

Mobile Phone Industry a Growth Model for the e-Business Firms in Pakistan

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Abstract

The e-Business firm is a unique human creation that can be described by generic concepts and models, for organization theory development and to be applied in entrepreneurial practice. There seems to have been a realization that e-business may not be the answer to all of a company's problems, but can be a great asset in the struggle to increase efficiencies in daily business dealings, and that the Web is primarily a new way of relating to customers and suppliers. This paper categorizes and discusses the electronic business model currently being used by businesses and discussed in the academic literature, and shows how this business model is being implemented within the Mobile phone telecom industry. In this research, a growth model of Telecom industry is presented and discussed, both in terms of its theoretical foundations and applicability in practice for the e-Business firm. The key research questions are: What are the critical success factors for growth? What significant strategies, business development and organization factors are involved to determine success and failures? The theoretical approach is inter-disciplinary and the main frame of reference comes from Strategic Management, Organization Theory and recent theory and research on International Entrepreneurship. The selected method uses triangulation as a mean for forming and validating the model. The research involves longitudinal case studies of international e-Business firms, comprising deep-interview observations and interpretations, as well as the analysis of secondary data. This Research Paper and inquiry presents a novel growth model for the e-Business firm. This Telecom model argues that there are four generic factors involved in the successful development of e-Business firms. These factors are interrelated and their contingencies are either fit or misfits. The main result from the case studies is that the strategic and structural transformations necessary for sustained growth, is dependent upon how this model fits in Telecom industry have been managed by the e-Business firm. This research on critical success factors and growth has important implications for the emerging field of International Entrepreneurship. It refutes the classical and academic separation of Strategic Management and Organization Theory, for the context of e-Business

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and SME firms. Instead, this research proposes a need for an integrated business and organization perspective upon further theoretical and empirical research in International Entrepreneurship.

Key words: *Growth, success factors, e-Business, entrepreneurship, internationalization.*

1. Introduction

Telecom companies have invested over US\$ 8 billion during the last four years, mobile sector investment share accounts for 66% of the total investment. In 2007 PTA established ITU Asia Pacific Center of Excellence (CoE) PTA Node for Policy & Regulations and conducted two training workshops for ITU participants from member countries. Overall teledensity of Pakistan reached 52.8% in December 2007 (PTA-Annual report2006-07). During 2006-07 total telecom revenue was Rs 236 billion. Total telecom investment during the year was US \$ 4.12 billion and the share of telecommunication sector in GDP was 2.0%. During 2006-07 the revenue of mobile industry was Rs.133 billion, an increase of 48% from pervious year. China Mobile investment is US\$ 704 million during 2006-07 for expansion of CMPak networks. Mobile Sector paid approximately Rs. 63 billion taxes to the National Exchequer during the year 2006-07. Upto December 2007 cellular subscribers in Pakistan reached 76.6 million. On average 2.3 million subscribers were added every month during 2006-07. Upto June 2007 6,000 cities/towns/villages covered by mobile operators. Upto December 2007, total cell sites 17,779 all over Pakistan. Today mobile network coverage is reaching to almost 90% of the total population The telecom sector received above US\$ 1.8 billion FDI, 35% of the total FDI. Telecom sector contributed Rs. 100 billion in the national exchequer in terms of taxes and regulatory fee which was 32% higher than the previous year. GST/CED collection during the period reached Rs. 36.28 billion. Over one million jobs have been created since the deregulation of the telecom sector International Mobile Equipment Identity (IMEI) blocking system installed to stop Mobile handset theft, PTA blocked 96,258 hand sets. PTA has prepared schedule for migration from 7 to 8 digits numbering plan. Reduction in the Annual License Fee of Card Pay Phone Operators from 1.5% to only 0.1% of their revenues. Rural Telephony Project launched during the year under which 400 Rabat Ghar (Telecasters) are being established in rural areas. Total investment in the LDI sector grew upto US\$ 603 million in 2007. New LDI sector revenue stood at Rs. 15.3 billion. Total LDI outgoing minutes from Pakistan grew to 1.3 billion minutes in 2007 12 LL companies are operational out of 38 companies. At the end of 2006-07 total fixed line connections stood at 4.8 million where as the teledensity is 3.04%. Out of 17 WLL licensed companies, 5 are fully operational whereas two companies (Wateen and Mytel) have been

issued commencement of service certificates. At the end of December 2007, WLL subscribers reached 2.1 million in Pakistan and teledensity stands at 1.34%. There are total of 387,490 PCOs including WLL based PCOs which are working across Pakistan at the end of year 2006-07. By June 2007, Broadband subscribers reached 71,000 and 65% of Pakistani broadband users enjoy DSL broadband technology. Total number of Internet subscribers crossed 3.5 million and total number of users crossed 17 million mark in 2007. The first phase of Deregulation in AJK & NAs completed with the issuance of cellular mobile licenses in June 2006. PTA fixed US\$ 10 million for grant of cellular mobile license for AJ&K and NAs and issued five cellular mobile licenses to Mobilink, Warid Telecom, Telenor Pakistan, Ufone and Paktel. The total teledensity of AJK & NAs was 20.1 in 2006-07 as compared to 3.6 in 2005-06. Overall growth in teledensity in the region due to deregulation is 450%. By June 2007, Cellular subscribers reached 912,227 all across AJK & NAs. All of the five new operators installed 260 cell sites across the AJK & NAs. (PTA-Annual report-2006-07) The monopoly in Pakistan's telecom industry ended in the year 2002 and the economic indicators showed positive signs within three years. Analysts believe that high Foreign Direct Investment (FDI) and economic pace are outcomes of brilliant policies by Government of Pakistan and also deregulation of telecom sector. Future of Pakistan's telecom sector seems very exciting but the good old past should also be kept in mind for learning and formulating fruitful future strategies. The foundation of this boom was led by the government and the private sector acted swiftly in the right direction towards the voyage of a wired Pakistan. The country is moving with a very high pace towards a tele-dense country. It is praiseworthy to notice special interest of Ministry of IT and strong support from Government of Pakistan to make the industry more competitive and beneficial for both consumers and telecom companies (Economic survey of Pakistan, 2006-07). Internet usage is also being promoted widely in the country and more real world services are now shifting to Internet day by day. Government has established about 50 IT centers for awareness in villages and 800 centers are to be established before the end of 2006. Establishment of Virtual University for distance learning is also a futuristic move as centers of this university have also been set up all over the countries which are interconnected via broadband. Besides this, 200 acres land for Internet City in Karachi has also been allocated. Pakistan is heading towards automation as government departments and ministries have started adopting computerized systems for processing of different everyday jobs. An E-government department with the name of 'Electronic Government Directorate (EGD)' is also there to facilitate automation. This department aims to make all government departments online; all ministries now

have their websites online. The government has also set a target to train 16,000 employees for computer use in coming months. IT Parks in metropolitan cities like Islamabad, Lahore and Karachi serve as platforms for buying and selling of IT services. All this is not only helping in the promotion of IT in an effective manner but is also contributing towards the economic growth of Pakistan.

The telecom sector remained the hottest of all in last 2 years and is still playing a key role in the country's economic growth. From Europe to Middle East, investment inflow is coming up while the days pass by. This is not just because of the telecom operators that came to Pakistan but also because of vendors which provide the basic infrastructure, technical support and equipment etc. for telecom companies. We can see this sector is acting as a catalyst for future economic development as the share of telecom industry in provision of employment and development in rural sector is on the rise. The country which had only 1500 Internet subscribers in 1995 now has the figure in millions. Currently, over 1900 cities and towns have Internet access in Pakistan. Similarly, last year the tele-density graph rose to such a high level that it had touched 13.7% which was at that time 3% higher than India despite the fact that India ended the telecom monopoly before Pakistan. Currently, the tele-density has touched 17% mark and is increasing rapidly.

If we look into the revenue collection by the telecom sector, it has contributed over Rs. 45 billion to national exchequer. This contribution comprises 17% of total public sector development program. On the other hand, revenue and tax collection through import and sales of millions of cell-phones across the country has also contributed towards improvement in revenues for the government. So the journey from monopolistic era to this competition age has proved to be fruitful in all aspects. Foreign investment, job creation, revenue growth and economic activities, everything showed positive signs. The role of PTA, Ministry of IT and government should be appreciated in taking all the right steps at the right time which resulted into an investor friendly and consumer focused industry. This growth will continue at a higher pace and will further create jobs and revenue opportunities as the tele-density is still around 17%, it can go above 80% likewise in other developed countries. The IT and telecom industry thus played the leading role in driving Pakistan's economy to such a great level. Many heads of International organizations appreciated the investor friendly policies and highly suitable business environment of the country. This means we will see more investment in coming years. Pakistan is on the 'take off' position in terms of economic growth and excellence in the field of IT and telecommunications. One can expect further Development and Growth in this sector and

great Economic activities in the future. With the falling calling costs all over the world it was just a matter of time that Pakistan Telecom changed its complicated and expensive rate structure. Finally this month PTCL decided to reduce rates for local, domestic long distance and international calls. The pricing model has also been simplified by removing the peak and non-peak times. Consumers have welcomed this rate cut.

- The competitor long-distance companies have complained about this unilateral rate change by PTCL – they point out that any rate changes should have the blessings of Pakistan Telecom Authority (PTA). With the responsibility of regulatory oversight PTA is supposed to ensure that the playing field is level for all players and PTCL being the incumbent – called Significant Player – does not abuse its position. This seems to be the start of a long overdue price war. Call Type: NWD (Long distance) PSTN to PSTN Time less, Distance Less
- Charges: Rs 2.00 per minute.

I find it annoying to see the extent of jargon in use at the PTCL website. On the lighter side the simplicity of the phrase “*Time less, Distance Less*” is unparalleled!

1.2 Telecom growth.

The BMI ranking study states that as a result of foreign investments, growth potential and good deregulation policies by PTA, the telecom industry in Pakistan has grown tremendously. A few months ago Pakistan was lagging behind Thailand but due to the political fallout of the coup in Thailand, Pakistan has moved ahead in rankings. The BMI rankings take into account a number of factors including industry situation, growth potential, competitive landscape and economy and political risks etc. Therefore this ranking implies that the investment environment in Pakistan has improved to the point where it is better than many other countries in the region. This is a big first step for Pakistan. The rankings change with time but this finding is consistent with the opinion of most researchers. The overall consensus of the analysts is that Pakistan is one of the countries with huge untapped potential for telecom growth and an attractive investment environment. Other Asian countries with good telecommunication potential include Vietnam, Indonesia and Thailand. When the government started an information-technology (IT) and e-commerce initiative in early 2000, the banks were expected to lead the way into e-commerce. However, although the banking sector is the leading spender on information communications technology, the most progress in

e-commerce has been in “e-government”. Some business-to-business (B2B) portals are available, but they are designed more for information than transactions. Half of the country’s 7,000 commercial-bank branches, including 90% of the branches in urban areas, had been computerized by August 2006. Many banks and exchange companies offer online funds transfers from overseas, such as for workers remittances. A few of banks offer mobile-phone banking, where customers can pay utility bills using their mobile phones. The National Institutional Facilitation Technologies (NIFT), an automated check-clearing house, was operating in 14 cities in August 2006, and it processed 60m checks per year in 2005/06. NIFT is a public-private company owned 51% by banks. Internet merchant accounts (used for processing financial transactions of Internet vendors) were permitted by the State Bank of Pakistan (the central bank) in February 2001. However, inadequate infrastructure and security concerns remain, and in mid-2006 only Citibank (US) offered these accounts, which were used by airlines, mobile companies, Internet service providers and merchants. The transactions that do occur use international credit cards, which are processed outside Pakistan. Users of Internet merchant accounts undertaking transactions outside Pakistan need to submit electronic forms for transactions valued at US\$500 or more to their banks, which must then submit the same in consolidated form on a monthly basis to the central bank.

In December 2005 the Central Board of Revenue, the tax authority, started allowing electronic filing of sales tax and federal excise returns by registered private and public companies. At that time, it said that it expected about 1,500 large taxpayers out of 22,000 to use the facility. Government efforts to promote the IT sector include the establishment of the Information Technology and Telecommunications Division in July 2000, various incentives, and the commitment of resources for education and infrastructure building. The Ministry of Science and Technology launched the National Information Technology Policy in August 2000. It was developed by a team that included working groups on the following: human-resource development; IT in government and databases; IT market development and support; IT fiscal issues; telecoms, convergence and deregulation; cyber law, legislation and intellectual-property rights; IT research and development; Internet development; software export; e-commerce; and incentives for IT investment. Total spending (by the government and private sector) on information, communications and technol-

ogy in Pakistan was US\$10bn during 2005/06. Various e-commerce projects and initiatives were underway in the public and private sectors in August 2006. The government said in May 2004 that it has planned new IT and e-commerce projects worth well over PRs4.5bn up to 2007, and by then it aims to produce 100,000 graduates a year in IT studies from the seven new IT universities it has already set up. Pakistan is part of the 15-member Asia Pacific Council for the Facilitation of Procedures and Practices for Administration, Commerce and Transport. The council aims to support the United Nations Centre for the Facilitation of Procedures and Practices for Administration, Commerce and Transport. Pakistan is a member of the Asia Pacific Council for Trade Facilitation and Electronic Business, a non-governmental organization that promotes trade facilitation, electronic business policies and activities in the Asia–Pacific region.

1.3 E-commerce: Growth of e-commerce

Pakistan has a number of barriers to electronic commerce, including inadequate infrastructure (insufficient telephone lines and frequent power failures); relatively few Internet users; and lack of security for online transactions. The government is working to overcome these problems and has made some progress. The number of Internet users in Pakistan is growing fast. According to the government's economic survey for 2005/06, there were an estimated 2.1m Internet subscribers and about 10m Internet users in June 2005 (latest figures available), and Internet access had expanded from 29 cities in August 2000 to 2,339 cities and towns by June 2006. Optical-fiber networks were available in 500 cities in June 2006, compared with 53 cities in August 2000. Pakistan had 170 Internet service providers in June 2006. The Sustainable Development Networking Program (SDNP), funded by the UNDP, started providing e-mail services and then Internet connectivity beginning in 1993. This remained the country's largest network until 1996. The government began allowing private Internet Service Providers (ISPs) in 1995. Paknet, a fully owned subsidiary of Pakistan Telecommunication Company, the formerly government-owned telcoms firm, began offering ISP services in 1999. Paknet is Pakistan's largest ISP, followed by cyber.net, part of the local Lakson Group. Other leading ISPs include Comsats, Brainnet, Fascom, Supernet, Worldtel (an affiliate of Worldtel Canada) and Net Sol Connect (owned by NetSol Technologies of the US and the Akhter group of the UK).

Telecom's deregulation has resulted in an increase in the country's teledensity, especially in mobile telephony. Landline teledensity (the number

of landline phone connections per 100 persons) was 3.9% in June 2006, compared with 3.6% the previous year; whereas cellular density (the number of cellular connections per 100 persons) was a substantial 21%, up from just 7%, over the same period. These improvements should help spur the use of the Internet and e-commerce. During August 2006 various e-commerce projects and initiatives were underway in the public and private sectors, including electronic-government projects worth US\$300m at the federal and provincial level. For example, a five-year, US\$30m project funded by World Bank at the State Bank of Pakistan (the central bank) to interlink the countrywide regional office network of the central bank was almost complete. A real-time gross settlements (RTGS) project with backward linkages to commercial banks and the clearing house is scheduled to be completed by end-2006. The Pakistan Software Export Board (PSEB) has a number of programmes to activate the local information-technology (IT) sector. For example, the Bridge 2002 programme seeks to computerize small and medium-sized enterprises and to provide projects to local software companies, with technical and financial assistance from the board. Another programme, the GEMS-2002, was launched in August 2002 to incubate small software companies, providing logistics support, infrastructure, and marketing and financial guidance. The PSEB also provides financial subsidies and technical support for various training programmes and for securing internationally-recognized quality certifications. Software-technology parks have been established to develop the IT industry in Lahore, Karachi and Islamabad. But a software-technology park set up in Peshawar in June 2004 was abandoned because of lack of funds and poor infrastructure. Other IT incentives include the following: IT companies qualify for an income tax exemption on software-export revenues until June 30th 2016. Software exporters may retain 35% of their earnings in foreign-exchange accounts. Computers and related hardware are exempt from customs duties, though the 2006/07 budget subjected them to a 15% sales tax. Depreciation on computer equipment was raised to 30% (from 10%) in the 2001/02 budget. Financing options provided by banks and development finance institutions for IT-sector contracts are acceptable as collateral for the export-finance facility. Accreditation and Quality Testing Councils are being set up to ensure a high standard of IT education in the public and private sector.

1.4 E-commerce: Foreign investment

Foreign investment of 100% is permitted in the telecommunications sec-

tor. About 100 IT and telecoms companies from the United States, Europe and Japan have offices in Pakistan, including Oracle, Cisco Systems, International Business Machines, Microsoft and Intel. Two leading ISPs have foreign connections: Worldtel is an affiliate of Worldtel Canada and NetSolConnect is owned by NetSol Technologies of the US and the Akhter group of the UK. Foreign investors are allowed to invest up to 100% in software companies, and foreign interest in Pakistan's technology sector has been increasing. Local entrepreneurs have set up around 100 call centers in recent years in Pakistan; one of the first was a call-centre that Align Technologies (US) set up in 2000. The United Nations Industrial Development Organization and the World Bank also support projects for information-technology development.

2. Literature Review

E-business is fundamentally transforming industry structures by enabling unprecedented networked business models facilitated by the Internet. The fundamental thesis of this ongoing study is that innovation in e-businesses can be theoretically understood by distinguishing between innovation in e-business models and innovation at the systems level. Innovation management theory and knowledge-based theory of the firm provide rich conceptual bases for exploring the relationship between business model innovations and IS innovation. Three research questions guide this study: (1) What are the relationships and complementarities between business model- and information system-level innovation in e-business? (2) How are knowledge structures altered in different modes of systems level and business model innovation? (3) How must firm knowledge be managed in such environments? This study hypothesizes that the ability to recognize the mode of innovation at both the business model and systems level is the precursor to the firm's ability to address any emergent e-business market opportunity. (*al et Amrit Tiwana, Ephraim R. McLean-2001*)

Scientists communicate to brainstorm ideas and be creative, formulate research questions, solve experimental or theoretical problems, disseminate results, and get feedback. Several authors emphasize the importance of communication to science. Garvey (1979) states: "communication is the essence of science." Abelson, an editor of the journal *Science* said, "without communication there would be no science" (1980, quoted in Lacy & Bush, 1983, p. 193). The peer-reviewed journal article – polished, archived, and findable – is only one facet of the scholarly communication process. Science is inherently social and informal scholarly scientific communication forms the backbone that connects scientists and enables scientific progress. E-business is defined as Internet-

mediated integration of business processes, applications, and information systems (Kalakota & Robinson, 1999). Until the emergence of e-business, IS has largely played a facilitative and relatively peripheral role in business, largely focusing on improving operational efficiencies, cost *Amrit Tiwana, Ephraim R. McLean 456*. Structures and effectiveness. Now, however, it would be fair to claim that e-business would not be possible if it were not for the information systems that facilitate it. The role of IS has become unprecedentedly central to e-business. The trade press estimates that e-business will account for as much as 37% of all transactions in some industries by 2003 (*Business Week*, June 9, 2000). Corresponding to this growth, spending on e-business software development is expected to grow to \$78 billion over the same time frame. Even though firms around the globe are rushing to build e-business systems, their rates of failure are alarmingly high. Failures have largely been blamed on poor execution and alignment of IS projects rather than on the failure of the technology to perform (Singh & Ambrose, 2000). The inability of firms to recognize the precise nature of an innovation can lead to “competency traps” (Levinthal, 1994), and can even create “negative competencies” (Ciborra, 1996). This study contends that innovation management provides the theoretical basis for mitigating risks of mindless reapplication of old approaches (Robey & Boudreau, 1999) that might be unsuited to the present e-business environment.

Information and communication technologies have transformed our world in many ways; yet, informal scholarly scientific communication forms a socio-technical interaction network in which communication is influenced by technology but defined by the social structures of scientists and their organizations (Kling, McKim, & King, 2003; Lamb, Sawyer, & Kling, 2000). Researchers know a lot about informal scholarly scientific communication through a rich history of study of the social structure of science and scholarly communication prior to the widespread availability of information and communication technologies such as e-mail, the internet, and instant messaging. The purpose of this paper is to review what we know about informal scholarly scientific communication and to examine exactly what influences information and communication technologies have had on the existing structures. An understanding of this interaction of social structure and media effects is important to better support the information seeking and communication of scientists.

3. Research Methodology & Data Collection

Data collection is underway for testing the aforementioned relationships among e-business Shah model and its application to entrepreneur business context. A cross-case analysis method is being used to collect data in two ways:

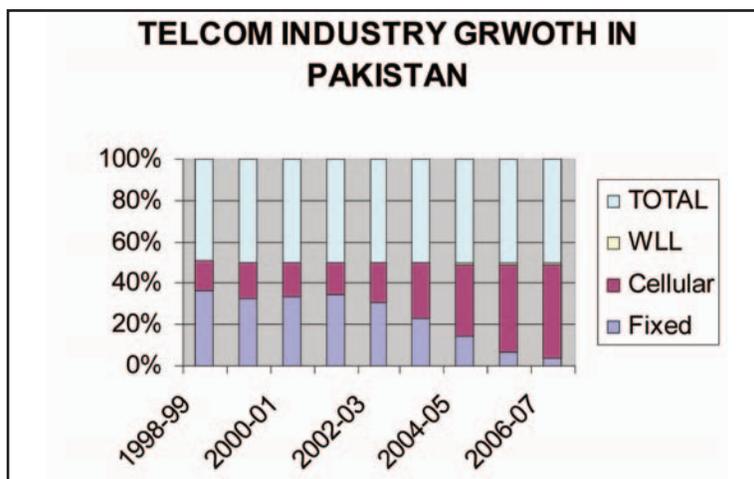
(1) questionnaire-based empirical data from IBA-Sukkur firm and (2) qualitative multi-case data using interviews with members, managers, and customers of the different entrepreneur business people. Data from these two sources will be first tested empirically and analysis text are truly architecturally destabilized will be gained through interviews with IS developers who build these systems. By using a multiple-informants approach for both quantitative data and qualitative data, a more accurate depiction of individual cases will be possible.

4. Model: 1-Telecom Growth Model

The dynamic growth on the telecom sector has been supported by prudential government policies. Telecommunication has improved many folds in the last couple of years. The growth in the telecom industry has shown that the number of customers is increasing day by day.

Years	Fixed	Cellular	WLL	TOTAL
1998-99	1.55	0.60		2.05
1999-2000	1.33	0.70		2.03
2000-01	1.65	0.80		2.45
2001-02	2.50	1.16		3.66
2002-03	2.69	1.62		4.31
2003-04	2.94	3.31		6.25
2004-05	3.43	8.29	0.17	11.89
2005-06	3.37	22.16	0.66	26.19
2006-07	3.32	35.79	1.06	40.17

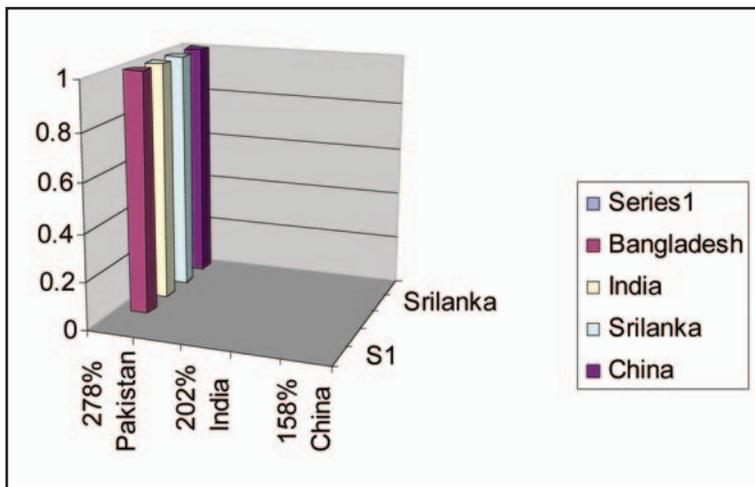
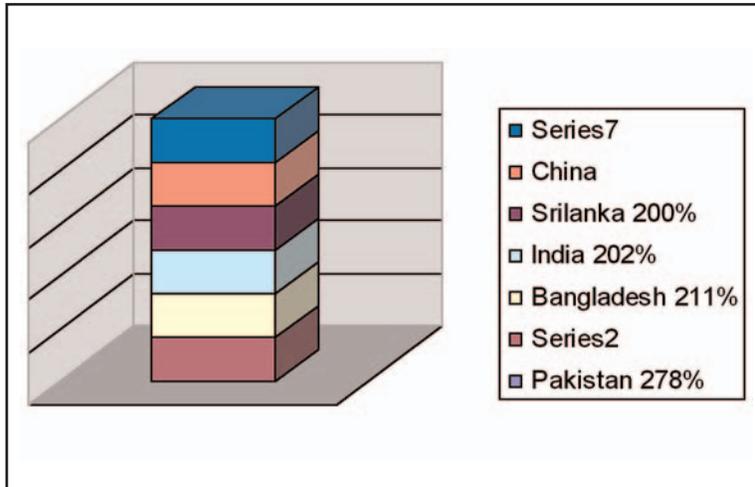
Source-PTA-Annual Report-2004-05-06.



4.1 Telecom Growth in South Asia

Pakistan	34.5	20.8	278%
Bangladesh	11.6	7.9	211%
India	108.0	9.9	202%
Sri-Lanka	107	7.7	200%
China	426.4	32.5	158%

Sources: http://blogs.nmscommunications.com/communications/2006/08/telecom_growth_.html



5. Model-2. SSS-Model for Telecom Industry

The system of equations estimated was based on SSS-model as Appears below:

$$\lambda_i, \Pr(Y_i = y_i | x_i) = \frac{e^{-\lambda_i} \lambda_i^{y_i}}{y_i!}, y_i = 0, 1, 2, \dots$$

$$z_i = \frac{|(y_i - \hat{\mu}_i)^2 - y_i|}{\sqrt{2\hat{\mu}_i}} \text{ on } w_j = \frac{g(\hat{\mu}_i)}{\sqrt{2\hat{\mu}_i}}; i$$

Description of the Model

λ_i = Measures the I value based services in Telecom Industry by Entrepreneurs

Y_i = Marketing services

P_n = Facilitation in term of mobile security services

P_{ni} = Individual tracking (GPS, Galileo)

Y_i = Sim-Activation

Z_i = Information

Var = Link to network

μ_i = Quality of Service

g = Incentives for customers

a = Free telephone set

b = free mints, phone calls & SMS and MMS.

C = free entertainment calls

D = video conference facility

SSS= Shah, Shah & Shaikh

6. Results and Discussion

λ_i = Measures the I value based services in Telecom Industry by Entrepreneurs, the ideas which develop the link and effectiveness of the SSS model and it also measures the traditional approaches of the present telecom industry, Y_i = Marketing services, which can offer by the entrepreneur in SSS-model, the new and innovate ideas are linked with different mobile industry to boost up their sale, in this model we will achieve the maximum possible results of sale of the different businesses of telecom industry. P_{ni} = Individual tracking (GPS, Galileo) this offer is given to all consumer on their request. In current scenario this is an innovative and new approach for those who want to contact with their mates. P_n = Facilitation in term of mobile security services. In Pakistan many people are snatching mobile phones and on gun point they snatch

mobile in big city, to handle all these thing SSS model help the entrepreneurs that they can easily provide services which is associated with the security of mobile phones in Pakistan by adopting different codes and this offer is giving every one who so ever wanted the services. g = Incentives for customers, In SSS model we will provide the quality of services to the customers and it help the new small business firm to get a addressed the issues of customers. a = *Free telephone set*, we give free mobile sets for the customers that attack the new customers as well as existing customers., b = *free mints, phone calls & SMS and MMS*, currently we have very few mobile service provider no one is offering a this service if we will given this to the customers in Pakistan defiantly the customers will be increased in number as well as possible image for the entrepreneurs. C = *free entertainment calls*, free call facility is given to the customers but time limit will be given. D = *video conference facility*, currently no one is providing this facility but this SSS model is giving this opportunity to all the customers who has access to mobile.

The growing competition in the vibrant cellular market of Pakistan has compelled the operators to offer very competitive services. Four out of five GSM operators perform well during the year exhibiting tremendous growth in their subscriber base and provided the market with new and innovative services which were discussed in the SSS model and these innovative approaches creative a long term customer's relationship. SSS model is the link between the Mobile industry, Telecom industry and final end users, and it was revealed that this model has significant role in building up customer relation as well as develop the market share in the mobile communication which very healthy development in the competitive era. The above models help the customers to get the best quality of service. The paper reviews the nature and extent of the take-up of these technologies by small firms, and the digital divides that have emerged. SSS-Models of e-business adoption by SMEs are examined, the model being contrasted with the more realistic approaches of customer's satisfaction Barriers to the adoption of e-business technologies and techniques are discussed, together with factors that promote successful adoption, of e-business and the major role played by the entrepreneurs to facilitate the customers. The challenge for many entrepreneurs business in deploying e-business solutions has been the complexity and cost of putting the hardware and the appropriate software and middleware together. Not anymore. The recent SSS Model helps the consumers to solve all the problems in the world of e-business.

7. Conclusion

The knowledge-based theory of the firm will be empirically operationalized in an e-business context. The distinction between business-model SSS help

entrepreneurs to facilitate customer's with new and innovate ideas make customer more attractive. The relationship between the two will help guide managerial decision making by better informing them of the interdependencies between them. Finally, by articulating shifts in knowledge structures under architectural model SSS of innovation and supporting them with case based data; further guidance will be provided to managers for managing firm-high level knowledge. This study further suggests viewing firms' to incorporate the strategies that will lead to customer satisfaction by creating *platforms* for launching new product as an entrepreneur and service offerings. This study proposes a comparative framework for contrasting e-business growth models within the context of small and medium enterprises. Growth models act both as a mechanism for understanding e-business growth and as an aid to implementation and policy development. This study reviews the performance of SSS e-business growth models, which are identified via perspective, stages and content. Furthermore, the study provides a narrative of the identified models appraising layout, characteristics, number and purpose of stage. A comparative framework is presented illustrating perspective, development, emphasis, empirical verification, focus, source and barriers to growth.. The paper concludes by identifying the need for a representative and empirical model and the appropriate methodology to attain this outcome. SSS model also identifies key e-commerce business drivers and to document e-business entrepreneur utilized in the telecommunication industry. One particular e-business SSS model will be explored in great detail of providing the quality services. It is concluded that the take-up of e-business by SMEs needs to be seen as a means to an end and not an end in itself. Government preoccupation with the take-up of the technology of e-commerce needs to be tempered with a more realistic view of how small firms operate.

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