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“E-BUSINESS IN PAKISTAN”

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Executive Summary

Economic history has witnessed transformation from Agriculture based to Manufacturing based economies over the time. This transformation had its effects on social structure of the communities, as new types of jobs were created in the manufacturing industries, and new life styles of metropolitan culture evolved. A similar transformation is now taking place as; business has grown global over the last years, making the present business atmosphere further competitive, fast and fluid. Technological and political events taking place across the world affect us as strongly as something happening in our neighborhood.

The two most recent and prominent developments of present times that have changed our economic activities are: -

- 1. Globalization and,*
- 2. Increase in Information and Communication Technologies (ICT).*

Globalization is most obvious, as the volume of global trade and products have expanded many folds. The world economies are opening-up to new world horizons. Developments in Information Technology has increased the pace of the events, bringing new products to markets from all over the world, increasing the global watch and reach of the organizations, as a result of this the companies are forced to reduce the costs and product development time of their products.

Second prominent development taking place during this time is the increase in ICT. These ICTs (particularly Intranets/Internet) have provided new channels and means of acquiring knowledge and opened new doors of promising opportunities like e-business. Sharp decrease in cost of computer hardware and software, plus improvement in software development has been responsible for increasing

number of firms using computers in their business processes. Computer has proved itself to be a revolutionary tool for management, its data & information processing capabilities has improved management in all domains. "Knowledge centric" view of firm has lately emerged. "The economists, academics, and commentators agree that a firm can best be seen as a coordinated collection of capabilities that is somehow bounded by its own history. And limited in its effectiveness by its own current cognitive and social skill" (Prusak -2001)

The "New Economic" system emerging in global arena presently has a growing share of "E-enabled and E-businesses". Productivity in manufacturing is increasing and a decline in factory jobs (as a share of total employment) is noted. Jobs in services sector are growing, as most of the industries and firms are organizing work around technology. The sources of competitive advantage in "Old Economy" also called "Heavy Economy" like access to raw material, transportation routes, or customer markets, a large labor pool are now becoming less important. The new economic success factors are effective homegrown technological innovation and entrepreneurship. The most valuable input for the firm now is the skill and talent of their workforce; a pool of skilled workers is the most important industry location factor. This emerging economic system due to its reliance on Knowledge is loosely defined as "Knowledge based Economy".

The objective of this paper is to bring the topic of E-Business in focus with respect to Pakistan's standing from a technological and economic viewpoint. A detailed discussion on the e-business and e-readiness in the world scenario is made. At the end of the paper some suggestions to improve the current state have also been given.

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CHAPTER 1: Introduction

1.1 Proposal Statement

E-business (electronic business), derived from such terms as "e-mail" and "e-commerce," is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners. One of the first to use the term was IBM, when, in October 1997, it launched a thematic campaign built around the term. Today, major corporations are rethinking their businesses in terms of the Internet and its new culture and capabilities. Companies are using the Web to buy parts and supplies from other companies, to collaborate on sales promotions, and to do joint research. Exploiting the convenience, availability, and worldwide reach of the Internet, many companies, such as Amazon.com, the booksellers, have already discovered how to use the Internet successfully.

Increasingly, much direct selling (or e-tailing) is taking place on the Internet of computer-related equipment and software. One of the first to report sales in the millions of dollars directly from the Web was Dell Computer. Travel bookings directly or indirectly as a result of Web research are becoming significant. Custom-orderable golf clubs and similar specialties are considered good prospects for the immediate future.

How Pakistan has reacted to such changes and how Pakistan's economy not only can benefit from E-Business but also how E-Business can change the way SME's operate and are viewed are all questions that are as yet unanswered.

1.2 Learning Objectives

The main objective of this study is to:

- Get more knowledge about how E-Businesses work and what is the required infrastructure. Analyze the government's policies in this regard.
- Find out how any business can benefit from an e-presence and how solely online infrastructures should be started; &
- Based on the findings, define the business processes and requirements of a startup company.

1.3 Literature Review

E-business was preceded by the growth of the Internet in two phases: the Communication Phase and the Information Phase. The Communication Phase (1993 to 1997) can be defined by the rapid adoption of e-mail. From AOL's "carpet bomb" approach — CD in the mail, CD at Target, CD with your detergent — to Hotmail's "viral marketing," this marked a period where e-mail and Internet awareness spread infectiously, revolutionizing how people and business communicated.

As online communication grew, so did the desire to provide information, and so was born the Information Phase. "Brochure ware" — websites that provided primarily organization and contact information — was the hallmark of the Information Phase.

To help us navigate through the rapid growth of websites came the search engines. From Yahoo! to Infoseek and Lycos to Hotbot, search engines helped Web surfers find the information they were seeking quickly. (Now they help you find information that the highest bidder wants you to find quickly, but that's another story)

Brochure ware gave way to Web tools and software solutions that made information sharing two-way. From surveys to shopping carts, e-mail lists and chat services, websites became a way to interact with site visitors. Many tools were designed to gather demographic data to help build the dotcom revenue model. Because brochure ware had borne some resemblance to magazine layouts, it seemed natural that the advertising model should apply to the Web.

And that's when the insanity clicked in. Fueled by billions of dollars, companies generated cocktail-napkin business plans. Consultants, software vendors and hardware vendors lined up to feed. Companies with names like Blue Martini and US Web were born to help deep pockets build beautiful, functional websites. Exorbitant costs were racked up to build sites that sold everything from pet supplies to furniture. Every business needed to transact business on the Internet, so they tried. And many failed. However, some succeeded, and succeeded big.

The dotcom era was replete with many lessons, but a key one was the huge appetite of customers to transact business on the Web. And that appetite fed the growth of the systems, skilled personnel and technology that could support it. Without this crucial experience, e-business may not have proved its value so quickly.

B2C Lessons

E-business solutions ultimately succeed when they relieve pain points for the customer. Amazon did more than sell books online. College students could turn to Amazon as an alternative source when bookstores ran out of texts and other materials needed quickly for classes. Ebay delivered a veritable bazaar of products and put money in people's pockets. Both companies solved pain points.

Channel integration was another hard lesson to learn. In the beginning, many brick-and-mortar stores flat out refused to unite their Web presence with internal back office systems. Some companies went so far as to create a separate Web entity, fretting about "cannibalization" of existing channels. Yet it turned out that eating your own young would be better than leaving them on the doorstep of your competitor. Survey results now indicate that the online shopper is different from the in-store shopper. Customer-focused companies such as The Gap worked quickly to adapt systems to allow customers to purchase products online and return them easily at retail outlets. This vision gave the customers options, and elevated e-commerce from a glorified mail order service to a customer value creation and retention opportunity. Bottom line: brick and mortars are still trying to learn the lesson that to succeed on line, they must integrate their website fully into the business.

Among the successful integration tales are online banking, online travel booking, much improved holiday retail sales support, and bill pay services. Traditionally these services were a chore and inconvenience for the customer (who had to get to the bank between 8-5, find a travel agency, remember to mail bills on time). Customers now have control, while companies are able to cut costs and concentrate on process improvement and service enhancement. The lesson here is put the customer in the driver seat, remove a pain point, and make some dollars.

B2B Lessons

B2C lessons carry over into B2B applications. While the dot com era proved the viability of e-business, the over-the-top costs for software license fees, consulting fees, hosting fees and hardware solutions did not. Just like the stock market, the industry was due for major corrections. These fees unaffordable for many and a critical factor in bankruptcy filings for others spawned alternative solutions.

Programmers rose to the occasion and began developing workarounds in the form of robust open source code. Free in many cases, and a nominal charge for businesses, open source reliability evolved, and allowed many companies to test solutions in the marketplace and to get the upper hand on costs. The introduction of Apache Web servers and Linux Operating Systems, made industry stalwarts take notice. These solutions now offer affordable, reliable options for budget-conscious entrepreneurs, businesses, governments and non-profits.

EDI, formerly reserved for proprietary solutions, can now be tied to Web interfaces via XML and Web Services, connecting back-office systems to front-end Web applications. The goal is to integrate systems and deploy solutions that can respond rapidly to changing market conditions. The combination of robust open source code, skilled personnel and affordable, transaction-based models that Application Service Providers (ASPs) are adopting, allow companies to better serve their customers. And that's what B2B is all about.

A Disruptive Business Model

There is a third phase of the Internet — the Distribution Phase. The Web is the only global channel that can communicate to customers, deliver product and service customers 24/7/365. (The Internet does deliver "digital" product, whether it is information that someone pays for — a mailing list, stats, a report, an online course— or content — stock footage, e-books, e-tickets for planes and movies, software, games, music such as the new iTunes service launched by Apple. For some companies and their customers, the Internet is the entire channel and the whole relationship exists over the Web.) This is unmatched in history. The supply chain and selling chain are integrated into one mega-channel.

By looking backwards, some lessons can be discovered in what's going on around us today. Among the current lessons:

The Web at Your Service

E-business lends itself to a self-service model. This has been successfully applied in B2C (e.g., Amazon, Ebay, Dell). There are still opportunities to create this in B2B, where employees and customers can fulfill business requirements when and how they want.

Small Businesses Poised to Explode

Seventy percent of America's small businesses (defined as those with less than 250 employees) do not have a Web presence, according to an October 2002 report from the Small Business Administration. For bigger fish, small businesses have the potential of becoming new clients, and, through partnerships, also providing access to niche customers. They can act as a virtual sales force, extending a company's reach to better serve these customers. The possibilities are exciting. Ebay, an innovator in this area, has become so successful with its power sellers that it is able to offer health insurance to them. New concepts such as this will proliferate in the future.

Increases in International Community and Competition

For many years, the U.S. led the way in Internet adoption. But that's changing. From Latin America to India, countries are poised to compete for business internationally. In the future, you may see supply chains integrate to get better economies of scale. Covisint, the big automotive industry portal, is a good example. Differentiators and competitive advantage will be achieved by knowing your customers.

Face Challenges With Partners

Gaining brand trust in a 24/7 world will be challenging. Forging partnerships, outsourcing services to experts and developing relationships with international partners will go a long way to attaining company business goals. Protecting intellectual property as well as copyright laws will continue to be a thorny issue, and the right partner can be an asset.

By its nature, e-business is a disruptive business model. It cannot be fully embraced without altering business. Organizations that develop flexible, adaptable resources, both physical and human, will succeed. Process development does not go away, but in fact becomes the lynchpin of successful system implementations and adaptations.

The new e-business organization, which includes its partners must be globally aware, system-oriented and customer sensitive. To succeed, the organization has to become a moving target: constantly differentiating itself by absorbing customer feedback and developing products and services that create loyalty

1.4 Research Techniques

Data will be collected for this research by using different sources and techniques.

1.4.1 Primary Resources

Although most data about e-businesses in general can be found out through secondary resources, to fully know the workings of e-businesses in Pakistan primary data collection is necessary. Conducting interviews with personnel from IT firms, couriers and ISPs will serve the purpose primary data collection.

1.4.2 Secondary Resources

For Secondary data collection different sources will be used including

- Newspapers
- Economic Journals
- Magazines
- Internet

CHAPTER 2: Literature Review

2.1 Definition

There are various definitions for e-business.

- The buying and selling of goods and services on the World Wide Web.¹
- Sites created for the purpose of selling goods and services over the Internet, regardless of whether the actual sale takes place on the Internet or via fax, phone or another means provided by the website.²

But for a manager the term e-business has as many meanings as there are functions in an organization. For each entity in a business relationship, e-business possesses a different potential and a different meaning. E.g. from a communications perspective it defines the delivery of information and services by electronic means. From a pure business perspective it is the application of technology to business transactions and workflow. For a customer, e-business consists of tools to cut the cost of, and improve the quality of, services whereas from an online perspective e-business is the buying and selling of products and information on the Internet.

A holistic view would be to consider e-business as the application of technology for the automation of business transactions. Electronic business is the transformation of the spectrum of business processes using technology. It includes:

- Enterprise Resource Planning
- Supply Chain Management
- Workflow and document management
- Process reengineering and knowledge management
- Web-based processes and customer relations management

¹ Definition from whatis.com

² Janice Anne Rohn, Siebel Systems, Inc.

2.2 Terminologies

2.2.1 E-Business

E-business is the electronic evolution of traditional business values; reduce operating costs, improve efficiency, accelerate revenue growth and create higher levels of customer satisfaction.

Using Internet technologies, e-business aims to improve and transform conventional business practices by streamlining communication processes, reducing administration and creating added value across all business activities - return on investment is key.

Key benefits include:

- Reduce business-operating costs
- Increase profitability through efficiency
- Increase revenue growth
- Improve customer service
- Improve market exposure
- Improve internal and external communications with customers, suppliers and strategic business partners
- Return on investment
- E-business has a number of components, each of which relies upon the speed, reliability and flexibility of your IT infrastructure.

2.2.2 IT Infrastructure

Infrastructure is the key to unlocking the potential of any Internet Based Business Solution (IBBS) as it determines the flexibility, reliability and adaptability of the key business systems across multiple platforms.

2.2.3 E-Commerce

E-commerce is very much a driving force behind e-business, but it is not simply the setting up of an online sales channel - it is concerned with the streamlining of business practices to improve efficiency, business

responsiveness and ultimately reduce the cost of sales using Internet based technologies.

By seamlessly linking customers, suppliers and strategic business partners through the integration of secure online business applications, it is possible to build closer relationships based on improved information accuracy and greater personalized levels of service.

Key benefits include:

- Improved efficiency
- Improved responsiveness
- Cost reductions
- Improved trading relationships - customers, suppliers, strategic business partners
- Market adaptability
- Scalability

2.2.4 E-Customer Relationship Management

Customer service expectations have changed dramatically over the years and the Internet is a major contributor responsible for this transformation. Customers now expect accurate, personalized, self-serviceable information that can be accessed 24 hours a day, 7 days a week, 365 days a year making it even more important than ever to plan and implement effective systems.

Applying Internet Based Business Solutions (IBBS) to customer service models and practices can dramatically improve customer retention as expectations can be continually exceeded at all points of customer contact; be it via a website, the phone or even in a meeting.

Internet technologies can improve business practices by allowing information synergy across different departments be it, accounts, sales, manufacturing or distribution. By seamlessly linking these different areas of your business with accurate information, the customer experience can be maximized ensuring that expectations are not only met but also exceeded.

Key benefits include:

- Information synergy across business departments
- Improved customer retention
- Introduction of customer self-service
- Fully personalized
- 24/7/365 customer service platform
- Open channel to communicate
- Real time updateable information - maximizing customer information accuracy
- Ability to pre-empt customer problems
- Allow you to understand your customers better
- Make more informed decisions based on accurate information

2.2.5 E-Supply Chain Management

Supply chain management is mission critical to any businesses infrastructure and when effectively introduced throughout the company can dramatically enhance business processes and create added value across all business activities, be it in product development stages or the distribution process.

The changes in customer expectations and requirements have meant that companies must now work their supply chains on a number of different levels including order status, dynamics and ability to manage changing market environments.

Key benefits include:

- Improved productivity
- Increased customer satisfaction
- Lower operating costs
- Reduced administration errors
- Improved time management
- Increased responsiveness

2.2.6 E-Business Intelligence

'Understanding the needs of your customers is one thing, but to truly manage customer relationships is another'.

In today's highly competitive business environment, accurate market and consumer intelligence is a crucial factor in the drive for success. Utilizing Internet Based Business Solutions (IBBS), it is possible to turn massive amounts of readily available information into valuable, decision aiding resources, therefore increasing a company's ability to satisfy customer needs more profitably.

G-Forces Web Management Ltd can work closely with your business to integrate key Customer Relationship Management (CRM) systems that will allow your company to accumulate and share vital information effectively, therefore supporting day to day decision making processes.

Key benefits include:

- Improved decision making
- Higher customer retention
- Increased satisfaction levels
- Marketing cost reductions
- Customer focused
- Increased profitability

2.3 Categories of E-Business

E-business can take many forms

- Business to Business (B2B)

B2B systems are based on existing EDI/MRP/ERP systems. B2B efforts are directed towards reducing procurement and distribution costs, facilitating tighter inventory control, allowing better supply

chain management and implementing customer relation management.

- Business to Consumer (B2C)

B2C revolves around organizations selling a product or service directly to the consumer. It may take the form of complete electronic transactions as in the case of software or transaction less product delivery as in the case of books or even informational shopping such as in the case of cars. It was spurred by and dependent upon the existence of web protocol.

- Peer to Peer (P2P)

It includes in-line auctions (Ebay averages 1.7 million visitors per day) where auctions may be timed auctions or reverse auctions. It may also take the form of collaborative information exchanges as was in the case of the now defunct askme dot com. Freetranslation is another example and P2P file sharing networks such as Gnutella and the clients that use those networks such as Kazaa have become more popular now.

2.4 Initial Findings

E-Business is the next step in the evolution of business management using technology. E-Businesses strive to:

- Manage large operations with attention to detail both temporally and functionally
- Reach new customers via e-channels
- Develop new bit based product forms
- Develop new communication based services

2.5 What is E-Business

E-business (electronic business), derived from such terms as "e-mail" and "e-commerce," is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners. One of the first to use the term was IBM, when, in October 1997, it launched a

thematic campaign built around the term. Today, major corporations are rethinking their businesses in terms of the Internet and its new culture and capabilities. Companies are using the Web to buy parts and supplies from other companies, to collaborate on sales promotions, and to do joint research. Exploiting the convenience, availability, and worldwide reach of the Internet, many companies, such as Amazon.com, the booksellers have already discovered how to use the Internet successfully.

Increasingly, much direct selling (or e-tailing) is taking place on the Internet of computer-related equipment and software. One of the first to report sales in the millions of dollars directly from the Web was Dell Computer. Travel bookings directly or indirectly as a result of Web research are becoming significant. Custom-orderable golf clubs and similar specialties are considered good prospects for the immediate future.

With the security built into today's browsers and with digital certificates now available for individuals and companies from Verisign, a certificate issuer, much of the early concern about the security of business transaction on the Web has abated and e-business by whatever name is accelerating.

E-commerce (electronic commerce or EC) is the buying and selling of goods and services on the Internet, especially the World Wide Web. In practice, this term and a newer term, e-business, are often used interchangeably. For online retail selling, the term e-tailing is sometimes used.

E-commerce can be divided into:

- E-tailing or "virtual storefronts" on Web sites with online catalogs, sometimes gathered into a "virtual mall"
- The gathering and use of demographic data through Web contacts
- Electronic Data Interchange (EDI), the business-to-business exchange of data
- E-mail and fax and their use as media for reaching prospects and established customers (for example, with newsletters)
- Business-to-business buying and selling
- The security of business transactions

2.6 Benefits of E-Business

Top concerns for CEO's in today's business environment are:

- The threat posed by competitors;
- Controlling costs;
- Finding new opportunities; and
- Improving responsiveness;
- Better customer focus and service.
- E-business is capable of delivering these benefits.

Business of all sizes in all sectors are using the Internet in many different ways - to work with partners and suppliers, for procurement, for internal activities such as knowledge sharing and new product development, and much more.

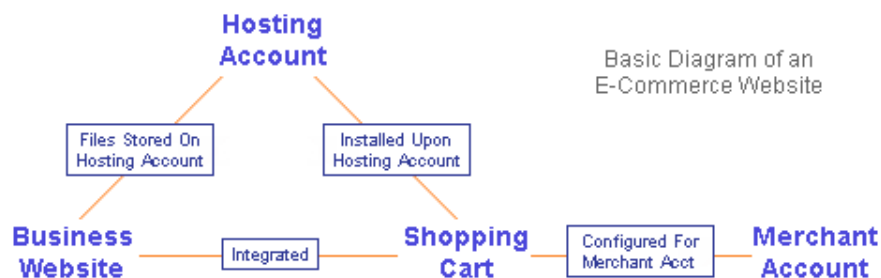
Companies such as United Technologies, J. Sainsbury, General Electric and many others are reporting benefits from the use of the Internet. These benefits include:

- Improved speed of response;
- Cost savings;
- Improved communications, information and knowledge sharing;
- Reductions in inventory;
- Improved efficiency and productivity;
- Harmonization and standardization of procedures;
- Better transfer of best practices;
- Acquisition of new customers and increased sales;
- Improved customer service.

However the benefits are achieved not by technology (which is an enabler) but by addressing strategy, technology, organization, people and business processes as an integrated whole and making changes in all these dimensions. The Internet is just like other information technologies - change management, good implementation practices and clear business objectives are required in order to reap the full benefits.

2.7 Core Components Of An E-Commerce Website

If you break down any E-Commerce website into its primary components, you would see that it basically involves combining an easy-to-use, manageable website design with a Shopping Cart Program and an Online Merchant Account -- then setting those up through a reliable E-Commerce Hosting provider. If you acquire each of these components and integrate them together, you will have the basics you need to start attracting customers and selling your products & services online.



Hosting Account - You will need an account from a web-hosting provider and you will need to register a domain name for your business (such as www.adamssite.com). To ensure security of online transactions, your E-Commerce Hosting account must have SSL capability -- which is provided by SSL Certificates.

Business Website - For this component you will either have to build a site yourself, or hire a professional design company to do it for you.

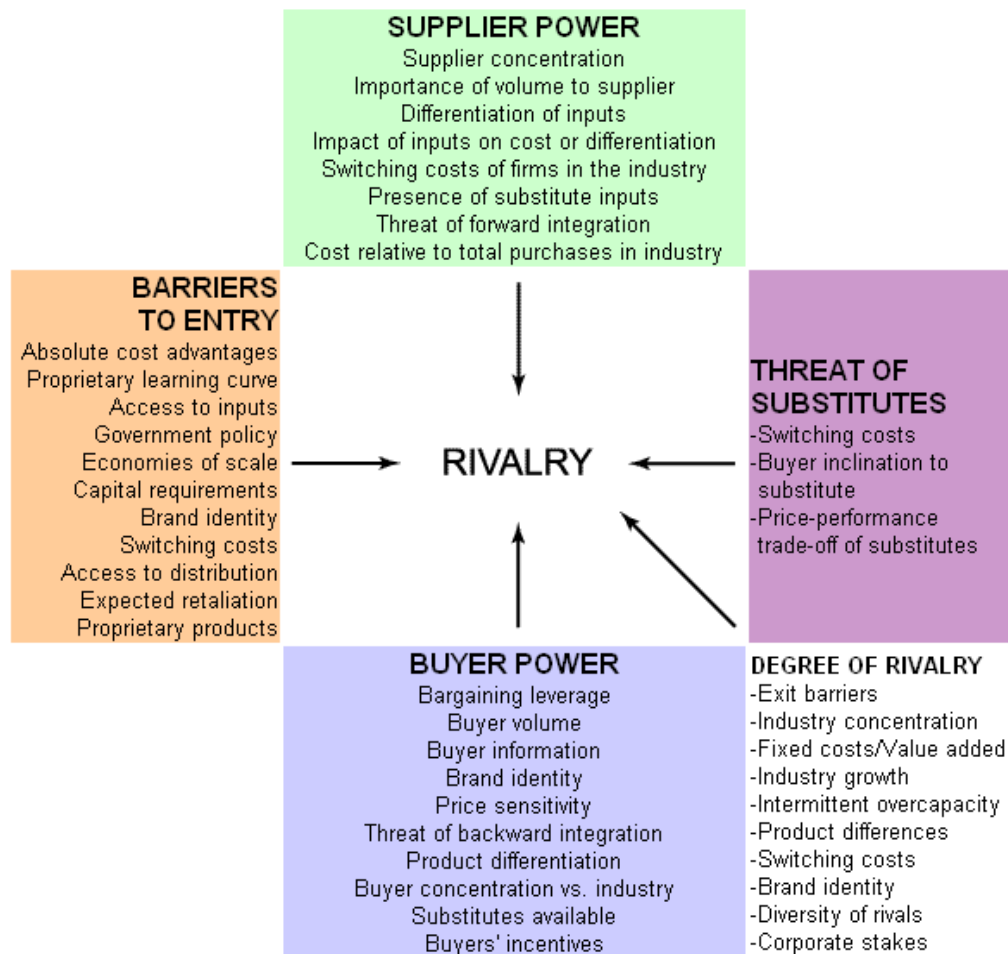
Shopping Cart - As with your website's files, any shopping cart program you select will need to be uploaded to your hosting account and installed there. A good Shopping Cart Program will have its own online administrative web page that allows you to easily add / remove product offerings and update information & pricing on each product.

Merchant Account - In order to process credit card orders and eChecks from Internet customers, you will need to select an affordable merchant account provider. You can obtain an Online Merchant Account either from your bank or from one of many merchant account services available on the Internet.

2.8 Porter's Five Forces

The model of pure competition implies that risk-adjusted rates of return should be constant across firms and industries. However, numerous economic studies have affirmed that different industries can sustain different levels of profitability; part of this difference is explained by industry structure.

Michael Porter provided a framework that models an industry as being influenced by five forces. The strategic business manager seeking to develop an edge over rival firms can use this model to better understand the industry context in which the firm operates.



2.8.1 Rivalry

In the traditional economic model, competition among rival firms drives profits to zero. But competition is not perfect and firms are not unsophisticated passive price takers. Rather, firms strive for a competitive advantage over their rivals. The intensity of rivalry among firms varies across industries, and strategic analysts are interested in these differences.

Economists measure rivalry by indicators of industry concentration. The Concentration Ratio (CR) is one such measure. A high concentration ratio indicates that a high concentration of market share is held by the largest firms - the industry is concentrated. With only a few firms holding a large market share, the competitive landscape is less competitive (closer to a monopoly). A low concentration ratio indicates that the industry is characterized by many rivals, none of which has a significant market share. These fragmented markets are said to be competitive. The concentration ratio is not the only available measure; the trend is to define industries in terms that convey more information than distribution of market share.

If rivalry among firms in an industry is low, the industry is considered to be disciplined. This discipline may result from the industry's history of competition, the role of a leading firm, or informal compliance with a generally understood code of conduct. Explicit collusion generally is illegal and not an option; in low-rivalry industries competitive moves must be constrained informally. However, a maverick firm seeking a competitive advantage can displace the otherwise disciplined market.

When a rival acts in a way that elicits a counter-response by other firms, rivalry intensifies. The intensity of rivalry commonly is referred to as being cutthroat, intense, moderate, or weak, based on the firms' aggressiveness in attempting to gain an advantage.

E-Commerce in Pakistan is still in an infant stage as an industry and in particular the P2P business is un-chartered territory. The rules of the game, the norms of the industry have yet to be defined and anyone who takes the initiative now would be the first to market and will have the luxury of defining the standards of the industry.

2.8.2 Threat of Substitutes

In Porter's model, substitute products refer to products in other industries. To the economist, a threat of substitutes exists when a product's demand is affected by the price change of a substitute product. A product's price elasticity is affected by substitute products - as more substitutes become available, the demand becomes more elastic since customers have more alternatives. A close substitute product constrains the ability of firms in an industry to raise prices.

The competition engendered by a Threat of Substitute comes from products outside the industry. The price of aluminum beverage cans is constrained by the price of glass bottles, steel cans, and plastic containers. These containers are substitutes, yet they are not rivals in the aluminum can industry. To the manufacturer of automobile tires, tire retreads are a substitute. Today, new tires are not so expensive that car owners give much consideration to retreading old tires. But in the trucking industry new tires are expensive and tires must be replaced often. In the truck tire market, retreading remains a viable substitute industry. In the disposable diaper industry, cloth diapers are a substitute and their prices constrain the price of disposables.

While the treat of substitutes typically impacts an industry through price competition, there can be other concerns in assessing the threat of substitutes. Consider the substitutability of different types of TV transmission: local station transmission to home TV antennas via the airways versus transmission via cable, satellite, and telephone lines. The new technologies available and the changing structure of the entertainment media are contributing to competition among these substitute means of connecting the home to entertainment. Except in remote areas it is unlikely that cable TV could compete with free TV from an aerial without the greater diversity of entertainment that it affords the customer.

The e-commerce business's alternative would be the traditional market place and even though e-commerce provides much more than the traditional market place does, inventive usage of already established media such as TV is bridging that gap. The biggest advantage that e-commerce would have in its p2p form is giving the customer the best possible price and easy accessibility to all sort of products. Traditional super stores through TV channels (shopping network) can accomplish the same and some are doing so in Pakistan.

2.8.3 Buyer/Seller Power

The power of buyers is the impact that customers have on a producing industry. In general, when buyer power is strong, the relationship to the producing industry is near to what an economist terms a monopsony - a market in which there are many suppliers and one buyer. Under such market conditions, the buyer sets the price. In reality few pure monopsonies exist, but frequently there is some asymmetry between a producing industry and buyers.

In a typical P2P ecommerce business, each participant can be a buyer as well a seller. And the nature of this marketplace dictates free information flow and thus better prices for all buyers. The buyer power is thus very high and there is a pronounced asymmetry between the buyers and seller (even though they are in a wider scope the same entity).

2.8.4 Barriers to Entry / Threat of Entry

It is not only incumbent rivals that pose a threat to firms in an industry; the possibility that new firms may enter the industry also affects competition. In theory, any firm should be able to enter and exit a market, and if free entry and exit exists, then profits always should be nominal. In reality, however, industries possess characteristics that protect the high profit levels of firms in the market and inhibit additional rivals from entering the market. These are barriers to entry.

Barriers to entry are more than the normal equilibrium adjustments that markets typically make. For example, when industry profits increase, we would expect additional firms to enter the market to take advantage of the high profit levels, over time driving down profits for all firms in the industry. When profits decrease, we would expect some firms to exit the market thus restoring market equilibrium. Falling prices, or the expectation that future prices will fall, deters rivals from entering a market. Firms also may be reluctant to enter markets that are extremely uncertain, especially if entering involves expensive start-up costs. These are normal accommodations to market conditions. But if firms individually (collective action would be illegal collusion) keep prices artificially low as a strategy to prevent potential entrants from entering the market, such entry-detering pricing establishes a barrier.

Different businesses have tried different approaches to running a p2p marketplace business. Their experience shows that it is an industry distinguished by low profit margins. This would ordinarily turn away would be investors and new business startups but since this is new industry and has close to no players in the industry, barriers to entry are on the whole a bit low and there are incentives given the government to promote the development of this industry.

Barriers to entry are unique industry characteristics that define the industry. Barriers reduce the rate of entry of new firms, thus maintaining a level of profits for those already in the industry. From a strategic perspective, barriers can be created or exploited to enhance a firm's competitive advantage. Barriers to entry arise from several sources:

CHAPTER 3: Global Perspective

3.1 Internet Economy

The Internet Economy force has become a more integral part of the global economy than ever before, creating jobs and increasing productivity in companies across the economy. The impact goes far beyond dot coms, as Internet Economy forces are transforming traditional companies and jobs. Seven of every 10 of these jobs are traditional, rather than high-tech, jobs, according to a new study by the University of Texas' Center for Research in Electronic Commerce. Of the Internet-related jobs, only 28 percent are in Information Technology, which ranks below sales and marketing (33 percent) as the job function generating the most Internet-related employment. Dot com companies are a very small part (about 9.6 percent) of the overall Internet Economy.

According to the study³, the Internet Economy now directly supports more than 3.088 million workers, including an additional 600,000 in the first half of 2000. This is about 60,000 more than the number employed in insurance industry and double the real estate industry. These jobs were created both by the explosion of the Internet and by companies shifting workers to take advantage of the benefits created by embracing the Internet. Employment in Internet Economy companies is growing much faster than employment in the overall economy. Total employment at Internet Economy companies grew 10 percent between the first quarter of 1999 and the first quarter of 2000. Internet-related jobs at Internet Economy companies grew 29 percent during the same period. Both of these figures far exceed the growth of non-Internet related jobs in these same Internet Economy companies, which grew 6.9 percent during the same period.

The Internet Economy generated an estimated \$830 billion in revenues in 2000, a 58 percent increase over 1999. The \$830 billion in revenues is a 156 percent increase from 1998, when the Internet accounted for \$323 billion in revenues. Internet economy revenue is growing twice as fast as Internet Economy employment. In 2000, for example, second quarter revenue grew 58.8 percent over the second quarter of 1999. Meanwhile second quarter employment grew

³ Center for Research in Electronic Commerce, Graduate School of Business, University of Texas at Austin, © 2004

22.6 percent over 1999. Internet-related revenue is a growing piece of corporate revenue as a whole. For Internet Economy companies, Internet revenue is one-fifth the size of non-Internet revenue – but growing three times as fast as corporate revenue as a whole. Revenue grew by \$23 billion between the first quarter of 1999 and first quarter of 2000. Internet-related revenue grew \$68 billion during the same period. Internet Economy employees are increasingly productive employees. Revenue per employee increased an estimated 11.5 percent in the first half of 2000 – a key indication of the productivity gains generated by the Internet. In the first half of 2000, Internet Economy companies generated \$1 of every \$5 in revenue from the Internet. Even as the overall economy experiences fluctuations, Internet Economy forces continue to reshape the economy in unprecedented ways, producing savings for businesses and consumers alike. And reports of strong online holiday spending levels in 2000 (a study by Goldman Sachs and PC Data, for example, said total Internet holiday spending rose to \$8.7 billion from \$4.2 billion in 1999) provide yet another sign of the way customers and retailers now routinely use the Internet.

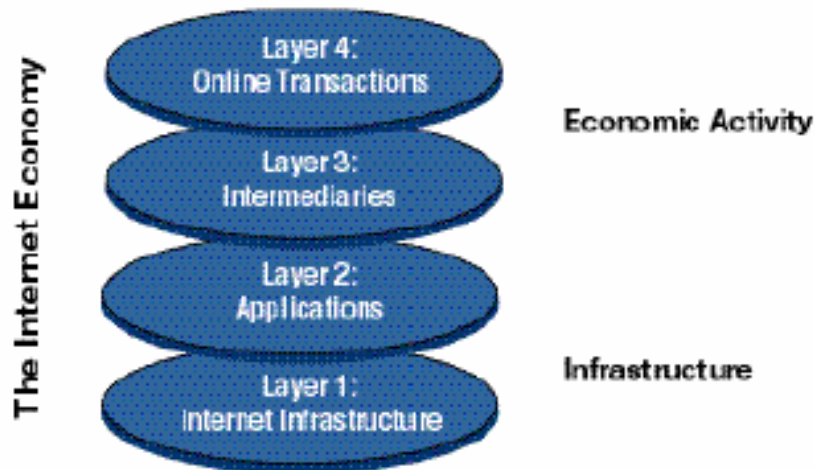
The Internet is increasingly becoming part of the basic business model for many companies, laying the groundwork for even more impressive growth during strong economic conditions. The Internet is rapidly becoming an integral part of the traditional economy – like telephones, elevators and personal computers over the years – leading to the day when there will be no separate measure of the Internet Economy.

3.2 Defining the Internet Economy

Research in Electronic Commerce has almost exclusively focused on the number of Internet users, demographics, and various aspects of online buying and selling. However, to better understand the impact of the Internet across all business sectors, the focus turned to measuring the size and growth of the Internet Economy. The first challenge was to determine how to define this emerging economy.

The first step in defining the Internet Economy was to build a conceptual framework and taxonomy. The Internet Economy can be conceptualized as a collection of IP-based networks, software applications and the human capital that makes the networks and applications work together for online businesses, and agents (corporations and individuals) who are involved in buying and selling

products and services in direct and indirect ways. There is a natural structure or hierarchy to the Internet Economy that can be directly traced to how businesses generate revenues. Based upon this type of structure, researchers broadly classify the Internet Economy into infrastructure and economic activity categories.



The infrastructure category is further divided into two distinct but complementary "layers": the Internet Infrastructure Layer, which provides the physical infrastructure for Electronic Commerce, and the Internet applications infrastructure, which includes software applications, consulting, training and integration services that build on top of the network infrastructure, and which makes it feasible for organizations to engage in online commerce. The economic activity category is also subdivided into two layers: electronic intermediaries and online transactions. The Intermediary Layer involves the role of a third party in a variety of capacities: market maker, provider of expertise or certification that makes it easier for buyers to choose sellers and/or products, search and retrieval services that reduce transaction costs in an electronic market, and other services that facilitate the conduct of online commerce. The Transactions Layer involves direct transactions between buyers and sellers like manufacturers and e-tailers.

While the position can be taken that e-tailers are also an intermediary between the consumers and manufacturers, the illustration above highlights the difference between an e-tailer like Amazon.com and an electronic intermediary in the purest

sense of the term. An intermediary would also specify where a book or CD could be found at the lowest price or shortest delivery time or some combination of criteria specified by the consumer. By contrast, Amazon.com only displays its own catalog, prices, availability, and lead-time. Of course, it is true that for the case of e-tailers the difference between the two topmost layers could be a matter of degree.

3.2.1 Layer One: The Internet Infrastructure Indicator

A physical economy critically depends on an efficient infrastructure involving transportation, energy, raw materials, and skilled workforce. Likewise, the growth of a digital economy depends on the ubiquitous presence of high speed and intelligent electronic networks and the ability to share any type of content between all agents in the economy. Accordingly, the Internet Infrastructure Layer includes companies that manufacture or provide products and services that make up the Internet network infrastructure. This layer includes companies that provide telecommunications and fiber backbones, access and end-user networking equipment necessary for the proliferation of Internet-based Electronic Commerce. This layer includes the following types of companies:

- National and regional backbone providers (e.g. Qwest, MCI WorldCom)
- Service Providers (e.g. AOL, Earthlink)
- Network equipment for backbones and service providers (e.g. Cisco, Lucent, 3Com)
- Conduit manufacturers (e.g. Corning)
- Server & client hardware (e.g. Dell, Compaq, HP)

3.2.2 Layer Two: The Internet Applications Infrastructure Layer

Products and services in this layer build upon the above IP network infrastructure and make it technologically feasible to perform business activities online. In addition to software applications, this layer includes the human capital involved in the deployment of Electronic Commerce and E-Business applications. For example, Web design, Web consulting, and Web integration are considered as a part of this layer. This layer includes the following categories:

- Internet consultants (e.g. MarchFIRST, Scient)
- Internet commerce applications (e.g. Microsoft, Sun, IBM)

- Multimedia applications (e.g. RealNetworks, Macromedia)
- Web development software (e.g. Adobe, Allaire, Vignette)
- Search engine software (e.g. Inktomi, Verity)
- Online Training (e.g. Sylvan Prometric, SmartPlanet)
- Web-enabled databases (e.g. Oracle, IBM DB2, MS SQL Server — only Internet/Intranet related revenues are counted here)
- Network operating systems
- Web hosting and support services
- Transaction processing companies

3.2.3 Layer Three: The Internet Intermediary Indicator

Internet intermediaries increase the efficiency of electronic markets by facilitating the meeting and interaction of buyers and sellers over the Internet. They act as catalysts in the process through which investments in the Infrastructure and Applications Layers are transformed into business transactions. While much has been written about a large-scale disintermediation in the transformation of the physical to the digital economy, the Internet necessitates a new breed of intermediaries whose roles are naturally information and knowledge intensive. In the physical world, intermediaries are distributors and dealers, whose primary role is to increase the efficiency of distribution and to lower buyer transaction costs by locating close to the customer population. By sharp contrast, physical proximity is not an issue on the Internet; online search, evaluation, communication, coordination, assurance of vendor and product/service quality are the important aspects in the Internet Economy. Internet intermediaries play a critical role in filling information and knowledge gaps, which would otherwise impair the functioning of the Internet as a business channel. This layer includes:

- Market makers in vertical industries (e.g. VerticalNet, PCOrder)
- Online travel agencies (e.g. TravelWeb, Travelocity)
- Online brokerages (e.g. E*trade, Schwab.com, DLJ direct)
- Content aggregators (e.g. Cnet, Cdnet)
- Portals/Content providers (e.g. Yahoo!, Excite)
- Internet ad brokers (e.g. DoubleClick, 24/7 Media)
- Online advertising (e.g. Yahoo, ESPN Sportszone)
- Web-based virtual malls (e.g. Lycos shopping)

3.2.4 Layer Four: The Internet Commerce Indicator

This layer includes companies that generate product and service sales to consumers or businesses over the Internet. This indicator includes online retailing and other business-to-business and business-to-consumer transactions conducted on the Internet.

- E-tailers selling books, music, apparel, flowers, etc. over the Web (e.g. Amazon.com, 1-800-flowers.com)
- Manufacturers selling products direct such as computer hardware and software (e.g. Cisco, Dell, IBM)
- Transportation service providers selling tickets over the Web (e.g. Delta, United, Southwest)
- Online entertainment and professional services (e.g. ESPN Sportszone, guru.com)
- Shipping services (e.g. UPS, FedEx)

It is important to note that many companies operate at multiple layers. For instance, Microsoft and IBM are important players at the Internet infrastructure, applications, and Internet Commerce Layers, while AOL/Netscape has businesses that fall into all four layers. Similarly, Cisco and Dell are important players at both the Infrastructure and Commerce Layers. Even though the four-layer Internet Economy framework makes it time-consuming to separate revenues for multi-layer players, the framework presents a more realistic and insightful view of the Internet Economy than a monolithic conceptualization that does not distinguish between different types of activities. Further, the multi-layered approach lets us analyze how companies choose to enter one Internet Layer, and later extend their activities to the other layers. Each layer of the Internet Economy is critically dependent on every other layer. For instance, improvements in layer one can help all other layers in different ways. As the IP network infrastructure turns to broadband technologies, applications vendors at layer two can create multimedia applications that can benefit from the availability of high bandwidth. Companies at layers three and four can benefit from improvements in both layers one and two — providing media-rich content to consumers as well as new digital products and service (information and software delivered online). This interdependence also exhibits itself in the form of alliances where conduit and content providers or applications vendors and e-tailers join hands to create bundled offerings that are valuable to consumers.

CHAPTER 4: Pakistan and E-Business

Information technology (IT) has assumed unprecedented importance in the global economic arena. In Pakistan, the present government is according a very high priority to this sector. One of the prerequisites for ensuring sustained growth of the industry, maybe the economy, is the provision of a definite framework consisting of policy, legislative, financial, and operational guidelines, which can provide a stable umbrella for growth.

4.1 E-Readiness

The Information Age is increasing the gap between the rich and poor, developed and developing countries and creating a society of information haves and have-nots.

Countries with greater powers of acquisition have easier access to new technologies and take greater advantage of them. Given this situation, it is imperative that developing countries redouble their efforts to prepare themselves to successfully meet the challenge and maximize the opportunities that the Information-Based Economy offers. This is not an easy job – there are many dimensions and factors associated with what it means to achieve a level of preparedness in the modern interconnected or digital world.

In the Information Age countries without high levels of resources can hope to accelerate development if they are able to develop knowledge, which, combined with adequate ICT⁴-related infrastructure, can allow successful integration into knowledge-based economies. But before discussing how development can be accelerated in those areas identifying those elements of success is needed.

⁴ Information and Communications Technology: It is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular context, such as ICTs in education, health care, or libraries.

There are many of factors that promote the countries to be e -ready:

- The enormous advantages that ICT will bring along by. It will not only lead to a Simple, Moral, Accountable, Responsive and Transparent (SMART) Government, it will also lead to making the citizens life easy. ICT promises various social and economical benefits as well.
- Secondly, the countries are facing a threat of being left behind.
- Third, international leaders, foreign donors, and lending agencies are integrating ICT into development and aid programs.
- Again ICT is a key weapon in the war against world poverty. When used properly, it offers a tremendous potential to empower people in developing countries to overcome development obstacles; to address the most important social problems they face; and to strengthen communities, democratic institutions, a free press, and local economies.

An e-readiness assessment, when properly applied in a larger process of evaluation, is a first step towards converting good intentions into planned actions that bring real changes to people's lives. E-readiness assessments are meant to guide development efforts by providing benchmarks for comparison and gauging progress. This is an old process adapted to today's technology realities determining the current situation in order to plan for the future and advocate specific changes.

E-readiness assessment can also be a vital tool for judging the impact of ICT, to replace wild claims and anecdotal evidence about the role of ICT in development with concrete data for comparison.

4.2 E-Readiness Models

Over the last three years, a number of 'e-readiness' assessment tools have been developed. On the surface, each tool gauges how ready a society or economy is to benefit from information technology and electronic commerce. On closer examination, the tools use widely varying definitions for e-readiness and different methods for measurement. For example, Harvard University's⁵ model looks at

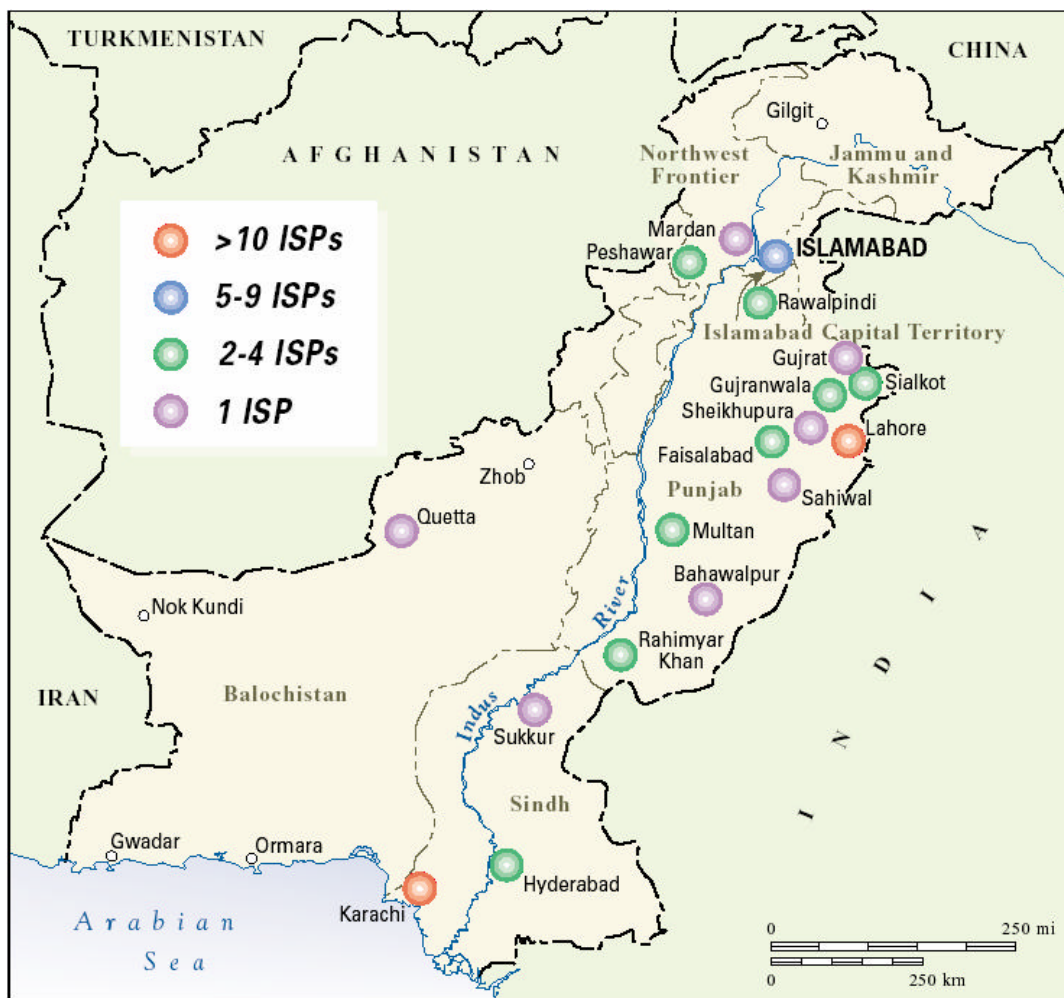
⁵ *Readiness for the Networked World: A Guide for Developing Countries*, Center for International Development, Harvard University, 2000.

how information and communications technologies (ICTs) are currently used in a society, while APEC's⁶ method focuses on government policies for e-commerce.

There are a number of e-readiness models available and each with their own complexity and scope pose a challenge of their own to analyze and implement.

This analysis extends beyond the scope of this report. However a report on how each tool is to be used and what purpose it serves can be found on bridges.org⁷.

4.3 Pakistan's E-Readiness



⁶ *E-Commerce Readiness Guide*, Electronic Commerce Steering Group, Asian Pacific Economic Cooperation (APEC), 2000

⁷ <http://www.bridges.org/ereadiness/report.html>

The EIU⁸ 2001 report on e-readiness placed Pakistan at number 60 in 2001. The complete table can be viewed in Annex 1. These rankings are based on scores derived from EIU's **business environment rankings** and Pyramid's⁹ **connectivity** scores along with 4 other categories.

Connectivity (30%): E-business simply cannot function without adequate telecommunications and Internet infrastructure. "Connectivity" measures the access that individuals and businesses have to basic fixed and mobile telephony services, including voice and both narrowband and broadband data. Affordability and availability of service (both a function of the level of competition in the telecomm market) also figure as determinants of connectivity.

Business Environment (20%): In evaluating the general business climate, the EIU screens 70 indicators covering criteria such as the strength of the economy, political stability, the regulatory environment, taxation, and openness to trade and investment. The resulting "business environment rankings" measure the expected attractiveness of the general business environment over the next five years. Calculated regularly as part of the EIU's Country Forecasts, these rankings have long offered investors an invaluable comparative index for 60 major economies.

E-commerce Consumer and Business Adoption (20%): Payment and logistics systems form the backbone of this set of criteria. Here evaluation of the extent of credit-card ownership as well as the existence of secure, reliable and efficient electronic payment mechanisms, the ability of vendors to ensure timely and reliable delivery of goods, and the extent of website development by local firms.

Legal and Regulatory Environment (15%): The legal framework governing e-business is a vital factor than can enhance or inhibit the development of electronic trading. The extent of legal support for virtual transactions and digital signatures is considered. Ease of licensing and the ability of firms to operate with a minimal but effective degree of regulation are other criteria.

⁸ Economist Intelligence Unit <http://www.eiu.com/>

⁹ Pyramid Research <http://www.pyramidresearch.com/>

Supporting E-services (10%): No business or industry can function efficiently without intermediaries and ancillary services to support it. For e-business markets, these include portals and other online intermediaries, web-hosting firms, application service providers (ASPs), as well as website developers and e-business consultants. The rankings assess the extent to which local companies and organizations have access to these services.

Social and Cultural Infrastructure (5%): Education and literacy are necessary preconditions to a population's ability to navigate the web and drive future domestic Internet development. Because entrepreneurship and risk-taking play such an important role in building new e-commerce models, the national proclivity to business innovation and receptiveness to web content is also assessed.

The business environment rankings are themselves based on 70 indicators. It is a most thorough and comprehensive study based on data collected from sources such as CIA, World Factbook; EIU, Country Risk Service; EIU, Financing Operations; EIU, Investing, Licensing & Trading; Freedom House, Annual Survey of Political Rights and Civil Liberties, 1995-97; Heritage Foundation, Index of Economic Freedom 1995-98; IMF, Annual Report on Foreign Exchange Restrictions; Institute for Managerial Development, World Competitiveness Report; International Labour Organization, International Labour Statistics Yearbook; Transparency International and Gottingen University, International Corruption Rankings; UN, Human Development Report; US Social Security Administration, Social Security Programs Throughout the World; World Bank, World Development Report; World Economic Forum and Global Competitiveness Report.

In 2002¹⁰, Pakistan's ranking improved slightly nudging up to number 57 but still in the category of E-Business Laggards. The complete table is attached as Annexure 2.

Although Pakistan languishes at the bottom of the e-readiness rankings, the situation is not as bad as it seems. There is room to improve ofcourse but improvement is not necessarily in this case. As can be seen in the rankings that:

¹⁰ http://www.ebusinessforum.com/index.asp?layout=rich_story&doc_id=5768

Bigger is not always better: The US may rule the roost, but many of the world's largest economies, including Japan, Germany and France, are outpaced by smaller, more agile competitors, such as the Netherlands, Switzerland and Sweden. What sets these countries apart is the broad accessibility and affordability of the Internet, thanks to state-of-the-art IT infrastructure and high per capita income.

Business culture is decisive. The US tops the rankings because of the degree to which the Internet has become embedded in commercial culture. Nowhere is so much business conducted over the web so routinely. This explains why the US scored highest in the category for e-business supporting services (the consulting and IT services and back-office solutions used to facilitate online business) as well as in the social and cultural category (which considers, among other things, the degree of innovation and entrepreneurship in business). It also explains why Singapore and Hong Kong rank as the most competitive telecomm markets in the world, and among the best equipped, yet don't figure among the top ten countries. While high-grade infrastructure is important, more important is how people use it.

Infrastructure is still evolving. Even top-ranked countries have not yet satisfied consumer demand for fast, cheap, secure and reliable Internet connectivity. High-speed broadband services are not universally available and Internet-ready mobile phones are still in their infancy--even in mobile-crazed Scandinavia.

Governments have wide influence. Internet business thrives when governments have a clear strategy--and money to spend--to develop IT infrastructure. But that's not the only area for official involvement. Successful e-business depends on a strong legal framework that protects private property and encourages entrepreneurship. Increasingly, it also requires Internet-specific legislation. In the crucial category of legal and policy environment, Australia comes in first, followed by Sweden, Switzerland, Finland and the UK. Other countries--even those without a strong e-business culture, such as Mexico and Chile--are enacting smart Internet legislation, recognizing that good laws promote industry growth.

4.4 Pakistan's IT Policy

Thus, the government, as the main facilitator, enabler, and promoter of the IT sector, has evolved an effective national IT Policy and Action Plan that clearly caters to the needs of nurturing the industry and is responsive to the dynamic forces of change that can affect its future growth. The private sector is being brought into the mainstream as the main driver for growth. The guiding theme for the policy is that 'the government shall be the facilitator and enabler to encourage the private sector to drive the development in IT and telecommunications'. This one single element has galvanized the entire Pakistani IT community to participate wholeheartedly in the process and over 200 professionals mainly from the private sector participated in various dialogues and eleven Working Groups meetings over the last four months to devise a comprehensive Policy and Action Plan document.

The vision of the policy is to harness the potential of information technology as a key contributor to the development of Pakistan and the broad-based involvement of the key stakeholders is a must for its sustainable development. Core IT policy strategies have been proposed under several focus areas and some of the lead recommendations in each area are as follows:

4.4.1 Human Resource Development

Human resource (HR) development is imperative for the local IT industry to position the country as an important player in the international IT market. Under the HR Action Plan, a large pool of academically as well as technically skilled IT manpower would be developed to meet the local and export needs. The policy accordingly envisages the establishment of four new IT universities, virtual IT university, national testing and accreditation services and educational intranet, strengthening of existing IT institutes and hiring of faculty from abroad. A major portion of the funds under the IT Action Plan would be dedicated towards HR development initiatives.

4.4.2 Infrastructure Development

The local IT industry requires a world class enabling infrastructure. An exercise for deployment of this infrastructure would be undertaken and a series of IT parks and incubators across the country would be established.

These parks will be equipped with modern facilities and matchless incentives, to provide a one-stop shop for prospective investors in the IT industry. Telecom infrastructure would be modernized to carry broadband access in the backbone and local loops. Other steps include the establishment of IT boards in provinces (except Punjab where it exists already), increasing tele density and the introduction of new technologies such as wireless local loop for data and cable internet.

4.4.3 Software Industry Development

Software development is a high growth industry and forms a major segment of the vast IT market and will continue to do so in the future. Integrated efforts to develop software industry with focus on exports (in addition to the local market) would be undertaken. This would include encouragement of local software houses to participate in government projects, local content development, Urdu and regional language software development, promotion of software exports through establishment of international marketing network, special bandwidth rates for software exporters, encouraging joint ventures, hiring of international consultants for global business development and fiscal and regulatory incentives for software exporters through the State Bank of Pakistan.

4.4.4 Hardware Industry Development

The policy recommendations in the area of hardware industry development do not seek to initiate aggressive competition with the developed countries. Rather, they focus on developing the areas that are within Pakistan's reach, in terms of technology and resources and in which the country could have a competitive advantage. Major recommendations include the waiver of duties and taxes on the hardware, incentives to reduce the cost of raw material and inputs, encourage and fund research and development in the universities and engineering colleges through faculty chairs, matching grants and focused joint projects.

4.4.5 Internet

4.4.6 Government Incentives

The government has invested in various fiscal and non-fiscal incentives to nurture, develop, and promote the use of IT in organizations, to increase their efficiency and productivity. The strategies focus on promotion of venture capital industry through incentives, recognition of software development as a priority industry for financing by the banks and DFIs, creation of investment friendly environment, building investors' confidence and changes in rules to allow the technology companies to be listed on stock exchanges of Pakistan.

4.4.7 Tax and Regulatory Incentives

The government of Pakistan guarantee to facilitate profitability, and efficiency for investors in information technology every step of the way.

- 15 year corporate tax exemption for information technology companies.
- 100% repatriation of profits allowed to IT sector companies.
- 100% foreign equity allowed in IT sector.
- 0% custom duties and tariffs on import of all IT related equipment.
- 7 year tax holiday for venture capital funds.
- 0% income tax liability for software development firms.
- 0% sales tax liability on sales of computer software and hardware.

4.4.8 Telecom Infrastructure

Pakistan's telecom is among the world's widest covering and most sophisticated. Fiber optic infrastructure, initially laid in the early 1990s, now accounts for well over 85% of the backbone that supports international and national exchange of data.

The government has proactively worked with the national telecom giant, PTCL, to reduce rates, improve access, and increase the level of quality that is delivered. Voice-over-IP and other related auxiliary services are being integrated into the core of the telecom industry.

Perhaps most importantly, the telecom sector was fully de-regulated in January 2003.

4.4.9 Legislation

To provide protection and enhance the confidence of users, providers, and facilitators of information services, legislation based on the recommendations of the working group comprising IT and legal experts would be framed. Action in the areas of **Digital Signature Act**, **Intellectual Property & Copyright Act** and the **Consumer Protection Act**, has been started. The government should seek legislative approval of changes to statutes that will encourage electronic commerce and revise statutes that mandate a paper-based or manual process.

4.4.10 Regulations

A regulatory framework is essential to avoid violating policy goals and direction. It would be ensured that excessive regulations do not stifle industry investment and growth. In devising a useful regulatory framework, the focus would be on creating a fair, equitable and competitive environment, based on the principles of free market and open access.

The IT Action Plan is an integral part of the IT policy. The Action Plan provides a framework for implementation of the IT Policy which includes priority areas, specific projects that can be conceptualized, formulated, assessed, prioritized and implemented. The implementation of the Action Plan is very much dependent on the funding provision for the IT & telecommunications division and the mechanism from project approval to funds release so that projects could be implemented in a timely fashion to achieve the desirable results in the shortest span of time. A separate mechanism for expeditious project appraisal by experts' committees, approval and funding under National Scientific and Technological Research and Development Management Fund has been developed and would be submitted separately to the cabinet for approval.

The main allocation of funds has been foreseen for training, re-training, human resource development and provisioning of enabling infrastructure. There are a host of other incentives, which could be done at low or no cost, which include changes in governmental processes, legislation, administrative elements, incentives and rules. Some of these have already

been submitted to the relevant quarters for approval whereas others are in the pipeline. A system of monitoring, surveying and compiling statistics on the extent and growth of the IT sector will also be devised to provide reliable data for planning and evaluation purposes and to set up performance indicators. The IT Action Plan will be implemented according to its well-defined phased targets and objectives. To ensure that the plan meets its objectives consistently and that suitable midcourse corrections can be incorporated in a timely manner, a mechanism will be set up involving the government, private sector, academia and other national representatives to coordinate and implement the policy and plan elements and provide strategic supervision over the longer term. The IT Policy and Action Plan being a dynamic document, would be subjected to formal review under this mechanism every six months, with more area-specific monitoring carried out on a monthly basis.

4.4.11 Software Piracy

Copyright (Amendment) Act, 1992 (The Amendment Act) is now extended to cover computer software. It is illegal to make or distribute copies of computer programs without authorization. No other copies may be made without specific authorization from the copyright owner.

Pakistan's copyright law prohibits reproduction of software without permission from the owner of the copyrighted computer program. If caught with pirated software, you or your company may be prosecuted under the provisions of the Copyright Laws. The penalties under the law include a fine of up to Rs. 200,000, seizure of products used for illegal copying, and a prison sentence of up to three years.

The Pakistan Government will protect the rights of copyright owners. Surprise raids¹¹ have been conducted and penalties have been imposed by PIPRO (Pakistan Intellectual Property Rights Association). These raids against software pirates will continue to encourage the purchase of original software. The latest raids were targeted at the source, i.e. the CD-DVD plants instead of the vendors so the latest drive is a step in the right direction.

¹¹ Business Section of The News Saturday, 28th February 2004

4.5 Pakistan's Standing

Pakistan has an extensive telecom network and with the deregulation of the industry in January 2003, steps have been taken in the right direction to improve connectivity.

"The telecommunication sector is growing rapidly though it is still underdeveloped even in comparison to other South Asian economies. By end of March 2003, there were 4.6 million fixed telephone lines (June 2002: 3.6 million). The Government announced an aggressive deregulation program that has come into operation by end of 2003 with a defined roll out plan to deregulate and privatize the telecommunication sector. It should be noted, however, that despite the limited scope of the telephone network, businesses are quickly connected; the average waiting time for installation of a fixed line is approx. one week. Mobile telephone networks are well developed at least in the major business centers of the country. Internet services are also growing fast. The number of Internet users in Pakistan increased from 100,000 in 1998 to 3 million in 2002 although the dispersion of personal computers with 4 for every 1000 Pakistani has been stable at this low level throughout the period."¹²

Although the government through its IT Policy initiative has shown support for this industry, compared to the world leaders it could stand to get better. Australia leads the EIU rankings in terms of Government Support. The Australian government through its e-business guide¹³ and formulation and subsequent publication of reports such as Australia's Strategic Framework for the Information Economy 2004–2006: Opportunities and Challenges for the Information Age has outlined its plan to support the e-business industry.

Pakistan needs a similar comprehensive plan and execution of that plan from the government to be able to better its e-readiness position and to be able to cash in on the global e -industry.

¹² Asia Invest Europe-Aid Cooperation Office: New Business Opportunities in Pakistan, An Investor's Guidebook. Page 20

¹³ <http://www.e-businessguide.gov.au/site/page.cfm>

Even though the connectivity has increased dramatically, the legislation has been updated to accommodate the working of e-businesses and the business applications are cheaper and easier to develop/buy in Pakistan, the problems of higher cost of merchant accounts and customer attitude remain.

Even in the developed markets Internet merchants pay a higher fee per transaction. But the costs in Pakistan are 100% more in Pakistan. A typical Internet merchant in USA pays 2.5% in transaction cost plus a small per transaction fee.

“Whereas these fees are in the range of 4.5% to 5%. Plus funds are retained for about 15 days. This withholding period increases the cost of capital and reduces turnover. Also a merchant is required to prove the validity of a transactions if a customer claims the card has been misused. It is difficult for a small merchant to install systems that provides sufficient to defend the charge backs. Typically a company reserves 7 to 8% for charge backs but in Pakistan it has to be in the range 15 to 20% which also raises the cost of transaction for the merchant. All these transactions added together require a higher threshold for a sale price, which then result in exclusion of many products to be sold on Internet. This is evident from the fact that an average transaction size on Internet is Rs. 1000 in Pakistan.”¹⁴

Also the customer attitude towards e-business is a gray area. Of the 3 million Internet savvy Pakistanis, only a minority engages in business online. The disposition towards using credit cards online because of stories about credit card theft have brought this industry in disrepute and has seriously hampered Pakistan’s progress in this regard. Even though most of the credit card theft is done during offline credit card transactions.

The two problems of expensive merchant accounts and customer attitude pose a serious threat to any e-business venture but with proper engineering of business processes and a sound business model, such a venture could prove to be not only successful but open the doors for other entrepreneurs.

¹⁴ Abdull Kundi of getPakistan.com, Inc - Interview to Pakistan Economist June 14 - 20 2004 <http://www.pakistaneconomist.com/page/issue24/etc3.htm>

CHAPTER 5: Neelami dot com

5.1 Generic Procedure to Starting An E-Business

Each business is unique in its nature and working depending on the environment, goals, objectives and management among other factors. The same is true for E-Businesses. The following are some of the generic steps that may help in establishing an e-business. Not all steps would be relevant to every business.

❖ Understanding

- Understanding e-business
- What is e-business?
 - ◆ The Internet explained
 - ◆ The World Wide Web explained
 - ◆ Websites explained
- What are the benefits?
 - ◆ Create additional revenue
 - ◆ Reach more customers and markets
 - ◆ Improve marketing and promotions
 - ◆ Meet the needs and expectations of customers
 - ◆ Concentrate on the things that matter
 - ◆ Make it easier for people to do business with you
 - ◆ The cost of not being there
 - ◆ Play on a level playing field
 - ◆ Help meet business goals
- Trusting the Internet
- Getting started
 - ◆ Getting the equipment and software
 - ◆ Getting connected
 - ◆ Getting email and a domain name
 - ◆ Getting training

❖ Planning

- About planning
- How to plan
- Researching the opportunities
 - ◆ Banking Planning
 - ◆ Communications

- ◆ Customer relationship management
- ◆ Distribution and logistics
- ◆ Exporting
- ◆ Marketing and promotion
- ◆ Purchasing office supplies
- ◆ Managing supply-chains
- ◆ Research and development
- ◆ Staff training
- ◆ Doing business with government
- Key issues to consider
 - ◆ Innovation and imagination
 - ◆ Integration with existing office systems
 - ◆ Developing a healthy e-business culture
 - ◆ Security
 - ◆ Knowledge management
 - ◆ Estimating the budget
- What level of e-business is right for your business?
 - ◆ Identify the aims of your e-business
 - ◆ Identify your target audience
 - ◆ Select the appropriate level of e-business
- Writing your e-business plan
- Building
 - ◆ About building
 - ◆ Technical issues
 - Should the contents of the website be held in a database?
 - Database security
 - Should the website be the central source of information?
 - What type of Internet connection do you need?
 - Powering and hosting your website
 - Getting a website name
- Choosing and preparing contents
- What do you want users to do?
- Marketing and your website
- The look and feel
- Organizing the contents
- E-commerce - selling on your website

- Maintenance considerations
- Developing the website
 - ◆ Writing the development brief
 - ◆ Who does the developing
 - ◆ The development contract
 - ◆ Selecting the web developer
 - ◆ Evaluation and score -sheets
 - ◆ What to look for in a developer
 - ◆ Staging the development
 - The technical specifications exercise
 - The construction phase
 - Testing the site
 - Delivery and deployment
- ❖ Protecting
 - About Protecting
 - ◆ Why be secure?
 - ◆ Where do I start?
 - ◆ What part of my business is at risk?
 - ◆ What are the sources of threats to my business
 - ◆ Are these threats real?
 - What can I do?
 - ◆ The security program lifecycle
 - ◆ Who will administer and manage the program
 - ◆ Who should be authorized to access data?
 - ◆ How do I know who is accessing my information
 - ◆ How do I keep track of everything?
 - Key issues
 - ◆ Email and communication security
 - ◆ Network security
 - ◆ Modems and remote access
 - ◆ Virus protection
 - ◆ Firewalls
 - ◆ Back-up and recovery
 - ◆ Incident response
 - Top Ten e-Security Tips
- ❖ Managing
 - About Managing
 - Who does the managing?

- Maintaining e -business systems
 - ◆ Website content maintenance
 - ◆ Quality assurance
 - ◆ Making improvements
 - ◆ Technical maintenance
 - ◆ Managing the maintenance system
- Internal Policies and Guidelines
- Promoting your website
 - ◆ Developing a promotional strategy
 - ◆ Registering with search engines
 - ◆ Helping search engines find your website
 - ◆ Advertising your website
- Budgeting for maintenance
- Controlling the risks
- Legal issues
 - ◆ Privacy laws in Australia
 - ◆ Defamation
 - ◆ Taxation and GST
 - ◆ Contracts
 - ◆ Terms and conditions
 - ◆ Trade practices
 - ◆ Intellectual property
 - ◆ Copyright
 - ◆ Trade marks
 - ◆ Confidential information
 - ◆ Digital signatures
 - ◆ Security
 - ◆ Jurisdiction
 - ◆ Disability discrimination
 - ◆ Spam and ethical e-marketing
- ❖ Improving
 - About Improving
 - Evaluating your e-business
 - ◆ Identify what to evaluate
 - ◆ Determine how to evaluate
 - ◆ Analyze results and take action
 - ◆ Determine who does the evaluation and when
 - Doing business with government online

- Procurement over the Internet
- Managing the supply chain and logistics
- Putting your catalogue online
- E-marketplaces
- Exporting

5.2 Neelami

The concept is similar to that of e-bay dot com. It will act as a market place where buyer and sellers come together to make transactions. So, it is a P2P business.

The plan is to start with a small setup¹⁵

1. Catering to the P2P market
2. Using a 3rd party courier services
3. Using a 3rd party marketing services
4. Working in only major cities such as Rawalpindi/Islamabad, Karachi and Lahore.

Towards building it into a

1. Business serving the B2C and P2P markets both
2. Expanding into the service industry (elance.com where buyers and sellers come together to buy and sell services instead of goods)
3. Developing own marketing expertise to serve clients other than own
4. Expanding to other cities within Pakistan.

5.2.1 Benefits of P2P Online Auction Business

The online auction business model is one in which participants bid for products and services over the Internet.

¹⁵ With an unlimited budget, the company could go all out and setup an extensive infrastructure to help its operations. To show the viability of starting a cheap online business a budget limit of Rs. 100,000 has been set to help in making all the business decisions.

When one thinks of online auctions they typically think of eBay, the largest online auction site. Like most auction companies, eBay does not actually sell goods that it owns itself. It merely facilitates the process of listing and displaying goods, bidding on items, and paying for them. It acts as a marketplace for individuals and businesses that use the site to auction off goods and services.

Several types of online auctions are possible. In an English auction the initial price starts low and is bid up by successive bidders. In a Dutch auction the price starts high and is reduced until someone buys the item. eBay also offers fixed price listings.

Strengths of the business model

The strategic advantages of this business model are:

- 1) No time constraints. Bids can be placed at any time, 24 /7. Items are listed for between 1 to 10 days (at the discretion of the seller), giving purchasers time to search, decide, and bid. This convenience increases the number of bidders.
- 2) No geographical constraints. Sellers and bidders can participate from anywhere that has Internet access. This makes them more accessible and reduces the cost of "attending" an auction. This increases the number of listed items (i.e.: number of sellers) and the number of bids for each item (i.e.: number of bidders). The items do not need to be shipped to a central location, reducing costs, and reducing the seller's minimum acceptable price.
- 3) Intensity of social interactions. The social interactions involved in the bidding process are very similar to gambling. The bidders wait in anticipation hoping they will "win" (eBay calls the successful bidder the "winner"). Much like gambling addiction, many bidders bid primarily to "play the game" rather than to obtain products or services. This creates a highly loyal customer segment for eBay.

4) Large number of bidders. Because of the potential for a relatively low price, the broad scope of products and services available, the ease of access, and the social benefits of the auction process, there are a large numbers of bidders.

5) Large number of sellers. Because of the large number of bidders, the potential for a relatively high price, reduced selling costs, and ease of access, there are a large number of sellers.

6) Network economies. The large number of bidders will encourage more sellers, which, in turn, will encourage more bidders, which will encourage more sellers, etc., in a virtuous spiral. The more the spiral operates, the larger the system becomes, and the more valuable the business model becomes for all participants.

7) Captures consumers' surplus. Auctions are a form of first-degree price discrimination. As such, they attempt to convert part of the consumers' surplus (defined as the area above the market price line but below the firm's demand curve) into producers' surplus. On-line auctions are efficient enough forms of price discrimination that they are able to do this.

5.3 Startup Issues

In line with the generic steps given in the first section of this chapter, the following issues were addressed:

1. Hosting

Since the site would require a lot of scripting and database interaction, only a select number of packages suit the business. The question of local vs. foreign web hosting is also a tricky one. While going for foreign web hosting might be cheaper but local web hosting gives better control over the web application and guarantees better customer support.

After an extensive survey, Nexus¹⁶ was chosen as the web host and their Winbudget¹⁷ package was selected.

¹⁶ <http://www.nexus.net.pk>

¹⁷ http://www.nexus.net.pk/win_budget.php

2. Development

Since the web application would be unique in terms of its working and deployment in the Pakistani scenario, no off the shelf product suits the need. A custom application would be required to be developed and the asking price for such a site ranges from Rs. 50,000 to Rs. 100,000 depending on the software house and the maintenance contract.

3. Marketing

Of the 3 million projected Pakistani Internet users, how many are capable of conducting online transactions. No demographic data was available at the time of this study.

For the sake of marketing ease, this market can be segmented into two groups. One are people involved in the IT industry; i.e. people who read up computer magazines and can be advertised through such magazines and the second consisting of people who use the Internet but are not technical folk and would have to be advertised to using traditional media like newspapers and radio/television ads.

a. Print Ads

- i. Spyder
- ii. Student Magazines
- iii. Mag
- iv. The News
- v. Dawn

b. Advertisement on the back of internet cards

- i. Hangama
- ii. WOL
- iii. Net2Net

c. E-Marketing

- i. Apnapakistan
- ii. Other Pakistani portals
- iii. Sponsored link on <http://www.google.com.pk>

4. Merchant Accounts

Citibank offers merchant accounts but the annual cost is Rs. 20,000. Also the payment gateway (e.g. as provided by Cybernet) is very expensive with the per transaction cost and setup cost compared to globally accepted costs.

Also since the data regarding number of customers willing to use credit cards for online business is an unknown, this expense is unnecessary; at least at the start. When the web-site has developed a sizable customer base then a survey could be taken to determine the benefit of adding credit card facility to the web site.

5. Forward Integration

Would Neelami benefit from owning its own courier service? The example of Baze dot com from India suggests so. The nature of the business requires the buyer to verify the product before making payment and no courier service is willing to conduct business of this nature.

Also due to the high costs of merchant accounts, the transactions would have to be cash only. Now this too poses a problem as all major courier services don't have transparent business processes and due to insurance and other issues are hesitant to handle cash only transactions.

While all this would suggest that having your own courier service is the only way out, the sheer expense of the required infrastructure is staggering. Luckily, DCS agreed to work with Neelami helping it with its cash only transactions in the area of Rawalpindi/Islamabad as a pilot project.

Had DCS not come to the rescues, Neelami would still have gone operational offering the service of introducing the buyer to the seller and collecting information for marketing purposes.

6. Pricing strategy

Charging for registration or charging on a per transaction basis would put off most people. The example of Elance dot com suggests that once people treat

your service as a habit, then they would be willing to pay for it. To pay just to sample a service will put up off most of the target market.

E lance dot com didn't charge any registration or transaction fee for its first 10 months of operation after which it started charging for both. Three years later it still is operational and is charging even higher prices and offering more services.

Thinking on similar lines, Neelami dot com will not have any registration fee or transaction fees in the beginning.

7. Backward Integration

Should Neelami be involved in selling merchandise on its web site? Considering the disposition of the average Pakistani towards online transactions, it seems that such a step would be necessary to at least portray a climate of security so that people feel at ease with the concept.

8. Security

Security is a major issue and the protection of the database would be the responsibility of the web-host and covered in their user agreement.

The issue of **user authentication** after the removal of using credit cards as a payment mode as an option at the start poses a problem. A problem which can be solved by manually authenticating people through the following procedure.

- Person signs up on Neelami's site and enters mailing address
- The Neelami system emails the concerned staff the whole document with a special code regarding the signup and with the email address
- The staff prints the document and mails it to the mailing address
- The person receives the document, pays some money (money = mailing charges + Neelami's cost) and then enters the code on the site to authenticate him.

This way Neelami can authenticate the person as well as earn some money off the subscription process. Lets say that the mailing charges are Rs. 20 (stamps

+ paper + envelope) and Neelami charges Rs. 50 through this process. If the projected customer base of 10,000 in the first 2 months is met then the company can earn Rs. 300,000 just off the subscription, which then can be used for marketing and the paying back of the invested capital.

To sum up the operations of the company:

5.4 Nature of business

Neelami is a P2P auction site designed with the Pakistani market needs in mind.

5.5 Business Model

The payment mode to restricted to cash only. The facility of credit cards will entail a change in the process and will be implemented only after a survey of the customers proves that it is necessary.

There will be no subscription fee charged at any point in time. The revenues will be generated from the following sources:

5.5.1 Authentication Charges

These charges will be collected when the secret generated passkey is mailed to the would-be subscriber. These charges will help in creating a pool, which will be used in the initial marketing and running expenses.

5.5.2 Banner Advertisements

A survey will be needed to come up with the most ideal of packages. This option can only be sought after creating a strong enough customer base.

5.5.3 Transaction Fees

For the first 6 months, no transaction fee will be charged to make Neelami as attractive as possible for the customer. After the first 6 months a fixed percentage of the transaction amount can be set as a

transaction fee. This percentage will be set after seeing the volume of traffic and number of transactions in any given month.

5.6 Resources

The following resources will be essential for Neelami.

5.6.1 Domain Registration

The name <http://www.neelami.com.pk> has been chosen as the URL. The registration fee is collected every second year and amounts to Rs. 2,000.

5.6.2 Web Host

Nexus has been chosen as the web host. It will cost anywhere from Rs.6, 000 to Rs. 8, 000 depending on the selected options.

5.6.3 Web Site

It will be developed using ASP 3.0 with MS SQL Server as the backend database.

5.6.4 Courier Service

Courier services will be essential for the day-to-day business. They have to be reliable, fast and flexible. Courier services are also needed for our authentication process.

5.6.5 Marketing

We have decided upon using a teaser ad and another ad the next month in Spider™ magazine. While this will address a major segment of the market, a lot of people will be left out. People who do use the Internet but are not IT professionals form the major bulk of any online business. To get to them, we need to use media such as

1. E-Banners

2. Newspapers
3. Radio Stations
4. TV

The cost of marketing has been estimated at Rs. 20, 000. This is only for the two print ads in Spider™ magazine. This will surely increase as we utilize other media for our marketing.

5.6.6 Finances

The total cost (estimated) is as follows:

Heads	Expenditure (Rs.)
Domain Registration	2,000.00
Name Registration	1,500.00
Web Hosting	8,000.00
Letter Heads	10,000.00
Envelopes	10,000.00
Marketing	
Spider™	18,000.00
Development Charges	50,000.00
Total	99,500.00

The cost of letterheads and envelopes is bloated and the cost of marketing has been understated, as other media will have to be utilized.

The above table only tabulates the initial costs. The running costs include the following:

1. Web Hosting

This cost is a recurring one and is paid for a whole year. It amounts to Rs. 8,000

2. Domain Registration

Domain registration fees are paid every second year. They amount to Rs. 2,000 for two years.

3. Marketing

These costs will vary over the year and will be a continuous expenditure.

5.7 Processes

Business will be conducted on our site in the following manner:

5.7.1 Marketing

Our marketing activity will start when the final version of the application is expected to be deployed in only a month's time. The teaser ad will show that the site is open for registration and for the posting of items only in the first month.

5.7.2 Signup

Our subscribers will signup using their original mailing address. Upon successful signup, they will move on to the authentication stage.

5.7.3 Authentication

After signup, our application will generate specific code and email it to one of us in a document format. That person will then print out the email and mail it to the subscriber. The subscriber will receive the mail, pay a certain amount to the courier (which covers our cost plus some profit) and then enter the code on our site after which he will have been authenticated.

5.7.4 Posting Of Items

The subscriber after being authenticated will be able to post items.

5.7.5 Opening of marketplace

After a month of posting of items, we will post another advertisement proclaiming that the marketplace is now open for transactions.

5.7.6 Transactions

The transactions will be held in a P2P manner. Every subscriber can act as a seller as well as a buyer. After posting an item, other subscribers will quote for the item. Upon selection of a successful bid, we will credit and debit the two parties' Neelami™ accounts and let our courier service know about the transaction. We should automate this process because as the volume of transactions increase, our lead-time will increase.

The courier will pick up the item from the seller and take the courier charges in cash from him. Upon delivery of the item to the buyer, the buyer will check the item and if he is happy, he will accept the item and pay ½ of courier charges and price of the item). This money is then returned to the seller. If the buyer is not happy with the item, he will return it along with the courier charges.

This way in either case, Neelami does not incur any courier charges

Financial Projections

Capital Expenditure Year 1

Description	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December
Domain Registration	1,000											
Web Hosting Charges	8,000											
Business Name Registration	1,500											
Envelopes, Letterheads etc.	20,000											
Total Capital Expenses	29,500	-	-	-	-	-	-	-	-	-	-	-

Revenues Year 1

Description	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December
Number of new subscribers	100	200	300	300	200	100	100	100	100	100	100	100
Authentication Charges (Rs. 10)	5,000	10,000	15,000	15,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Banners	0	0	0	0	0	0	500	500	500	500	500	500
Avg. Amount of Transactions (Rs.)	1,000	1,000	1,000	1,500	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Transaction Fee Percentage	0%	0%	0%	0%	0%	0%	7%	7%	7%	7%	7%	7%
Transaction Fee Charged	0	0	0	0	0	0	140	140	140	140	140	140
Total	5,000	10,000	15,000	15,000	10,000	5,000	5,640	5,640	5,640	5,640	5,640	5,640

Costs Year 1

Description	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December
Mailing Charges	500	1,000	1,500	1,500	1,000	500	500	500	500	500	500	500

Marketing	25,000	8,000	0	0	0	5,000	3,000	2,000	1,000	0	0	0
Total	25,500	9,000	1,500	1,500	1,000	5,500	3,500	2,500	1,500	500	500	500

Profits Year 1

Description	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December
Revenues	5,000	10,000	15,000	15,000	10,000	5,000	5,640	5,640	5,640	5,640	5,640	5,640
Costs	25,500	9,000	1,500	1,500	1,000	5,500	3,500	2,500	1,500	500	500	500
Profits	-20,500	1,000	13,500	13,500	9,000	-500	2,140	3,140	4,140	5,140	5,140	5,140

5.8 Final Thoughts

Although the problems of merchant account expenses, courier service restrictions, budget limitations and customer attitude hamper the way such a P2P business is truly meant to be setup and conducted, there is enough substance in Pakistan's infrastructure to support online businesses. But certain tweaks would be necessary to suit the Pakistani environment for a business to be viable and successful.

There are not resident big players in this industry who could potentially stamp out any new entrant and since this market has not be explored before in Pakistan, anyone who takes the initiative now would have the luxury of defining the industry's norms and dictating its own terms to the customer.

The projected revenues in the previous section are very pessimistic and if proper investment is done to promote the business and streamline the distribution channel, there is no foreseeable reason for it not to be as successful as ebay has been all over the world now.

CHAPTER 6: Conclusions and Recommendations

Like any technology, the Internet has a social context. It has the potential, some of which has been realized, for ushering in a broad spectrum of social, political, and economic change, both for good and for ill. Many commentators write of the Internet's potential to transcend national boundaries to advance relationships and understanding between individuals of diverse backgrounds, beliefs, and nationalities. The Internet has been touted as a vehicle for expanding the global economy and bringing modernization and economic expansion to underdeveloped regions. The personal yet global quality of the network may empower individuals and interest groups and enable the circumvention of restrictive censorship and social controls of oppressive governments. Others worry about the Internet's ability to facilitate international information warfare, terrorism, and drug trafficking and to promote all manner of economic and social crime and unrest.

The perception of whether the impact of the Internet is a benefit or a threat varies considerably from one individual to another and from one country to another. If government policy has a significant impact on the Internet, then one would expect to see variations in the rate and extent of absorption of the Internet, depending on whether the perceived value among policy-makers, the so-called "balance of tensions," is predominantly positive, negative, or equally balanced. While the perceived value is just one of many determining factors, the experiences of such countries as China, Saudi Arabia, Qatar, Iraq, Finland, etc. illustrate the range of this determinant and the influence it can have. On the surface, Pakistan has a good reason to be concerned about the Internet. As an overwhelmingly Muslim country, she might fear the influence of pornography, un-Islamic information, proselytizing by other religions, and so forth. Each country has serious problems with terrorism and dissent and could fear the Internet-enabled ability of terrorists to organize, propagandize, and otherwise threaten established interests. The nations could worry about the ability of India, a long-standing antagonist, to communicate directly with Pakistani citizens. The established media and commercial conglomerates in both countries could also perceive a threat from the Internet as an information source that would undermine their traditional influence over public opinion. Such concerns are not unfounded. Some of the cyber activity of hackers and insurgency groups that could be viewed as a threat to established Pakistani interests has been document.

While there are countries that have taken strong measures to counter the perceived negative effects and threats of the Internet, Pakistan is not among them. In Pakistan, the positive perceptions of the Internet as an enabler of economic development and integration have dominated policy-making in this area. The beneficiaries of Internet growth, the ISPs and the commercial interests that are gaining from information dissemination and electronic commerce –related investment and transactions, are increasingly exercising lobbying power to promote support of the Internet. At this point, the window of opportunity for a concerted opposition to dramatically curtail the spread of the Internet is closing.

Much of the growth of the Internet in Pakistan is likely to be driven by demand of individuals and organizations and the efforts of ISPs to expand the customer base. The Internet has become established, having reached a critical mass in which future growth is a function of time as much as anything. At the same time, there is more that these governments might do to promote the Internet and relieve some of the limiting factors to future growth. Several of these possibilities are listed below. Some of these are exceedingly difficult and long-term (e.g., “stabilize the economy,” “improve the educational system”). But others of potentially high impact are much easier. Among the latter are measures to reduce tariffs for domestic and international leased and dial-up connections. Many of the measures listed here are similar, and they span the spectrum from very difficult to relatively easy. Spending a sum of money is easy; bringing about a shift in popular opinion is more difficult. High impact measures are those that are likely to have a strong and relatively quick impact on one or more of the Internet dimensions. Each measure can also be classified according to whether it is easy or difficult to implement. In each country, measures that are likely to have a high impact and are relatively easy to implement should be given highest priority. These include:

- Dropping rates for domestic and, in particular, international connectivity¹⁸
- Promoting legislation establishing a proper framework for electronic commerce

¹⁸ On May 1, 2000, PTCL did drop prices for international connectivity for ISPs by 53 percent. One editor attributed this drop in part to the lobbying efforts of ISPAK and NetMag, the leading Pakistani Internet magazine: F. Khan, “Wireless Internet Arrives and PTCL Cuts Down Their Access Rates for ISP,” NetMag 13 (May/June 2000), <<http://netmag.com.pk/new/editorial.htm>> (June 30, 2000).

- Continued investment in infrastructure.

Somewhat more difficult to implement because of the scope of the problem or the legislative and political tangles involved will be an expansion of IT education and the promotion of a competitive environment for all communications services, including basic ones. Pakistan's need to create a national backbone to support ISPs is of utmost importance.

The future of the Internet in Pakistan is promising. Growth, expansion, and increased sophistication will continue. Whether and how quickly the Internet will reach its potential and keep pace with other countries, however, depends strongly on measures taken by the governments and the national telecommunications carriers to remove some of the limiting factors.

Although Pakistan has made tremendous progress in equipping itself with the necessary tools and policies to attain e-readiness, it still lags behind. In the global scenario, the government of Australia should be the benchmark for any country in the matter of government's role in promoting e-readiness and e-businesses.

- **Access:**
Construct true national backbone; provide hardware/software to educational institutes
- **Perceived Value:**
Enact policies promoting open and transparent governance processes
- **Ease of Internet use:**
Promote literacy programs; promote local language content
- **Cost of Internet Access:**
Reduce leased line charges
- **Adequacy and Fluidity of Resources:**
Improve investment climate; create financial system supporting of venture capital; expand and stabilize power grid
- **Regulatory and Legal Framework:**
Pass e-commerce legislation; open up domestic and international basic services to competition; remove prohibition over voice over Internet.
- **Culture of Entrepreneurship:**
Improve investment climate; enact legislation more conducive to venture capital
- **Enablers of change:**

Continue to expand IT education; promote benefits of technology; reduce bureaucracy and red tape.

- **Merchant Accounts:**

Although Citibank now offers merchant accounts and ISPs such as Cybernet provide the gateway to debit those merchant accounts, the transaction cost and setup costs are huge compared to globally accepted rates and thus reduce the viability of most business ventures.

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