

Development & Growth of ICT in Pakistan

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Abstract:

The IT and Telecommunication Sector is one of the fastest growing sectors in Pakistan. The government is firmly committed to its policy of privatization and de-regulation environment allowing fair and open competition. The governments have enacted investor friendly policies with attractive incentives. Thus the potential of development and growth in the information and communication technology sector are tremendous.

Pakistan's estimated population today is 155 million and the number of cellular telephone connections is 60.90 million. The cellular tele-density is 39.3% while fixed tele-density 4.3%. According to industry estimates it is likely that another 10 million cellular connections shall be added by the end of 2007. India has nearly 150 million cellular connections while Bangladesh have 24 million which gives them the cellular tele-density nearly 16% in either case.

1.0 Background:

- 1.1. ICT covers telecommunications, broadcasting and information technology (including internet). In Pakistan under the National IT Policy approved in 2000 a number of actions were taken to raise awareness, improve infrastructure and give incentives and training and education for ICT. The measures already taken include increased financial allocation, reduction in the cost of bandwidth, universal Internet access, training program for ICT, incentives for software development and export and establishment of the national testing service and accreditation council.

1.2. The measures to provide access to information technology for less privileged sections of society such as supply of low cost computers to schools, reduced cost of using Internet at Cyber Cafes provision of bandwidth for the universities has also been implemented.

2.0 Growth of Telecom Sector:

2.1 The public sector monopoly in the telecommunication ended with the opening up of the sector. The cellular services were allowed in private sector in 1990's when three private sector companies and one public sector Company started cellular services. The Pakistan Telecommunications Authority was created as a regulating and licensing body. The PTCL the leading public sector telecom operator's 26% controlling stake along with management rights were transferred to M/s Etisalat of UAE.

2.2 The Government of Pakistan announced its telecom de-regulation policy in 2003 and the mobile cellular policy in 2004. Under the new policy the licenses were issued to a number of operators for different services in a transparent manner.

Types of Services	No. of Licenses issued
Cellular Mobile	4+2
L.D.I	12
F.L.L	78
W.L.L	92
ISP	150

(Source: PTA website)

A number of new operators have commenced services while a total sum of Rs.14 billion was raised through the auction/ sale of licenses.

2.3 The PTCL is still the dominant player in the telecommunication sector with a share of 70% in terms of its financial size. The mobile companies are in second place with almost 25% and the others are only 5%. The share of telecommunication in overall GDP has gone up to 2.0% that is expected to increase to 3.0% next 3 years. Its share in total Foreign Direct Investment (FDI) is nearly 54% (i.e. \$1905 out of total \$3521). China Mobile have made a major investment recently and acquired Paktel.

FDI & GST/CED in Telecom Sector

Year	Total FDI	FDI in Telecom Sector	%age	GST/CED Mobile	GST/CED Fixed	Total
	US \$ Million	US \$ Million		Billion Rs.	Billion Rs.	Billion Rs.
2001 -02	484.7	6.1	1.26	2.0	6.9	8.9
2002 – 03	798.0	13.5	1.69	3.3	8.2	11.5
2003 – 04	979.9	207.1	21.13	5.2	6.9	12.1
2004 – 05	1524.0	494.4	32.44	9.9	10.6	20.5
2005 – 06	3521.0	1905.1	54.11	18.8	8.0	26.8
2006 – 07	2859.1	1350.0	47.22	20.2	5.8	26.0
Upto Mar 07						

(Source: PTA website)

2.4 The growth in fixed telephony sector has been slow as people have been switching to cellular service due to its easy availability, options of various packages and flexibility of usage. The total assets of telecom vendors increased by 18% last year while the listed telecom companies like Tele Card, World Call and others showed revenue increases between 45 to 60%. More than \$ 1 billion worth of mobile phones are being imported annually. The four major supplies are Nokia (55%), Sony Ericsson (22%), Samsung (17%) and Motorola (5%). Nearly 1 million phones are imported every month. There are 15,000 sales outlets employing 60,000 people, selling cellular phones.

Year	Cellular Connection		Share of Telecom in GDP
	Connection Growth (%)	Tele density	% age
2001	142%	0.52	1.6
2002	128%	1.16	1.6
2003	42%	1.61	1.7
2004	109%	3.29	1.7
2005	154%	8.30	1.9
2006	170%	22.21	2.0
2007	70%	39.29	-

(Source: PTA website)

3.0 Current Scenario in ICT:

3.1 According to the Global Information Technology Report 2006 – 2007 issued by World Economic Forum (WEF) Pakistan has been rated at 84th position out of the 122 nations Networked Readiness Index (NRI) measures the propensity of countries to leverage opportunities offered by ICT for development and increased competitiveness. It also establishes a broad international framework mapping out the enabling factors of such capacity. There is a huge room for expansion and growth in the sector.

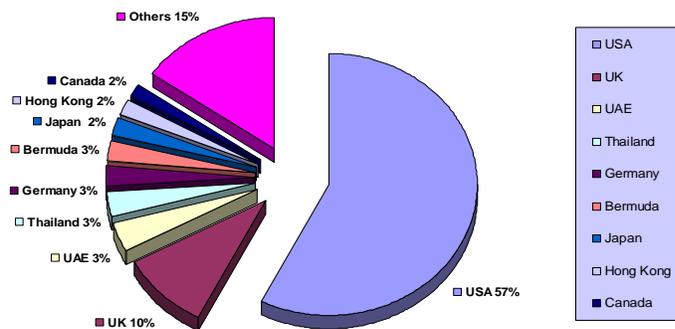
3.2 Under the methodology developed by WTO – IMF and used by countries like India the total revenue of Pakistan IT industry has crossed \$2 billion while IT exports exceed \$1 billion.

Breakup of IT Exports in 2006 – 2007

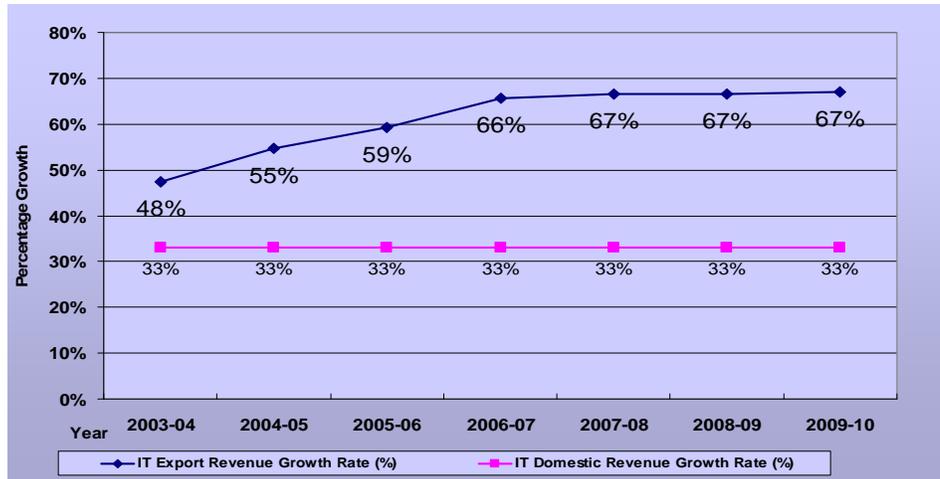
Direct Exports	\$ 150 M
Sales to MNC & Foreign Missions	\$ 200 M
Overseas Revenue of Pakistan Cos.	\$ 450 M
Salaries of non immigrant IT Workers	\$250 M
Total =	\$ 1,050 M

(Source: PSEB website)

Pakistan IT Exports by Region



3.3 Export growth in last three years has been nearly 50%. While the domestic market grew by 33%. The IT sector in Pakistan is growing at an incredible 50 per cent per annum which is much higher than ever before.



The sector comprises more than 900 IT & ITes companies operating in Pakistan, of which more than 125 are either ISO-certified or CMMI-appraised. The most fundamental measure of IT readiness is the telecom infrastructure and the reach of network services. The bandwidth consumption in Pakistan has increased from 800 MB in 2003 to 2,500 MB. The ranking of Top 10 IT/ITPS export companies with percent share for fiscal year 2005-06 are given below:

Company	%Share	Rank
NetSol Technologies (Pvt.) Ltd.	15.7	1
Ovax Technologies (Pvt.) Ltd.	10.9	2
TRG (Pvt.)Ltd	8.3	3
System (Pvt.) Ltd.	7.2	4
Elixir Tech Ibds	5.8	5
Descon IT24 (Pvt.) Ltd	5.2	6
Trivor Software	4.5	7
TIG Netsol (Pvt.) Ltd	3.8	8
Geopaq Tech (Pvt.) Ltd Ibd	3.7	9
Fusion Itech. (Renamed as Enterprise DB)	3.2	10

[Pakistan Softwar Export Board, 2006]

3.4 This indicates a robust growth and is extremely encouraging for Pakistan’s readiness for the networked world. In terms of IT awareness, most private schools are well equipped with IT facilities and the government has also provided computer labs and staff to 1,100

government schools. Large private sector organizations are using state-of the-art IT solutions as IT usage in the business sector in Pakistan has proliferated and even small establishments are using IT for competitive advantage.

3.5 There are an estimated 2 billion users of Internet worldwide currently. In Pakistan the number of Web users presently are estimated to be no more than 5 million. In order to provide universal access to Internet, the Internet facility has been extended to over 2300 cities, towns and villages compared to only 30 about six years ago. This covers a large segment of population of Pakistan. The Government has also reduced the rates for bandwidth to as low as US\$ 1800 per mega bit per month. This has provided a big boost to IT and software industry and is expected to result in increased export of software and IT services.

Following are some of the leading global companies operating in Pakistan with healthy revenue growth percentage every year.

Company	2004	2005	2006
Oracle	30	40	70
IBM	20	20	25
NCR	25	30	35
Microsoft	20	30	30
Intel	30	30	35
Cisco	20	30	50

[E-Commerce Resource Centre – Pakistan]

3.6 Although, the international call center industry in Pakistan started in 1998, but the current call centers started their business after 9/11. The HR strength of these companies ranges from 5 to 500+ and the companies’ age from 6 months to 25 years. It was estimated that the total numbers of agents working in the international and domestic call centers were 2,500 and 1,000 respectively by the year 2005.

3.7 A number of Pakistani call centers are in process to maintain their presence in North America / Europe through their own offices or business alliances. The top 25

international call centers in Pakistan collectively add up to about 1,500 seats. Majority of these are outbound, i.e. providing sales and telemarketing services.

4.0 Human Resources & Infrastructure

- 4.1 The ITPS industry generated direct employment for over 120,000 people by the year 2005. The total number of IT professionals, call center agents and the employees working in other BPO segments in the country was estimated at 75,000, 3,500 and 2,000 respectively. However, the corresponding numbers with exportable skills were about 4,000, 2,500 and 1,500 respectively, which implied that out of the total HR strength of 80,500, only about 10 % possess exportable skills by the year 2005. [BearingPoint Analysis, 2005]
- 4.2 The population of people who can understand and communicate in English with varying levels of skills is about 6.5 million. However, a large number of them would require extensive training to work for their foreign clients. The main strength of Pakistan lies in the availability of a large pool of Accountants, Engineers, Bankers and Doctors who can be employed in the BPO sector.
- 4.3 Infrastructure includes the three major factors, Internet bandwidth, telephone and electricity which affect BPO sector. BPO companies can address load shedding problem by using generators and UPS but Internet and telecom are beyond their control. The reliability of the Internet connection is a major concern.
- 4.4 PTCL has recently implemented two more links for redundancy, one through undersea cable SEMEWE-4 and the other through underground fiber optic link with an Indian company VSNL. The total bandwidth was 608 Mbps in the year 2005-06 and it is projected that it would improve to 1222 Mbps by the end of 2007.
- 4.5 After the deregulation of telecom sector, reliability of phone service does not constitute any significant problem in the outsourcing of BPO business to Pakistan, as over a period of time, the land and mobile phone infrastructure has become reasonably developed. Over 85% of telecommunications infrastructure is on fibre optics.

5.0 The Emerging Outlook:

- 5.1 Outsourcing has become one of the most thriving and profitable industry to date. After the early boom in late 90s most businesses in the UK, USA and Canada outsourced their processes to India. These processes included Inbound/Outbound Calling along with Customer Services and Tech Support. The call centre business is primarily focused on customer services and tele-sales segment of the company.
- 5.2 The foreign markets have fully matured and are benefiting from excellent and professional customer services. The local market has entered the race as well; customer services for major multinationals and all the banks have their own customer services/call centre in place.
- 5.3 Tele-sales are still a virgin market and lots of our local companies have yet to explore this segment and maximize their sales. There is still a lot of room to grow and this is just the beginning and in future there are lot more jobs to be created in this industry. The overall business environment is very optimistic and even with the law and order situation being an obstacle in providing uninterrupted services to our foreign clients, country is on the right track.
- 5.4 The overall economy and the GDP are growing at substantial rates. With the influx of FDI and foreign banks/MNC the employment opportunities are growing and the need for HR in all sectors, especially in sales and marketing is rising rapidly.
- 5.5 The government is making efforts to project Pakistan as a vibrant modern technology conscious nation and establish our credibility for stable long-term policies, an investor friendly regime, a disciplined educated workforce and an efficient infrastructure. Attention is also being focused on development of important skills such as project management, quality control and financial discipline which are necessary for service delivery in the international market.
- 5.6 Several other measures have also been undertaken/ initiated to improve the infrastructure and facilitate/ accelerate the deployment and growth of information & communication services. There include:

Internet Access	2300 Location
Internet Cafes	5500
Optic Fiber	300 Towns
Satellite Channel	45 Licenses
FM Radios	85 Licenses
TV Sets	24 Million

- 5.7 In spite of deregulation and the incoming investment worth billions there is still room for expansion in high speed (broad band) internet. The number of high speed users has just exceeded 51,000. Out of the total 4 to 5 million internet users only about 1.6% are using broadband Cisco System have recently proposed a target of 200,00 connection by next year by launching CISCO Broadband Barometer an indicator to determine the growth of high speed internet in Pakistan.
- 5.8 According to a conservative estimate there are 15,000 – 20,000 students presently enrolled in undergraduate and postgraduate degree programmes in IT and Telecom at various HEC recognized universities and much larger number in the non-accredited and non-recognized colleges and universities all over Pakistan.
- 5.9 The IT Ministry and HEC have funded a number of projects for the universities to improve their facilities and quality of education and hire faculty in the universities. This is likely to reflect in improved quality of the graduates produced by the universities.
- 5.10 The investments into these sectors during past three years, particularly in telecommunications along with its privatization, deregulation and creation of open market economy, made the facility of telephone affordable to common man which is vital for both socio-economic growth and social development.
- 5.11 Due to the introduction of new mobile phone service providers and creation of competition in telecom sector, the telephone consumers both landline and mobile phone are now 67.6 million. But still there is a lot to be done in this sector as 65% of our population resides in rural areas where we may not have satisfactory coverage.

Three year back, no Pakistani IT company had more than 250 employees but now there are scores of globally recognized large-sized companies in IT sector that have well above 1500 employees.

5.0 Way Forward:

- 5.1 The country's ICT industry has emerged as the fastest growing sector mainly supported by phenomenal jump in call centre operations during last two years. More than 400 centres are currently operational mainly in Lahore, Karachi and Islamabad offering employment to around 5,000 people. The call centres have adequate telecom facilities, trained manpower and access to database providing information to customers.
- 5.2 Growth in business from western companies has inspired local investors to explore new opportunities. With revenues increasing at a healthy annual rate in excess of 50pc over the last three years, the industry is perhaps the most exciting and dynamic sector in the country today that has a presence in international markets.
- 5.3 The convergence of communications, computing and entertainment (ICT) has resulted in the blurring of boundaries between disciplines and IT companies now come in all shapes and sizes. The Government of Pakistan's commitment to this sector's growth is reflected in the emphasis it places on developing a talented human resources pool, providing affordable bandwidth rates, an appropriate infrastructure and policy/regulatory support to the industry.
- 5.4 The trend of growth is reflected in increased tele-density in the country, burgeoning mobile and fixed line subscriber's base, unfolding of new investment plans of the existing and new entrants as private operators, broad based telecom services reaching out to places uncovered before, a variety of services available to the consumers from which to choose from, reduced tariff structure that is constantly coming down with attractive new service packages being offered from operators every now and then.
- 5.5 The growth in the sector has resulted in direct as well as indirect increased opportunities for the employment of approximately half a million people both skilled and unskilled related to telecom operators, payphone business, franchise, vendors and distributors of the telecom services.

- 5.6 The government and the Regulator are not oblivious to meet the challenges of new trends to meet the ICT needs. Introduction of new technologies, encouragement of new broadband services, development of emerging telecom infrastructure, provision of wireless services to the remote areas of the country, creation of tele-centres in rural areas, curbing the menace of grey traffic in the country and redressed of consumers grievances are some of the key areas that are being attended adequately. In the days ahead, concrete results would be more prominent.
- 5.7 Pakistan has been quoted as a model for the spectacular growth that has been witnessed in the country's telecom sector and was awarded Government Leadership Award by the Global System of Mobile Association for revolutionary growth in its mobile sector, Similarly, ITU bestowed Pakistan with the Global Regulator's Exchange Award for the country's contribution in ITU activities. These awards are recognition of the international community's appreciation for the sound telecom policies of the country.

6.0 Reference:

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