

ABSTRACT

There is little doubt that electronic commerce has penetrated many people's—and particularly business'—lives in one way or another, during the past few years. But how many businesses really use the Internet? How do they use it? And how are they planning to use it? When it comes to a precise evaluation of the importance of e-commerce, including its dimensions, growth-rate and role in economic growth and development, uncertainty prevails. The IT sector has shown appreciable progress over the past three years in Pakistan. The Ministry of Science and Technology took a leading role in bringing the IT sector into the center of government policy. The National IT Policy and Plan of Action (August, 2000) was the driving force to strengthen the IT Sector in Pakistan. The government encouraged import of IT equipment, by significantly reducing custom duties; there were tax-incentives for income generated through IT business, bandwidth costs were brought down manifold and Internet-access was provided to more than 800 cities/towns/villages.

On the supply side of the equation, this is an enviable progress. However, there are challenges on the demand side. The number of businesses using e-commerce is negligible. There is a cumulative effect of human-resource capacity-constraints, old business processes, a high proportion of informal economy, lack of trust in electronic-payment culture, insufficiency of legal systems to enforce contracts, etc. E-commerce capacity-constraint can be overcome through ensuring the value of their resources, both for the businesses and customers. If a technology cannot provide value for their resources, its use cannot be sustainable in the long-term. The sustainability is directly proportional to the value provided by the technology and its demand and spread.

INTRODUCTION

There is little doubt that electronic commerce has penetrated many people's lives (particularly business) in one way or another during the past few years. But how many businesses really use the Internet? How

do they use it? And how are they planning to use it? When it comes to a precise evaluation of the importance of e-commerce, including its dimensions, growth-rate and role in economic growth and development, uncertainty prevails. The IT sector has shown appreciable progress over the past three years in Pakistan. The Ministry of Science and Technology took a leading role in bringing the IT sector in the center of government policy. The National IT Policy and Plan of Action (August, 2000) was the driving force to strengthen the IT Sector in Pakistan. The government encouraged import of IT equipment, by significantly reducing custom duties; there were tax incentives for income generated through IT business, bandwidth costs were brought down manifold and internet access was provided to more than 800 cities/towns/villages. On the supply side of the equation, this is an enviable progress. However, there are challenges on the demand side.

E-READY STATUS OF PAKISTAN

The number of businesses using e-commerce are negligible. There is a cumulative effect of human-resource capacity-constraints, old business-processes, a high proportion of informal economy, lack of trust in electronic-payment culture, insufficiency of legal systems to enforce contracts, etc. E-commerce capacity-constraint can be overcome through ensuring the value of their resources both for the businesses and customers. If a technology cannot provide value for their resources, its use cannot be sustainable in the long term. The sustainability is directly proportional to the value and its spread that a technology generates.

International perceptions of Pakistan's e-readiness status are poor

- i. Respected rating-agencies all place Pakistan very low in terms of e-readiness. The Economist Intelligence Unit's 2002 ratings place Pakistan 57th out of 60 of the world's largest markets, lower than Iran, Nigeria, Indonesia and Vietnam. It has however improved by three places since 2001 (60th). Business culture is determined to be decisive in the scoring. Pakistan does not shape well in this area.

* Programme Officer, Sustainable Development Livelihoods Unit (UNDP), Saudi Pak Tower, Islamabad. Email: naeem.ahmed@undp.org
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- ii. No e-commerce policy is currently in place and no national strategy to e-enable Pakistan is apparent. The Ministry of Science and Technology have taken ownership of the e-commerce drive, as part of its Information Technology Policy. The Policy does devote a small section to e-commerce, but mainly at the technical level. The lack of a clear national strategy, and a lack of coordination between ministries is a potential weakness in the drive to develop e-commerce in Pakistan.
- iii. Due to an aggressive IT policy, the telecommunications infrastructure has improved dramatically over the past 18 months. More than 850 cities were now connected to the Internet, of which 240 were connected by optical fibre. There has been a dramatic increase in cellular subscribers from 225,000 (January 2001) to 1150,000 (August 2002). Liberalisation has freed the wireless frequency; VSAT licenses are not required. Pakistan is about to license additional fixed-line telecommunications-providers, thereby ending the current monopoly of the state telecommunications company, PTCL - www.ptcl.com.pk. The terms of the licenses are still being debated.
- iv. The Internet infrastructure has experienced similar improvements. Availability of Bandwidth was increased from 32 mb/s (August 2000) to 410 mb/s (October 2002). Bandwidth-costs have dropped from USD 70,000.00 per month for a 2 Mb link to around USD 3,500.00 per month. This however is still costly when compared with developed countries.
- v. There are still problems with "last mile connectivity". The quality of connections between users and ISPs needed upgrading. The number of Internet subscribers grew from 130,000 (June 2000) to 1180,000 (August 2002). It was estimated that there were more than 4 million actual users (sharing subscriptions, business, Internet cafes, etc).
- vi. Broadband-wireless solutions are in process of being rolled out in four cities. Paknet.com (a subsidiary of PTCL) are behind the roll-out and claim that they will offer connectivity between 64k and 128k lines for around Rs 45,000 to Rs 65,000 per month. Plans are afoot to install these solutions in educational institutions. It is believed that this solution will fast-track connectivity,

enabling companies to connect to their remote subsidiaries without having to lease or build a wired infrastructure.

Specific to E-commerce

- vii. Progress made by banks in developing an e-payment infrastructure over the last three years was important. Of the 4881 branch offices, 570 (8%) have been connected using Internet technology and 2036 are computerized. There are two national switches. To encourage further developments in the e-enablement of banks, the Ministry proposed the publication of the e-readiness status and rankings of Banks. The problem is that the National Bank, which has the most branches and provides services to smaller cities and towns, is a long way off full automation and connection. The e-payment infrastructure under its current development-approach is, therefore, not addressing the needs of the majority of Pakistanis.
- viii. In the report of the State Bank of Pakistan, it was noted that no financial network was deployed to cater for the need of the national inter-banking financial traffic. No Real-Time Gross Settlement payment system (RTGS) was in place. Budget has been earmarked for significant investment in the national electronic-payment infrastructure, so this situation is expected to improve dramatically over the next 12 months.
- ix. The promulgation of the Electronic Transaction Ordinance is a first and important step in creating the required regulatory environment, in which e-commerce can flourish. This ordinance provides various stakeholders, such as banks, Customs and others, to implement their applications. The ordinance mainly deals with the legality of electronic contracting and non-repudiation. The next areas of concern that need to be addressed are data and privacy protection and consumer protection.
- x. E-government initiatives (actually implemented) are few and far between. There have been some recent developments allowing people to make utility payments from ATMs. Utility companies, such as the power supply and telecommunications monopolies, have entered into agreements with some of the banks to allow these payments to be made from various pay-points.

- xi. E-education is beginning to show some interesting developments. Applications for university entrance can now be done online. Virtual University has recently been launched and is expected to be fully operational by next year. UNIDO has partnered with Virtual University to promote e-learning via internet-based short-courses for upgrading skills of human resources, as well as for women-development. There is a positive attitude to e-learning, which bodes well for this option to be utilized.
- xii. E-Trade facilitation is in its infancy. PRAL is embarking on a pilot with Port Qasim, to allow electronic submissions of declarations. There has been work on simplifying trade-procedures, which will assist in bringing about e-trade. Obstacles such as impeding trade regulations (i.e. exchange controls), could stand in the way of fully fledged e-trade facilitation.
- xiii. E-commerce-promotion initiatives and surveys are only recently beginning to surface. An ITU sponsored training-programme on E-commerce was run during April 2002. The ITCN Asia 2002 conference "Emerging IT Trends and Business Opportunities" was held in Karachi during August 2002. The conference focused mainly on ICT, with a section on e-commerce. The Industrial Information Network (IIN) has conducted a survey on levels of use of ICT among small companies. A net-readiness survey of SMEs is currently being conducted by UNIDO. UNIDO is starting working-groups in areas of e-commerce and ICT, and for usage and adoption of e-commerce and ICT for industry, as well as for marginalized poor and women.
- xiv. General e-commerce activity is virtually non-existent. It is estimated that there are less than one hundred companies engaged in some form of e-commerce in Pakistan. The reasons range from limitations on the physical infrastructure to a lack of user-interest. Most small-company systems are not automated, hence not in a position to benefit from the various e-commerce applications such as CRM, etc.

In summary, the e-readiness of Pakistan can be described as reasonable in terms of Internet infrastructure, promising in terms of e-payment infrastructure and a regulatory environment, and very

weak in terms of e-commerce applications and general user demand.

GENERAL IMPRESSIONS

(UNCTAD/UNDP Study on E-commerce in Pakistan, September 2002)

- i. Most agree that there have been impressive strides in the development of the Internet infrastructure over the past year. However there is still a great deal of skepticism about the quality of this connectivity. Certain key-towns, which host textile mills, still have very poor connectivity, making it difficult for textile companies to e-enable their systems (Textiles is the largest export oriented sector).
- ii. There was a note of disillusionment among some of the people interviewed about previous e-commerce initiatives. There were a few that had been launched about two years ago, which had lost their momentum. Project-proposals were approved, funds allocated, but implementation was halted due to key-people in the responsible departments not understanding these projects. Money allocated was therefore returned to the treasury. It appears that the Ministry of Commerce was the responsible party in this case.
- iii. There is a sufficient level of intellectual capacity within Pakistan to mobilize an e-commerce drive. IT specialists abound and key government and business people have already invested a great deal of time in the question of e-commerce. These people need to be included in the initiatives proposed by UNCTAD.

VIEWS ON INTERNET INFRASTRUCTURE

- i. The quality of most of the Internet Service-Providers (ISPs) is still in question. Significant investment in their infrastructure is lacking. This is understandable due to relatively low subscriber-numbers. Large disparities in Internet access-speeds and reliability therefore exist.
- ii. The quality of the Internet-access does pose concerns for applications. Economic viability of applications depends on a critical mass of users. If this user-base is affected by quality of access, negative psychological barriers will develop, making it more difficult to achieve assimilation.

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VIEWS ON PARTICIPATION OF ENTERPRISES IN E-COMMERCE

- i. Most parties agreed that the main challenge to developing e-commerce lay at the level of enterprise and government department. Most players in this area were oblivious of what e-commerce is, and subsequently feel no imperative to move in this direction.
- ii. A major obstacle is the virtual non-existence of automation in most enterprises. Many entrepreneurs run their businesses from a book, no records or data are in electronic form. Many do not even have computers, and relatively few use email or the Internet.
- iii. A possible objection to automation and e-enablement is the fear of transparency that such a process will bring. Automation will increase the reporting-capability and highlight information about every aspect of the business. One of the basic requirements of electronic business is that the business holds a bank account and transacts through that account. There is a perception that this economic activity will be auditable, providing a tool for the taxation and other authorities.
- iv. There have been government-subsidized programmes to support small enterprises to automate and to undergo ISO certification. These programmes have had limited effect so far. Many of the people interviewed felt that the ISO certification was just window-dressing and a way for consultants to extract government funds. Many SMEs are willing to play along with these consultants, as they just want the certification to satisfy their customers and are not interested in installing proper quality-management systems.
- v. Various B2B portals have been set up, but none have had economic success to-date, due to low usage. This is possibly because of the lack of focus of these portals, which is not unique to Pakistan. These type of portals have not had great success in other countries either.
- vi. Exporters in certain sectors are beginning to feel pressure from international buyers to provide data. The main challenge facing these enterprises is a lack of managerial and, hence, business-culture to comply with the demands of the 21st century.
- vii. Certain sectors of the exporting industry have already begun to feel the demands of e-enablement from their foreign buyers. Exporters in the sports and surgical-goods sectors have

been the first to feel this. Large buyers in the USA are placing reporting demands, as well as wanting to process and track their orders via the Internet. Those companies that have not automated the internal business-processes will find this demand impossible to satisfy. Some buyers, such as Waltons, have already started to disqualify suppliers unable to comply.

- viii. The State Bank has been proactive in e-enablement initiatives. They have a task-force in place involved key-people from the banking industry. As a result, the National payments infrastructure is taking shape. This task-team seems to have had an impact on the e-payment status of banks. This is a good indication that a well managed task-team can achieve its objectives and have national impact.

E-COMMERCE FOR CIVIL SOCIETY

People have not yet felt the positive impact of e-commerce. The majority of the population is oblivious of discussions and developments in this area. There are, however, positive signs of increasing use of e-mail and the Internet. Some estimates put general usage of email and Internet at around 4 million people (about 3.5% of the population).

INSTITUTIONAL CAPACITY

- i. Capacity to implement e-commerce related projects already exists in Pakistan. This capacity ranges from a group of key people, a few task-teams to business-associations and business-development-agencies. The banking industry has an active task-force on e-commerce. As part of the UNCTAD Trade Facilitation Action Programme, a National Trade Facilitation Committee has been formed.
- ii. UNIDO held an ICT conference in May 2002, with the Federal Ministry of Science and Technology, Federal Secretary IT & Telecom, MD PSEB, and private sector IT SME leaders. The conference served as a launch-pad for Government, private sector, and international organization joint-collaboration in ICT. Subsequently, UNIDO is now forming alliances and partnerships with overseas Pakistani networks, universities, Government, and private-sector leaders that are users or providers of e-commerce and ICT.
- iii. SMEDA (Small and Medium Enterprise Development Authority - www.smeda.org.pk) is of

particular interest. They are an organization focused on developing business-capacity in small-business in Pakistan. They have good infrastructure in Karachi and Lahore, employing over 100 MBAs. They have impressive training-programmes throughout Pakistan. Courses include training on international competitiveness. Management has expressed strong interest in supporting e-commerce initiatives. They have had success in mobilizing their membership to use the Internet for research.

- iv. The Industrial Information Network (IIN – www.iin.org.pk – a joint developmental project of SMEDA, SME Bank, COMSATS & UNIDO) has been active in both promotion and research in e-commerce initiatives. They produced a needs-assessment on e-commerce, in cooperation with UNIDO, of small enterprises in the textile and leather sectors.

PRO-POOR E-COMMERCE

Officials from the UNDP expressed concern that the focus was on modernization and hence most efforts were aimed at bringing mainstream-businesses into the e-commerce arena. More had to be done in identifying how e-commerce can make a difference to the lives of the poor, and in particular, how e-commerce can be used to empower rural woman.

CONCLUSIONS

Conclusions are summarized below.

- a. There is a very strong sense that the Pakistan leadership is fully behind the development of ICT applications in Pakistan. The current IT policy is extensive and has number elements that provide a positive environment to the development of e-commerce. Their speedy action in promulgating the Electronic Transactions Ordinance indicates a willingness to make the required legislative adjustments.
- b. The determination of the Ministry of Science and Technology to put in place an e-commerce strategy and policy is a very important development, on which the optimism of this report is based. The fact that it is a local initiative and that a task-force has been put in place provides a ready-made vehicle to which technical assistance can be applied.

- c. There is a positive movement toward developing a physical e-commerce infrastructure. The Government have earmarked significant funding in this direction. There are signs of private-sector investment and there is a movement toward the liberalization of the telecommunications provision. This bodes well for more competition and a broader range of services.
- d. The banks are showing commitment toward offering e-payment applications for enterprises and for civil society in general. E-government and E-business applications are now possible in main cities.

The fact that certain institutions and individuals have already initiated activities to develop applications of e-commerce indicates that there is a local base from which to launch the project. Organisations such as SMEDA and UNIDO provide a capacity to implement enterprise e-enablement programmes. It is expected that the various sector-associations will be receptive to e-commerce initiatives.

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