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E-Commerce Patterns in South Asia: A Look Beyond Economics

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Abstract:

Conflicting and complex forces are shaping the diffusion patterns of the Internet and e-commerce in South Asia. Drawing upon the literature on institutional theory, we explore the drivers and inhibitors of the Internet in South Asian countries. We examine the influence of the three pillars of institutions (Scott, 1995) on the digital world of South Asia. The paper discusses how regulatory, normative, and cognitive institution—such as laws, relationships, culture, and habit—have shaped the diffusion patterns of the Internet and e-commerce in South Asia.

Keywords: India, Southeast Asia, globalization, emerging economies, liberalization, financial crisis, foreign investment

Article:

INTRODUCTION

South Asia has a disproportionately low share in the global online population and e-commerce transactions. Home to 22.7% of the world's population (Table 1), the seven members of the South Asian Association for Regional Cooperation (SAARC)—Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka—accounted for only 1.4% of worldwide Internet users in 2001. South Asia's share in the global e-commerce market is lower still. Estimated e-commerce transactions in India for the year 2002 amounted to US\$222 million (Petroleum Economist 2001) compared to US\$327 billion worldwide in the same year (Udo, 2001). Nonetheless, the online population in this region is growing at a hyperbolic pace. For instance, the number of Internet users as a proportion of the total population in this region jumped from 0.04% in 1998 to 3.6% in 2003 (Table 2). Similarly, a study of the market research firm, International Data Corporation (IDC) indicated that during 2003-2008, India will record Asia-Pacific's highest compounded annual growth rate (CAGR) of 83.7 per cent in e-commerce, compared to China's 81 per cent in the same period (Businessline, 2004).

South Asia also differs from the rest of the world in terms of qualitative factors related to Internet adoption. Such factors include popularity of cyber cafés, mediation by non-typical media such as radio, use of information and communication technology (ICT) devices made from local resources such as wooden computers, and lower "width and depth" of technology adoption—narrow and limited uses and applications of the technology.

TABLE 1. Economic Indicators in South Asia

Country	GDP Per Capita (US\$, PPP, 2002)	Adult Literacy Rate (2002, %)	Population (millions, 2003)
Bangladesh (.bd)	1,700	41.1	147
Bhutan (.bt)	1,969	47.0	2.3
India (.in)	2,670	61.3	1,065
Maldives (.mv)	4,798	97.2	3.2
Nepal (.np)	1,370	44.0	25
Pakistan (.pk)	1,940	41.5	154
Sri Lanka (.lk)	3,570	92.1	19
SAARC	2,658	57.6	1,415
World	7,804		6,225

Sources: UNDP (2004): Human Development Report for population and GDP. Population data are from the publications of Euromonitor.

TABLE 2. ICT Related Indicators in South Asia

Country	Internet Users, '000 (2003)	Internet Hosts '000 (2001)	ISDN lines (2001)	PCs ('000) (2000)	Mobile Phones ('000) (2001)	Fixed Phones ('000) (2001)	Internet Introduced (Year)	No. of ISPs (2000)	E-government performance ranking (2002)
Bangladesh (.bd)	235 (.16)	4.9		130 (0.1)	260.3 (0.20)	539 (0.42)	1997	10	184
Bhutan (.bt)	5.3 (0.23)	1.1		3 (0.46)		15 (0.71)	1999	1	185
India (.in)	44,898 (4.2)	45.3	18,313	4,600 (0.45)	5,847 (0.57)	39,318 (3.83)	1990	43	58
Maldives (.mv)	12 (0.38)	0.4		5 (1.89)	12.5 (4.37)	27 (9.44)	1996	1	31
Nepal (.np)	72 (0.29)	1.7		60 (0.27)	14.4 (0.06)	287 (1.20)	1994	6	65
Pakistan (.pk)	5,773 (3.75)	7.7	4,028	580 (0.43)	427.6 (0.27)	3,105 (1.94)	1994	30	130
Sri Lanka (.lk)	215 (1.1)	2.9	1,359	105 (0.56)	326.2 (1.73)	857 (4.56)	1994	5	118
SAARC	51,210 (3.6)	64	23,700		14,307 (0.51)	44,148 (3.24)			

Note: Figures in parentheses are percentage of the total population.

South Asia is also characterised by a high degree of intra-regional heterogeneity in terms of Internet and e-commerce development. A recent e-business readiness study of 60 major economies in the world (Economist Intelligence Unit, 2002), for instance, put Sri Lanka (rank 42) and India (rank 43) ahead of other, economically more-developed countries such as Romania, Russia, Thailand, Saudi Arabia and Egypt. Pakistan was ranked 57th in the same study. To some extent, the variability is related to the time of introduction of the Internet in these countries. India established ERNET, the first Internet network, in 1986. It had an IP connection with UUnet backbone in the U.S. in 1989 (Burkhart et al., 1998) and was connected to the U.S. National Science Foundation Net (NSFNET) in 1990 (Goldstein, 2000). Bhutan, on the other hand, had no Internet until June 1999 (Table 2).

There is little research that examines the factors that influence Internet and e-commerce in South Asia. This paper attempts to fill the research gap by drawing upon the literatures on institutional theory. We thus drill deeper than obvious economic factors to explore the drivers and inhibitors of the digital world in South Asia. This paper is structured as follows: The next section briefly examines the diffusion pattern of the Internet and e-commerce in South Asia. It is followed by a discussion on institutions and their potential impacts on innovation diffusion. Then, we analyze how institutional factors have influenced the trajectory of Internet diffusion in South Asia. Next, we discuss some measures technology marketers and policy makers can take to stimulate e-commerce in the region. Finally, we provide discussions and implications.

THE INTERNET AND E-COMMERCE IN SOUTH ASIA: A BRIEF SURVEY

E-Commerce Patterns and "New" Business Models

E-commerce can be defined as any transaction in which at least one of the following activities—production, distribution, marketing, sale or delivery—takes place by electronic means. These activities can be broadly divided into three phases: pre-transaction (advertising and searching), transaction (payment) and post-transaction (delivery) phases. Compared to the last two phases, the pre-transaction phase is more likely to take place on the Internet in South Asia. For instance, buyers in India use the Internet to order merchandise and payment is made in cash after the delivery rather than by credit card payments. Thus, payment and delivery phases take place in the reverse order in India compared to the U.S. Similarly, farmers in villages of Sri Lanka, who depend heavily on selling rice, are able to double their income by going online to check the price at the market in Colombo, thereby cutting the roles of middlemen (Currie, 1999). ITC, a major conglomerate in India, has launched the community-browsed e-Choupal portal to provide services to Indian farmers in Hindi language rather than English, to improve access by those with low levels of education (see Box 1).

Width and Depth of Adoption

Mainly for economic reasons, the overall width of adoption measured by “the number of different uses” and depth of adoption measured by “the amount of usage” (Gatignon and Robertson, 1985) of the Internet appear to be lower in South Asia compared to other parts of the world. South Asians tend to use the Internet for fewer phases of a business transaction process and for fewer activities of a particular phase. Although the Internet can be used for activities such as finding new supply sources, requesting quotations and management of international logistics, a survey of South Asian garment exporters indicated that their Internet use was limited to email (Barclay and Domeisen, 2001). South Asians also have lower depth of adoption. For example, in 2001 Indian Internet users spent 1.7 hours per week compared to 13.7 hours in China (Kshetri, 2002).

BOX 1. e-Choupal: A Community-Browsed Portal for Farmers

In 2002, ITC—a leading conglomerate in India—launched e-Choupal, a portal that offers farmers “all the information, products and services they need to enhance farm productivity, improve farm-gate price realization and cut transaction costs.” The Hindi word Choupal means a village square, where farmers meet and discuss various issues. Given the lack of literacy in India’s villages, e-Choupal is designed to work as a community-browsed portal. Each connected village has a public e-Choupal kiosk and a Choupal Sanchalak, a literate lead farmer who can access the information in this Hindi-language portal and communicate it to the illiterate farmers. The portal covers eight main crops of India. Links on the home page lead to detailed information on Weather, Agricultural Techniques, Markets, Harvests, Soil Testing, Government Programs, and Discussions.

ITC uses the portal aggressively, for example, to procure good quality wheat for making ITC-branded flour. ITC also sells insurance policies to farmers via this portal.

Sources: Based on Goopu (2002), Sanganerla (2003), and <http://www.echoupal.com>.

Location of Use

Because of low availability and affordability of Internet infrastructures, developing countries lack the array of choices that advanced countries have. In most South Asian villages and towns, for example, only a single central access point can be established. Like the community cyber centers in Jamaica, cyber bars in Eastern Europe, and walk-in Internet posts in Mongolia (Ishaq, 2001), Internet cafés or e-mail kiosks have become the top Internet access channels in South Asia. ITC’s e-Choupal portal, for instance, is not merely a website—it plans to have over 3,000 village kiosks for community browsing of the portal (see Box 1).

In 2001 there were only 700,000 home PCs but 5 million Internet users in India, indicating that a large proportion of online population accessed the Internet from cyber cafés. Estimates suggest that there were 12,000 cyber cafés in India in 2001 (Achar, 2001). A single Indian ISP, Satyam Infoway, had 600,000 customers and 616 Internet cafés across India in 2002 (Angwin, 2002). In 2001, one in three Indian users relied mainly on Internet cafés to go online (Achar, 2001). A Gartner Group study suggests that Indian online population will reach 56 million by 2005 and a significant proportion of them will use Internet cafés (Angwin, 2002).

Such cyber cafés are becoming increasingly pervasive in South Asia. For instance, the first Internet kiosk established by GrameenPhone in Bangladesh was 80 miles from the capital city, Dhaka (Business Week, 2000). Similarly, Indian Oil Corporation (IOC) and Dishnet DSL, India’s leading ISP, reached an agreement in 2001 to set up Internet cafés in IOC’s 7,100 petrol and fuel stations across the country. There are Internet cafés in countries as remote as Bhutan (Murphy, 2000) and also in 11,280-foot high Namche village, on the Everest trekking route of Nepal (CNN.com, 2003). A Nepalese entrepreneur is setting up a satellite-linked, solar-powered cyber café at the 17,400-foot high Mount Everest base camp (CNN.com, 2003).

Intermediation by Broadcast Media

Creative intermediation by traditional broadcast media is facilitating the diffusion of the Internet in South Asia. For instance, “radio browsing” has become popular in Nepal and Sri Lanka. A local radio station in Sri Lanka gets call-in requests from listeners, browses the requested websites, and then broadcasts the browsed content (Little et al., 2001). Similarly, in Nepal, Radio Sagarmatha runs programs that provide its audience with the information resources available on the Internet.¹ Likewise, since cable, TV in the region has a higher penetration than PC and dialup. In India, for instance, cable TV penetration in 2003 was 52% of TV households and 23 per cent of total households (Indiantelevision.com 2003). The potential of using cable networks for TV as well as Internet browsing is very high (Ciol.com, 2002).

INSTITUTIONAL FACTORS AND DIFFUSION OF ICTs

Institutionalists have recognized that the diffusion pattern of an innovation is tightly linked to the context provided by institutions (Storper and Walker, 1989; Sabel and Zeitlin, 1997). Viewing from a “rational perspective,” institutions are mechanisms that provide efficient solutions to predefined problems (e.g., decisions regarding Internet adoption, types of uses of the Internet, choosing about accessing or not accessing pornographic sites, etc.) (Olson, 1965; Williamson, 1975). Institutions influence how organization and individuals perceive the legitimacy of an action and hence can be better understood in the context of the tasks for which they were created (Holm, 1995).

Institutions help to provide solutions to a given problem by helping align individual and collective interests. North (1990) defines institutions as the macro-level rules of the game and thus distinguishing the players (organizations and individuals) from the rules (institutions) (p. 27). Hodgson (2003) argues:

Socio-economic systems do not simply create new products and perceptions. They also create and recreate individuals. The individual not only changes his/her purposes and preferences, but also revises his/her skills, his/her perceptions of his/her needs. In terms of both capacity and beliefs, the individual is changed in the process. (p. 162)

Scott (1995) has conceptualized institutions as composed of three broad categories: regulatory, cognitive, and normative. Each set has corresponding legitimacy concerns.

Regulative Institutions

Regulative institutions focus on the pragmatic legitimacy concerns in managing the demands of regulators and governments (Kelman 1987). In the context of this paper, regulative institutions consist of regulatory bodies and the existing laws and rules (e.g., Pakistan’s Electronic Transactions Ordinance, 2002) that influence organizations and Internet users to behave in certain ways (Scott, 1995). Internet users and those facilitating Internet use adhere to them so that they would not have to suffer the penalty for noncompliance (Hoffman, 1999).

Regulatory bodies are also parts of regulative institutions that influence the digital world. The Internet, arguably “the greatest democratizer the world has ever seen” (Pitroda, 1993, p. 66), is incompatible with authoritarian regimes. The next section provides various examples of Internet control in South Asia.

Normative Institutions

Normative components introduce “a prescriptive, evaluative, and obligatory dimension into social life” (Scott, 1995, 37). Practices that are consistent with and take into account the different assumptions and value systems of the national cultures are likely to be successful (Schneider, 1999). Elements of normative institutions also include trade associations or professional associations that can use social obligation requirements to induce certain behavior within the Internet industry and market. Normative institutions are concerned with procedural legitimacy and require the members of a society to embrace socially accepted norms and behaviors (Selznick, 1984). The basis of compliance in this case thus derives from social obligations, and non-adherence can result in societal and professional sanctions. For the purpose of this paper, the normative component focuses on the values and norms held by Internet users, technology marketers and policy makers.

Cognitive Institutions

Cognitive institutions are most closely associated with culture (Jepperson, 1991). Cognitive institutions represent culturally supported habits that influence a national system of innovations. In most cases, they are associated with cognitive legitimacy concerns that are based on some taken-for-granted cultural account of Internet use (Berger and Luckmann, 1967). Scott (1995, 40) suggests that “cognitive elements constitute the nature of reality and the frames through which meaning is made.” The cognitive component reflects the cognitive categories widely shared by the people in a particular country (Scott, 1995). Cognitive programs affect the way people notice, categorize, and interpret stimuli from the environment. Although carried by

individual members, cognitive programs are elements of the social environment and are thus social in nature (Berger and Luckman, 1967). Compliance in the case of cognitive legitimacy concerns is due to habits; Internet users may not even be aware that they are complying (e.g., tendency to visit websites in the native language, “wasting” time on the Internet, etc.).

INSTITUTIONS AND THE INTERNET IN SOUTH ASIA

In this section, we examine how the three institutional pillars conceptualized by Scott (1995) influence the diffusion patterns of the Internet and e-commerce.

Regulative Institutions and Internet Diffusion in South Asia

First, a strong rule of law is prerequisite to e-commerce transactions. A country with a strong rule of law is characterized by “sound political institutions, a strong court system” and citizens that are “willing to accept the established institutions and to make and implement laws and adjudicate disputes” (International Country Risk Guide, 1996). A country with a strong rule of law has provision of penalty for non-compliance with relevant laws. Institutions in such a country impose an effective punishment and regulatory sanctions for defectors which enhance the ability to combat against fraudulent dealings related to online transactions (Oxley and Yeung, 2001). South Asian economies are characterized by a lack of strong rule of law. For instance, insecurity, unreliability and theft are common problems in the postal system of Pakistan (Ebusinessforum, 2000b). U.S. online merchants consider Pakistan as one of the high-risk countries and many of them block all orders from Pakistan (Richmond, 2003).

Second, e-commerce potential is tightly linked to the existence of laws that govern online transaction and other policy measures friendly to the digital world. Until 2000, no SAARC countries had enacted laws recognizing digital and electronic signatures. India’s Information Technology (IT) Act, 2000 formally recognises digital signatures and governs online transaction (Achar, 2000; Viswanathan, 2000). Similarly, in 2002, Pakistan enacted Electronic Transactions Ordinance, 2002. South Asian governments are taking aggressive measures to develop the ICT sector. The Indian government, for instance, set up a high-powered IT task force in May 1998 in an effort to transform India into a Global IT Superpower (Jhunjunwala, 2001). Following the recommendations of the task force, India privatised the national long-distance market, permitted ISPs to set up their own submarine cable landing stations, and share bandwidth with other ISPs. Among other measures to liberalise the telecom sector, India allowed the use of Ku-band in both Indian and foreign satellites. It also lowered import duties on IT products from 110% to 20% (Sowinski, 1999). Bangladesh, Nepal, Pakistan and Sri Lanka have also introduced policies aimed at fostering the ICT sector. For instance, Bangladesh’s National Telecommunication Policy (adopted in 1998) aims to provide high quality telecom services, including mobile telephones, paging, data services, and Internet access, throughout the country at reasonable cost by increasing private and foreign investment (Shehabuddin 2001). There is no longer a government monopoly of the ISP businesses in these countries (Table 2).

Third, various controls on the Internet in South Asian nations tend to diminish the value of Internet use. Those South Asian governments that are authoritarian seem to be bigger enemies of the Internet. For instance, in the Maldives, the editors of an electronic newsletter have been serving life in prison since July 2002 for circulating articles critical of the government (Reporters Sans Frontieres, 2003). In the summer of 2004, the Maldivian government cut off the Internet and cell phone text messaging for 48 hours to prevent activists from contacting press organizations outside the country.² Similarly, new rules in Pakistan require Internet cafés to check their clients’ identity cards (Fisher, 2002). Pakistan Press Foundation also reported that in 1996, Pakistan’s ISPs asked customers to sign contracts that authorised police to read their messages. Moreover, users were not allowed to use cryptography and were required to provide a copy of their identity card that could be used in legal proceedings.³

There are some instances of Internet control even in the more democratic South Asian countries. Although there are no censorship laws pertaining to the Internet in Sri Lanka, instances of Internet control do occur. During the 1999 presidential elections, a minister warned news websites of a possible license revocation if their coverage

of the election campaign was not favourable to the party of the outgoing president.⁴ Similarly, a report by the Electronic Privacy Information Centre (EPIC) discusses the Indian government's efforts to compel users to disclose keys or decrypted files to government agencies (Gips, 2000). To fight cyber crime and pornography, Karnataka state of India has proposed new laws which will make it compulsory for those using cyber cafés to carry a photo-identity card and enter their details on an address book to be kept at the counter.⁵ Concerns about the Internet's threat to right to rule delayed the introduction of the Internet in Bhutan. Although discussions to introduce the Internet began in 1996, the Bhutanese government wanted to restrict the content by installing an Intranet (Telenews Asia, 1999), delaying the arrival of the Internet until 1999.

In terms of their capability and sophistication of Internet control, however, South Asian governments are far behind those of Singapore, Saudi Arabia, and China.⁶ To take one example, the Pakistan government's directive to ISPs to put filters to control net surfers accessing objectionable content has largely been ignored (World IT Report, 2003).

Normative Institutions and Internet Diffusion in South Asia

Compared to Western countries, Asia in general and South Asian countries in particular have values and social norms that are incompatible with the Internet and e-commerce technologies. First, preference for personal face-to-face communications over impersonal e-mail communications, and precedence of established relationships such as those found in Indian conglomerates (McKinsey, 2001) over Internet-driven efficiency, tend to work against the Internet and e-commerce.

Social norms also work against investment in IT-related projects. Mainly because of low income, social and political forces oppose the development of the Internet and e-commerce. For instance, in IT-vanguard Andhra Pradesh State of India, political opponents have attacked the government's focus on ICT industry and foreign capital as elitist (Chanda, 2000). Chandrababu Naidu's (Andhra Pradesh Chief Minister during 1995-2004) neglect of agriculture development and focus on the computer industry cost him the election in May 2004. Y. S. Rajashekha Reddy, who replaced Naidu, said:

We stand committed to their (the peoples') development, to mitigate their sufferings. Mr. Naidu only made five percent of the population richer. We raised the farmers' issue in the assembly, and Naidu ignored it.⁷

Third, socially accepted norms and behaviors (Selznick, 1984) in South Asia have created gender divide in Internet use. In 2000, women accounted for only 23% of Internet users in India (Hafkin, 2003; Hafkin and Taggart, 2001) and 20% of users are women in Bangladesh (Choudhury, 2004). As we mentioned earlier, public cafés are popular Internet access points in South Asia. Internet cafés, especially in small towns and rural areas, are managed by young males. The manager and his male friends frequently use the Internet to access pornographic sites. This is true even in community centers established by non-profit organizations (Gurumurthy, 2004). Social norms in South Asia do not allow women to visit such cafes. Although there are women-only Internet cafés in some countries (e.g., Pakistan), they are limited.

Cognitive Institutions and Internet Diffusion in South Asia

Sharing is a culturally supported habit in the collectivist culture of South Asia. To some extent, the propensity to share communications tools compensates for the adverse impact of low ICT penetration in the region. ICT use in general and Internet use in particular in South Asia is characterised by multiple users per device. For instance, each mobile phone serves nearly 70 customers in Bangladesh (Businessweek.com, 2001). Community-browsed e-Choupal portal also takes advantage of the sharing culture (see Box 1).

Habits related to economic transactions have also shaped e-commerce pattern in South Asia. For instance, less than 0.4% of the 1 billion people in India possessed credit cards in 2000, with an average annual spending of less than US\$40 (Ebusinessforum.com, 2000). In Pakistan, there were only half a million credit card holders in 2002, estimated to rise to one million by the end of 2005.⁸ Credit cards are virtually non-existent in other

smaller South Asian nations. Kenny (2003) points out the difficulty of conducting e-commerce in developing countries of Africa and South Asia:

Even if poor people are lucky enough to be literate and conversant in a major world language, their use of the Web for activities such as e-commerce is likely to be limited by their lack of credit cards, not to mention the challenge of persuading FedEx and UPS to start delivery services in their neighbourhoods. (p. 79)

Given the lack of credit cards, other payment forms have gained popularity. Check, wire transfer, and cash on delivery are employed for e-commerce payments in South Asia. In response to such habits, new e-commerce models such as cash-on-delivery (COD) have evolved in South Asia. COD is compatible with Indian culture because banks offer door-to-door cash delivery services, people often keep large sums of cash at home, and very large transactions are routinely made in cash. Moreover, those able to afford a PC in India are also likely to have servants and so there will always be someone at home when the purchased product is delivered (Ebusinessforum.com, 2000). To provide its COD services in India, Rediff.com has tied up with FedEx in a system that enables customers to track shipments (Najmi, 2000).

SOME MECHANISMS FOR STIMULATING E-COMMERCE IN SOUTH ASIA

Technology marketers and policy makers in the region can take measures to attack some of the e-commerce barriers in the region. Since institutions are durable (Hodgson, 2003), it is difficult to change their fundamental structure in an economy. Success in the electronic market is thus a function of the degree to which online sellers and policy makers can adapt ICT projects and business models to account for various institutional pressures. For instance, to align with the habits of economic transactions in the region (e.g., heavy use of cash), fundamental changes are needed in the banking industry and market. To meet the demand of cash needed for online transactions and at the same time to produce the Money Multiplier Effect, banks and governments in the region are required to launch marketing campaigns focusing on the benefits of deposit accounts (e.g., free from robbery, interest accumulation, etc.). Increased deposits in the financial services industry means more money to lend out. Such campaigns, combined with some countries' efforts (e.g., India and Pakistan) at alignment with international standards such as Basel II,⁹ can contribute to the short- as well as long-term growth of the e-commerce industry in the region.

Online marketers can also capitalize on technologies that have relatively higher penetration in the region. As mentioned earlier, cable TV is such a product. For instance, India's cable TV penetration in 2003 was 54.2%, compared to China's 29.2%.¹⁰ "Web TV" based products, thus, have high potential, at least in the short run.

The experience of the Andhra Pradesh state of India indicates that ICT projects and products that focus exclusively on elites do not gain normative legitimacy. Innovative Internet and e-commerce products that focus on the population at the bottom of the economic pyramid are more likely to be successful in the long run.

In some cases, stricter enforcement of existing laws can result in more productive uses of the Internet, as well as the development of a more equitable information society. For instance, India's IT Act 2000 prohibits transmitting and accessing "obscene" material through the Internet. Women are more likely to visit Internet cafés if such laws are more strictly enforced.

Concluding Remarks

An important contribution of this paper is to dig deeper than obvious economic factors to examine the drivers and inhibitors of the Internet and e-commerce in South Asian nations. We have discussed how regulatory institutions such as strength of rule of laws, existence of laws to govern transaction in the digital world and nature of rule making institutions; normative institutions such as emphasis on established relationships over Internet-driven efficiency, existence of social forces against investment in Internet-related projects; and cognitive institutions, such as sharing culture and habits related to economic transactions, have shaped the digital world of South Asia.

Institutions are durable and hence a company cannot change their fundamental structure in an economy. Success of an online seller in the hyperbolically growing digital world of the South Asia is thus a function of the degree to which it can adapt its business models to account for various institutional pressures. Businesses that are able to re-align and adapt with the environment in South Asia have reaped the rewards. To take one example, thanks to its COD model and other features attractive to South Asia, Rediff has already started earning profits.

NOTES

1. See <http://www.infodev.org/exchange/exch12/2exch12.htm>
2. "Caught in the Net: Maldives," Foreign Policy, November/December 2004.
3. See <http://www.c4group.net/ivhp/bilgibelge/docs/enemies%20of%20internet.doc>
4. See <http://www.c4group.net/ivhp/bilgibelge/docs/enemies%20of%20internet.doc>
5. India News. India's IT state set to restrict Internet usage <http://india.news.designerz.com/indias-it-state-set-to-restrict-internet-usage.html>
6. For instance, the Chinese government closed 150,000 unlicensed Internet caf s following a fire in a Beijing net caf and the remaining cafes are required to install software that prevents access to up to 500,000 banned pornographic sites or sites with "subversive content" (BBC News, 2002, September 3). Likewise, a recent study conducted by Harvard Law School found that a central array of proxy servers in Saudi Arabia filters and blocks "sexually explicit" contents (Hermida, 2002).
7. See YSR Elected CLP Leader, to Take Over as Andhra CM May 15, 12 May 2004, <http://www.indian-elections.com/latest-news/india-elections-news237.html>
8. See <http://www.mallpk.com/aboutecommerce.htm>
9. Basel II lays out international standards for the amount of money banks are required to keep in reserve to meet obligations resulted from unexpected losses. This is an effort to enhance the safety standards in financial services industry. Indian banks will have to adopt Basel II by March 2007 ([Reuters.com](http://www.reuters.com), 2005).
10. See <http://www.worldscreen.com/asiapacific.php>

REFERENCES

- Achar, A. (2000), 'Concerns About India's New IT Bill,' Telecommunications, (34:8), p. 15.
- Achar, Aparna (2001), 'ISPs Turn to Cyber Caf s for Extra Revenue,' Telecommunications, 35(6), p. 13.
- Angwin, Julia (2002), 'Internet Pioneer in India Grows by Targeting Middle Class, Tech Firms—Now, Satyam Infoway's Backer Says It Plans to Sell a Stake And AOL May Be Interested,' Wall Street Journal, March 25.
- Barclay, Brian and Domeisen, Natalie (2001), 'E-Trade Opportunities: Are Developing Countries Ready?' International Trade Forum, 1, 16-19.
- BBC News (2001), 'Village in the Clouds Embraces Computers,' 22 October, http://news.bbc.co.uk/1/hi/english/sci/tech/newsid_1606000/1606580.stm [accessed 30 September 2002].
- BBC News (2002), 'Behind China's Internet Red Firewall,' 3 September, <http://news.bbc.co.uk/2/hi/technology/2234154.stm> [accessed 30 September 2002].
- BBC News (2003), 'Afghans Plant Flag in Cyberspace,' 10 March, <http://news.bbc.co.uk/2/hi/technology/2835799.stm> [accessed 30 March 2003].
- Berger, P.L. and Luckmann, T. (1967), *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Doubleday.
- Bhatnagar, Pradip (1999), 'Telecom Reforms in Developing Countries and the Outlook for Electronic Commerce,' *Journal of World Trade*, 33 (4), 143-158.
- Burkhart, G. E.; Goodman, S. E.; A. Mehta and Press, L. (1998), 'The Internet in India: Better times ahead?' *Communications of the ACM*, Nov, 41 (11), 21-26.
- Businessline (2001), 'India: Bridging the IT Divide In Microcredit,' February 4. *Business2media.com* (2001), Rediff.com Reports Fourth Quarter and Year End Results, April 19, <http://www.business2media.com/home/pressrelease.asp?b2mid=90> [accessed 30 September 2002].
- Business Week (2000), 'Muhammad Yunus,' July 3.
- Businessweek.com (2001), 'Providing Rural Phone Services Profitably in Poor Countries,' <http://adsections.businessweek.com/digital/profit.htm> [accessed 30 September 2002].
- Chanda, Nayan (2000), 'Limits of vision,' *Far Eastern Economic Review*, February 24, p. 20.

Choudhury, Naziat (2004), Digital Divide in Internet Use: Women Internet Users in Bangladesh Proceedings of the AoIR-ASIST 2004 Workshop on Web Science Research Methods, <http://cybermetrics.wlv.ac.uk/AoIRASIST/choudhury.html>.

CIA (2001), World Fact Book 2001, Central Intelligence Agency, <http://www.odci.gov/cia/publications/factbook/> [accessed 3 September 2002].

Ciol.com (2002), Broadband: An Introspection, May 08, <http://www.ciol.com/content/news/interviews/102050801.asp> [accessed 20 September 2002].

CNN.com (2003), 'Everest Camp to Get Internet Café,' March 8, Online at: <http://edition.cnn.com/2003/WORLD/asiapcf/south/03/07/nepal.cafe.ap/index.html> [accessed 30 September 2002].

Currie, Antony (1999), E-lack-of-commerce, Euromoney; October, p. 7. Ebusinessforum (2000a), Cash is king for Indian e-commerce, July 10th, <http://www.ebusinessforum.com> [accessed 30 September 2002].

Ebusinessforum (2000b), Doing Business in Pakistan, www.ebusinessforum.com [accessed 10 October 2002].

Ebusinessforum (2000c), Doing Business in Sri Lanka, www.ebusinessforum.com [accessed 13 September 2002].

Economist Intelligence Unit (2002), The Economist Intelligence Unit e-readiness rankings, July 2002, <http://www.ebusinessforum.com/index> [accessed 3 September 2002].

Euromonitor (2003), International Marketing Data and Statistics, 27th ed. London. Fisher, Ian (2002), 'Cybercafe Crackdown May Trip Up Leering Boys,' New York Times, August 1.

Gatignon, Hubert and Thomas S. Robertson (1985), 'A Propositional Inventory for New Diffusion Research,' Journal of Consumer Research, 11 (March), 849-867.

Gips, M. A. (2000), 'Home on the Page: <http://www.securitymanagement.com>,' Security Management, 44 (8), pp. 20.

Goldstein, D. (2000), History of the Internet, <http://www.nic.at/english/geschichte.html> [accessed 30 September 2001].

Gooptu, Pradeep (2002), 'ITC to Expand E-Choupal Network to 3,000 Kiosks,' Business Standard, June 11, <http://www.business-standard.com/archives/2002/jun/50110602.028.asp> [accessed 30 September 2002].

Gurumurthy, Anita (2004), Gender and ICTs: Overview Report, Bridge: <http://www.bridge.ids.ac.uk/reports/CEP-ICTs-OR.pdf>.

Hafkin, N. (2003), Gender issues in ICT statistics and indicators, with particular emphasis on developing countries, Joint UNECE/UNCTAD/UIS/ITU/OECD/EUROSTAT Statistical Workshop: Monitoring the Information Society: Data, Measurement and Methods (Geneva, 8-9 December 2003), <http://www.unece.org/stats/documents/ces/sem.52/3.e.pdf>.

Hafkin, N. and Taggart, N. (2001), Gender, information technology, and developing countries: An analytic study. Retrieved March 22, 2001, from the United States Agency for International Development Web site: <http://www.usaid.gov/wid/pubs/hafnoph.pdf>.

Hermida, Alfred (2002), 'Saudis block 2,000 websites,' BBC News, July 31, <http://news.bbc.co.uk/2/hi/technology/2153312.stm> [accessed 30 September 2002].

Hodgson, Geoffrey M. (2003), 'The Hidden Persuaders: Institutions and Individuals in Economic Theory,' Cambridge Journal of Economics, 27: 159-175.

Holm, P. (1995), The dynamics of institutionalization: Transformation processes in Norwegian fisheries. Administrative Science Quarterly, 40(3), 398-422.

Ishaq, A. (2001), 'On the global digital divide,' Finance & Development, 38, 3, 44-47.

Indiantelevision.com (2003), 'Consumers will slowly adopt set tops post-CAS: Morgan Stanley,' 17 July, <http://www.indiantelevision.com/headlines/y2k3/july/july132.htm>.

Jepperson, R. (1991), 'Institutions, Institutional Effects, and Institutionalism.' In W.W. Powell and P.J. DiMaggio (eds.), The New Institutionalism in Organizational Analysis. Chicago: University of Chicago Press, pp. 143-163.

Jhunjhunwala, A. (2001), Can IT Help Transform India?, <http://www.tenet.res.in/Papers/IT-Trans/ittrans.html> [accessed 30 September 2002].

Kelman, S. (1987), Making Public Policy: A Hopeful View of American Government. New York: Basic Books.

Kenny, Charles (2003), 'Development's False Divide,' Foreign Policy, Jan/Feb, 76-77.

Kshetri, Nir (2002), 'What Determines Internet Diffusion Loci in Developing Countries: Evidence from China and India,' *Pacific Telecommunications Review*, 23(3), 25-34.

Lagerquist, Peter (2002), 'Lahore Calls for Business,' *Far Eastern Economic Review*, June 20, 36-39.

Little, Stephen, Holmes, Len and Grieco, Margaret (2001), 'Calling up Culture: Information Spaces and Information Flows as the Virtual Dynamics of Inclusion and Exclusion,' *Information Technology & People*, 14 (4), 353-67.

McKinsey, Kitty (2001), 'Asians Miss the E-Biz Mark,' *Far Eastern Economic Review*, March 15, pp. 42.

Murphy, Cait (2000), 'The Edge of the Web,' *Fortune*, July 10, 168-177.

Murphy, Cait (2002), 'The Hunt for Globalization that Works,' *Fortune*, Oct. 28, 163-9.

North, D. C. (1990), *Institutions, Institutional Change and Economic Performance* Cambridge, UK: Cambridge University Press.

Olson, M. (1965), *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

Oxley, J. E., Yeung, B. (2001), E-commerce readiness: Institutional environment and international competitiveness, *Journal of International Business Studies*, 32 (4), 705-723.

Petroleum Economist (2001), 'E-commerce: India Moves Online,' 68 (5), 40.

Pitroda, Sam (1993), 'Development, democracy, and the village telephone,' *Harvard Business Review*, 71 (November/December): pp. 66.

Reporters Sans Frontieres (2003), 'Editors of an electronic newsletter sentenced to life in prison,' February 14, http://www.rsf.org/article.php?id_article=4940 [accessed 30 September 2002].

Reuters.com (2005), India to put banks under Basel regime in 2007, Feb 15, 2005, <http://www.reuters.com/newsArticle.jhtml?storyID=7636485&type=businessNews>.

Richmond, Riva. Selling Strategies—Scammed! Web merchants use new tools to keep buyers from ripping them off. *Wall Street Journal*, Jan 27, 2003. p. R.6

Rosary, Grace D. (2001), Asian countries ready copyright laws for e-commerce, *Computer World*, Nov 12, 1.

Sabel, C., Zeitlin, J., eds. (1997), *World of Possibilities: Flexibility and Mass Production in Western Industrialization*. New York: Cambridge University Press.

Sanganeria, Sunanda (2003), 'ITC E-Choupal in U.P. Wheat Buying Spree,' *Business Standard*, February 13, <http://www.business-standard.com/archives/2003/feb/50130203.001.asp> [accessed 30 March 2003].

Schafer, W. (2003), Delving Deeper Into Access: Marginal Internet Usage in Local Community, Paper presented at Household Oriented Informatics and Telematics (HOIT), Irvine: University of California, April 5-8.

Shehabuddin, K. M. (2001), 'Bangladesh: Journey Towards Sonar Bangla,' *International Journal of Commerce & Management*, 11, 2, 40-49.

Schneider, A. (1999), 'U.S. Neo-Conservatism: Cohort and Cross-Cultural Perspective,' *The International J. of Sociology and Social Policy*, 19(12), 56-86.

Scott, W. R. (1995), *Institutions and organizations*. Thousand Oaks, CA: Sage.

Scott, W. R. (2001), *Institutions and organizations*. Thousand Oaks, CA: Sage.

Selznick, P. (1984), *Leadership in Administration*. Evanston, IL: Peterson.

Sowinski, L. (1999), "China, India, and Australia," *World Trade*, 12 (10), 28-32.

Storper, M. and Walker, R. (1989), *The Capitalist Imperative: Territory, Technology and Industrial Growth*, London: Basil Blackwell.

Udo, G. J. (2001), 'Privacy and Security Concerns as Major Barriers For E-Commerce: A Survey Study,' *Information Management & Computer Security*, 9(4), 165.

UNCTAD (2000), *Building Confidence: Electronic Commerce and Development*, United Nations Conference on Trade and Development, Geneva.

UNDP (2001), *Human Development Report*, New York: United Nations Development Program, <http://www.undp.org/hdr2001/completenew.pdf> [accessed 11 July 2001].

UNDP (2002), *Human Development Report*, New York: United Nations Development Program, <http://hdr.undp.org/reports/global/2002/en/pdf/backone.pdf> [accessed 20 July 2002].

UNDP (2002b), 'Benin Parliamentarians and the Digital Age,' <http://capacity.undp.org/cases/insights/dandjinou.htm> [accessed 30 September 2002].

Williamson, O. E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press, New York.

World Bank (1999), *World Development Report: Knowledge for Development*, Washington D.C.: World Bank.
<http://www.worldbank.org/data/databytopic/GNIPC.pdf> [accessed 30 September 2002].

World Bank (2001), 'Linking Rural Bangladesh Through Cellular Phones: IFC invests in Grameenphone,'
<http://wbln1018.worldbank.org/sar/sa.nsf/2991b676f98842f0852567d7005d2cba/71044b08a15612588525686d0060040b?OpenDocument> [accessed 30 September 2002].

World Bank (2002), *World Development Indicators database*, World Bank, August 2002,
<http://www.worldbank.org/data/databytopic/GNIPC.pdf> [accessed 30 September 2002].

World IT Report (2003), 'Pakistan faces difficulties to block porn sites,' February 3.