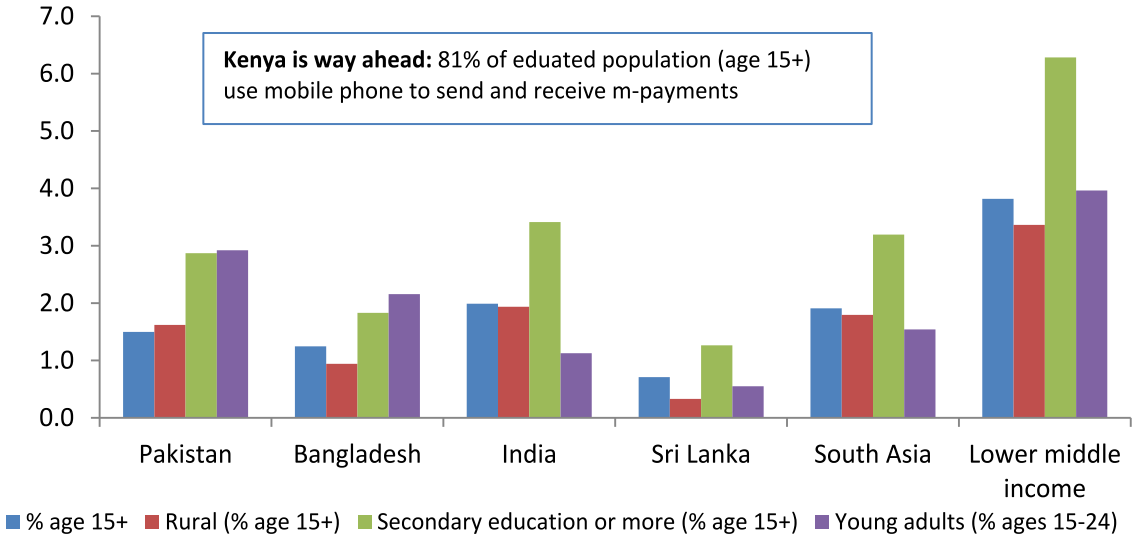


Source: Global Findex, the World Bank.

[5] This is the first public database to consistently measure use of financial products/m-payments across countries. World Bank conducted face-to-face interviews of 150,000 people across 148 countries in the year 2011. The primary sampling units are stratified by population size and geography. In Pakistan, the survey was conducted during April-May 2011.

In terms of use of mobile phones to send and receive money, Pakistan has higher usage patterns than Bangladesh and Sri Lanka, though it is still lower than South Asian average and much lower than the overall average usage in the lower middle income countries (Figure 41). Nevertheless, the young and educated population in Pakistan has higher usage of mobile phones to receive money than the average in South Asian countries.

Figure 41: Mobile Phone Usage to Send & Receive Payments



Source: Global Findex, the World Bank.

Kenya is considered as one of the most successful models in terms of the usage and adoption of m-payments. Eighty (80) percent of its educated population use mobile phones to send and receive payments, several times higher than the average in Pakistan and other South Asian countries. Even in the rural areas, 64 percent of the population use m-payments systems to send and receive money. By this standard, the South Asian countries including Pakistan are far from the potential usage of m-payments.

5.6 Insights from In-depth Household Survey

During the first quarter of FY2012-13, the Gates Foundation conducted a survey on the usage and adoption of m-payment services in Pakistan. The survey was conducted on 4,940 households in all the provinces and covered rural / urban population. The results represent the behaviour and usage patterns of Pakistani households in general. The key findings are as follows:

- Almost 90% of the households have either a SIM card or can access mobile communications and this does not differ much by rural / urban or banked / unbanked or income status. 86 percent of the poor households have a SIM card.
- Only 5 percent of households interviewed have at least one m-payments user, and 99.7 percent of these users avail Over-the-Counter (OTC) option through agents' network, and only 0.3 percent have a registered m-wallet account. The usage is heavily biased towards male i.e. 95 percent of m-payments users are male.

- Adoption of m-payments does not differ much in the rural and poor households.
- Banked households are two times more likely to access m-payments than unbanked households.
- Male population of age 35-54 years with post-secondary education is the most likely segment to access m-payments
- Across provinces, Punjab has the highest ratio (7%) of households with m-payments users followed by Sindh (5%), Balochistan (1%) and Khyber Pakhtun Khwa (0%).
- Remittances sent through m-payments systems are for business or informal loan payments and money transfers to family members and friends.
- Most (85%) of OTC users use m-payments once a month or less, but almost half of the users have increased the frequency of use since they first started using an m-payment system.
- Almost 40 percent of households surveyed save money through financial institutions or informal channels. However, m-payments systems are rarely used for savings. It calls for introduction of saving products tailored to the needs of the potential m-payment users.
- M-payments users are more comfortable with the OTC option to make money transfers and find less utility of opening m-wallet accounts. They consider it burdensome to go through the process of account opening and learning how to use it while OTC can serve their purpose.
- Television is the top source of information on m-payments services and the largest source of encouragement in the households to adopt m-payment services.

From the above survey results, we can deduce that (a) households in general have limited information about the m-payments services on offer, and efforts are required to increase the general awareness of m-payments services and its possible usage and benefits; (b) education of the existing m-payments users has pertinent importance in encouraging the use of m-wallet accounts and to inform the users that m-payments is beyond simply sending and receiving money, rather it can be used for saving and availing other financial products; (c) mobile companies / banks need different products and strategies to reach the un-banked population.

5.7 Conclusion

New players in the m-payments market can substantially expand the existing customer base and usage, if a healthy competition and reduced cost of m-payments transactions are assured, and new products and business models are launched while considering the consumer requirements and demand side economics. The m-banking model of m-pesa has been widely quoted for its success as it has reached more than 66 percent of Kenyan households. However, achieving a similar success in Pakistan with different regulatory frameworks is a challenge. M-banking segment of Pakistan has vast potential for growth in the coming years provided that mobile operators / banks keep up with their innovations and the financial and telecom regulators remain proactive to facilitate this process with their coherent and comprehensive strategies.

Annexures

PTA's Accounts

Pakistan Telecommunication Authority

Balance Sheet

As at June 30, 2013

	Note	June 30, 2013 Rupees	June 30, 2012 Rupees
Balance of Federal Consolidated Fund, related party	4	**6,406,325,837**	5,201,539,766
Balance of Public Account, related party	5	**(7,076,264,336)**	(8,343,736,811)
Balance with Government of Pakistan, related party		**(669,938,499)**	(3,142,197,045)
Long term payable to AJK & GB, related parties	6	**755,642,370**	944,797,444
Deferred grant	7	**79,255,757**	112,876,455
Deferred liabilities	8	**300,024,861**	242,508,254
Total Non-Current Liabilities		**464,984,489**	(1,842,014,892)
Current Liabilities			
Unearned revenue	9	**2,172,151,250**	2,172,151,250
Payable to AJK and GB, related parties - net	10	**236,850,305**	267,792,078
Provision for taxation - net	11	**3,829,887,799**	2,979,035,587
Accrued and other liabilities	12	**423,721,215**	175,196,979
Total Current Liabilities		**6,662,610,569**	5,594,175,894
		7,127,595,058	3,752,161,002
Contingencies and Commitments	13		

	Note	June 30, 2013 Rupees	June 30, 2012 Rupees
Non-Current Assets			
Property and equipment	14	**447,074,091**	496,660,975
Intangible	15	**-**	792,422
Initial license fees receivable from operators on behalf of AJK & GB, related parties	16	**592,800,000**	800,700,000
Long term advances to employees	17	**32,514,787**	44,544,983
Total Non-Current Assets		**1,072,388,878**	1,342,698,380
Current Assets			
Fee receivable	18	**967,842,215**	1,210,102,534
Investments		**-**	392,685,859
Advances, deposits, prepayments and other receivables	19	**150,432,497**	647,040,354
Bank balances	20	**4,936,931,468**	159,633,875
Total Current Assets		**6,055,206,180**	2,409,462,622
		7,127,595,058	3,752,161,002

The annexed notes 1 to 27 form an integral part of these financial statements.

Member (Finance)

Chairman

Annexures 1

Pakistan Telecommunication Authority

Income and Expenditure Account

For the year ended June 30, 2013

	Note	**June 30, 2013**	June 30, 2012
		Rupees	Rupees
Revenue	*21*	**9,277,113,045**	8,158,113,530
Expenditure			
General and administrative expenses	*22*	**702,654,068**	644,636,696
Provision for doubtful receivable	*18.3*	**554,602,187**	13,995,165
Federal excise duty	*19.1, 19.2 & 19.3*	**1,267,905,481**	-
Audit fee		**300,000**	300,000
Financial charges		**4,155**	10,334
		(2,525,465,891)	(658,942,195)
		6,751,647,154	7,499,171,335
Amortization of deferred grant	*7.2*	**33,620,698**	33,620,698
Other income	*23*	**396,734,979**	554,053,541
		430,355,677	587,674,239
Surplus for the year before taxation		**7,182,002,831**	8,086,845,574
Less: Provision for taxation			
- Current year	*11 & 24*	**(3,157,235,952)**	(2,835,713,329)
- Prior		**(2,570,499,624)**	(2,051,041,921)
		(5,727,735,576)	(4,886,755,250)
Net surplus for the year transferred to Federal Consolidated Fund		**1,454,267,255**	3,200,090,324

The annexed notes 1 to 27 form an integral part of these financial statements.

Member (Finance) **Chairman**

Pakistan Telecommunication Authority
Cash Flow Statement
For the year ended June 30, 2013

	Note	June 30, 2013 Rupees	June 30, 2012 Rupees
Surplus for the year before tax		**7,182,002,831**	8,086,845,574
Adjustments for non-cash items:			
Depreciation on property and equipment	14.1	**49,956,097**	49,701,000
Amortization on intangibles	15	**792,422**	1,069,035
Provision for gratuity	8.3	**38,886,687**	36,001,459
Provision for pension		**621,252**	740,391
Profit on bank deposit	23	**(176,617,143)**	(488,952,071)
Provision for doubtful debts	18.3	**554,602,187**	13,995,165
Amortization of deferred grant	7.2	**(33,620,698)**	(33,620,698)
Gain on sale of property and equipment		**(7,951)**	(7,026,183)
Loss on foreign currency translation		**-**	-
Operating surplus before working capital changes		**7,616,615,684**	7,658,753,672
Changes in assets and liabilities			
Decrease / (increase) in assets			
Advances, deposits, prepayments and other receivable		**556,712,074**	(448,313,388)
Fees receivable including initial license fee - net		**(104,441,868)**	11,513,801
Public Account		**1,267,472,475**	1,591,064,461
Government of AJK & GB		**(158,762,766)**	(37,740,574)
(Decrease) / increase in liabilities			
Accrued and other liabilities		**248,524,236**	120,493,338
Contributory provident fund payable		**17,816,594**	16,975,145
		1,827,320,745	1,253,992,783
Cash generated from operations		**9,443,936,429**	8,912,746,455
Contribution to FCF and FAB		**(249,481,184)**	(1,820,725,710)
Income taxes paid		**(4,938,217,445)**	(7,760,114,645)
Gratuity and pension paid		**192,074**	(7,929,958)
		(5,187,506,555)	(9,588,770,313)
Net cash generated from / (used in) operating activities		**4,256,429,874**	(676,023,858)
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchases of property and equipment		**(378,403)**	(2,933,580)
Investment matured / (made) during the year- net		**392,685,859**	(372,685,859)
Profit on investment and bank deposits received during the year		**128,543,122**	577,441,311
Proceeds from sale of property and equipment		**17,141**	7,274,113
Net cash generated from investing activities		**520,867,719**	209,095,985
Net increase / (decrease) in cash and cash equivalents		**4,777,297,593**	(466,927,873)
Cash and cash equivalents at beginning of the year		**159,633,875**	626,561,748
Cash and cash equivalents at end of the year	20	**4,936,931,468**	159,633,875

The annexed notes 1 to 27 form an integral part of these financial statements.

Member (Finance) Chairman

Telecom Revenues

Rs. in Millions

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Cellular	182,122	212,423	236,047	262,761	298,510	311,145
Local Loop	63,693	62,568	61,595	58,342	63,805	80,661
LDI	23,397	47,969	32,895	34,195	32,675	5,617
WLL	2,704	2,670	3,473	4,978	5,861	38,572
Class Value Added Services	8,048	8,179	10,202	7,052	8,394	3,526
Total	279,964	333,809	344,212	367,327	409,245	439,521

Note CVAS Revenue 2012-13 are Estimated

Foreign Direct Investment

US$ in Millions

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
FDI in Telecom	1,438.6	815.0	373.62	79.2	(361.4)	(408.0)
Total FDI	5,410.0	3,719.9	2,199.44	1,574.0	820.6	1,576.0

Telecom Investment

US$ in Millions

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Cellular	2,338	1,230	909	359	212	422
LDI	404	277	240	132	13	2
LL	342	57	23	19	5	16
WLL	53	82	23	10	7	12
Total	3,136	1,646	1,195	519	238	451

Cellular Subscribers

	Mobilink	Ufone	CMPak	Telenor	Warid	Total
2007-08	32,032,363	18,100,440	3,950,758	18,125,189	15,489,858	88,019,742
2008-09	29,136,839	20,004,707	6,386,571	20,893,129	17,886,736	94,342,030
2009-10	32,202,547	19,549,100	6,704,288	23,798,221	16,931,687	99,185,843
2010-11	33,378,161	20,533,787	10,927,693	26,667,079	17,387,798	108,894,518
2011-12	35,953,434	23,897,261	16,836,983	29,963,723	13,499,836	120,151,237
2012-13	37,121,871	24,547,986	21,044,319	33,513,133	12,706,353	128,933,662

Note: Instaphone Subscribers upto 2008-09 are included

Fixed Local Loop Subscribers

	2008-09	2009-10	2010-11	2011-12	2012-13
PTCL	3,378,495	3,268,642	2,881,684	2,847,597	2,885,144
NTC	104,538	105,788	105,954	107,095	107,631
WorldCall	12,234	9,874	10,085	9,830	8,977
Brain	8,817	11,267	13,280	14,076	14,662
Union	3,700	4,200	4,200	4,175	4,175
Nayatel	1,359	1,583	1,649	2,860	3,699
	3,509,143	3,401,354	3,016,852	2,985,633	3,024,288

Note: Nayatel Subscribers year 2008-09 and 2009-2010 are revised

Wireless Local Loop Subscribers

	2008-09	2009-10	2010-11	2011-12	2012-13
PTCL	1,305,675	1,234,339	1,353,523	1,424,051	1,233,793
NTC	11,620	12,160	12,114	9,165	12,231
WorldCall	559,362	581,580	497,361	518,340	519,030
Telecard	582,907	588,056	588,056	588,056	763,330
Great Bear	66,389	65,740	-	-	-
Wateen	72,176	147,905	218,506	297,503	281,053
Mytel	138	138	138	32	32
Link Direct	19,349	29,906	38,850	39,135	25,074
Sharp/Qubee				74,148	74,926
Witribe					199,786
Total	2,617,616	2,659,824	2,708,548	2,876,282	3,346,572

Broadband Subscribers

S.NO	Company Name	2010-11	2011-12	2012-13
1	PTCL	848,379	1,262,732	1,930,591
2	NTC	8,028	9,279	10,900
3	Worldcall Pvt. Ltd.	148,441	181,311	180,382
4	Wateen Ltd.	218,506	297,503	281,053
5	Multinet Pakistan	2,527	3,374	4,230
6	Nayatel	6,161	8,243	10,945
7	Micronet Broadband	3,948	3,318	1,708
8	LinkdotNet (WoL Telecom)	37,693	35,608	24,916
9	Link Direct	30,708	25,589	
9	Wi-Tribe	136,674	197,151	199,786
10	QuBees/Sharp Com	46,112	74,128	74,925
11	CyberNet	3528	3,528	3,528
12	SUPERNET	203	203	203
13	COMSATS	438	438	438
14	Brain Net	145	145	145
Sub Total		1,491,491	2,102,550	2,723,750

Pakistan Telecommunication Authority

Economic Affairs Team

Dr. Muhammad Saleem, Director General
Mr. Muhammad Arif Sargana, Director
Dr. Shahbaz Nasir, Assistant Director
Mr. Abdul Rehman, Assistant Director
Mr. Gul Hassan, Assistant Director
Mr. Waqas Hassan, IT Officer
Mr. Muhammad Riaz, Admin Officer