E-Commerce
in the
Asian Context

Selected Case Studies

EDITED BY

RENALD LAFOND
CHAITALI SINHA

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Contents

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Foreword

The International Development Research Centre (IDRC) is proud to be a publisher of this volume, jointly with the Institute of Southeast Asian Studies, Singapore. The IDRC's Pan Asia Networking (PAN) programme, which supported this work, has been involved with information and communications technology (ICT) for development in the region for more than a decade.

Long before the G8 countries "discovered" the digital divide, PAN was assisting innovators in South and Southeast Asia to help move their societies and communities forward in the Information Economy. Pan Asia Networking's contributions in this area began as early as 1994 and continues to this day, remaining focused on Asian ICT innovations that will help the poor and build the region's social and economic institutions.

E-commerce started as an over-hyped fad. The assumption was that households would be doing major proportions of their domestic purchasing over the Internet. Yet, e-commerce sales account for less than 1 per cent of GDP and 2 per cent of all sales in the United States, which transacts three-quarters of all e-commerce worldwide. The original paradigm of a business-to-consumer business model misread the market. Instead, e-commerce flourishes most where businesses interact and transact in supply chains, something the consumer doesn't even see.

So why a volume on e-commerce in Asia? First, as the "twin towers" of Asia's digital dynamo, China and India, continue to grow, Asian firms will build their own supply chains and become vertically integrated with existing commercial networks. The skills, practice, and policy to support this economic development will need to be in place sooner, rather than later.

Second, the incredible growth of digital transaction models like e-Bay means that no Asian producer need be too far removed from the principal markets for goods and services. As an Asian supplier, I can "sell it on e-Bay" or build and participate in similar transaction exchanges in my own language in the region.

Third, the early Asian experiences with e-commerce need to be documented, learned and incorporated into the next steps taken by the region in its digital development. We hope that this volume contributes to this outcome and appreciate the time, patience and professionalism of the volume's contributors.

RICH FUCHS
Director
Information and Communications Technologies for Development
International Development Research Centre

Acronyms

APEC	Asia-Pacific Economic Co-operation
ASEAN	Association of Southeast Asian Nations
ASP	application service provider
B2B	business-to-business
B2C	business-to-consumer
BDS	business development services
CAPART	Council for Advancement of People's Action and Rural Technology
CBO	community-based organization
CD-ROM	compact disk–read only memory
DSL	digital subscriber line
DTP	desktop publishing
EDI	electronic data interchange
FCRA	Foreign Contributions (Regulations) Act
FDI	foreign direct investment
FISME	Federation of Indian Micro and Small and Medium Enterprises
FOOD	Foundation of Occupational Development
GHTC	Government Handloom and Training Centre
ICT	information and communications technology
IDRC	International Development Research Centre
IPR	intellectual property rights
ISP	Internet service provider
IT	information technology
JETS	Japanese European Technology Study
KB	kilobyte
Kbps	kilobits per second
LAN	local area network
LCC	local cluster co-ordinator
Mbps	megabits per second

MOS	mail order system
MOST	Ministry of Science and Technology
MOSTE	Ministry of Science, Technology and Environment
MOT	Ministry of Trade
MPT	Ministry of Post and Telematics
MSME	micro, small, and medium enterprises
NATO	North Atlantic Treaty Organization
NCDPD	National Centre for Design and Product Development
NGO	non-governmental organization
NISTPASS	National Institute for Science and Technology Policy and Strategy Studies
NOIE	National Office for the Information Economy (*now* Australian Government Information Management Office)
NRC	National Research Council Canada
OECD	Organization for Economic Co-operation and Development
OSS	open source standards
PAN	Pan Asia Networking
PC	personal computer
PIDS	Philippine Institute for Development Studies
RASI	Rural Access to Services Through Internet
RELC	Regional Language Centre
SAREC	Department for Research Co-operation, SIDA
SIDA	Swedish International Development Co-operation Agency
SME	small and medium enterprises
SMS	short messaging system
SOE	state-owned enterprise
SSL	secure sockets layer
SSP	Saigon Software Park
STIP	Science, Technology, and Innovation Policy
TEL	Telecommunications Working Group
UNCITRAL	United Nation Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
UNU	United Nations University
USA	United States of America
VAT	Value Added Tax
VB	virtual bookshelf
VBS	virtual bookshelf system

VCIT	Vietnam Association for Information Processing
WAN	wide area network
WISP	wireless Internet service provision
WTO	World Trade Organization

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Introduction

Renald Lafond and Chaitali Sinha

Electronic commerce (e-commerce) is increasingly discussed and written about in today's knowledge-based economies. Although there are currently no internationally agreed-upon definitions of e-commerce, the OECD (Organization for Economic Co-operation and Development) defines e-commerce transactions as: *the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organisations, conducted over computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line.*[1] The concept of e-commerce extends into communications, promotion, customer service, statistics, and usage patterns. However, often overlooked when examining e-commerce acceptance or failure is the social and cultural impact of conducting conventional business transactions over the Internet.

The absence of an agreed-upon definition for e-commerce creates a challenge when comparing e-commerce modalities in different countries. For some people, e-commerce is limited to credit-card transactions that take place over the Internet. For others, e-commerce means using any electronic device to purchase goods or services. The entire e-commerce process is complex and requires meticulous and well-informed planning to succeed. Businesses need to look beyond issues such as what products and services to offer, how to design and maintain a portal, and how to handle security issues. They must closely examine less tangible, but equally important issues, such as social and cultural norms in the region; sustainable funding strategies, and the formation of strategic partnerships.

1

E-Commerce in the Asia-Pacific Region

The Asia-Pacific region is an extremely diverse testbed for e-commerce because of its different levels of economic, political, and technological expertise and stability. Overall, the number of e-commerce transactions has been increasing since the late 1990s; however, many of these transactions are concentrated in a handful of countries. The Asian e-commerce landscape is far from evenly distributed. Japan, the world's second biggest economy, is responsible for more than $27 billion of online revenues within the region, or approximately 70 per cent of the total.

Research on E-Commerce

The International Development Research Centre (IDRC) is a Canadian public corporation that has been helping developing countries to use science and technology to find practical, long-term solutions to the social, economic, and environmental problems since 1970. The e-commerce paradigm is compelling to IDRC, as the Centre actively supports research into innovations that can contribute to the knowledge and information economies of developing countries.

The e-commerce issues examined by IDRC's Pan Asia Networking (PAN) programme range from providing electronic payment systems and authentication to studying the policy environment within which e-commerce activities are conducted. By supporting research in countries that did not have e-commerce infrastructure and policies, PAN is able to help local research teams examine the obstacles and issues that are encountered when piloting such a unique business model. This book discusses the experiences of four e-commerce research projects supported by PAN in Asia.

PAN Regional E-Commerce Mall

The PAN e-commerce mall is a not-for-profit e-commerce portal <www.panaseanemall.org> that serves the development community in the Asia-Pacific region. This initiative was the first of its kind in the region to successfully confront the issue of secure electronic payment. With contributions from thirteen countries in the region (Bangladesh, China,

India, Indonesia, Laos, Malaysia, Mongolia, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, and Thailand) in the form of arts and crafts, publications, videos, and CD-ROMs, this truly regional e-commerce site has been in operation since June 2000. The PAN e-commerce mall is part of a larger undertaking — the ICT4D (Information and Communication Technologies for Development) Collaboratory, hosted at the ASEAN Foundation in Jakarta, Indonesia <http://www.ict4dasean.org/>.

India: Direct Marketing of Artisanal Products

Indiasocial.org uses information and communications technologies (ICTs) to create a bridge between artisanal clusters in India and their potential markets. These previously isolated groups can now build on local knowledge and use ICTs to develop a comprehensive, cost-effective way to market their products globally. Four clusters of artisans participated in this pilot project. The report outlines the steps taken by Indiasocial.org to introduce e-commerce to theese isolated communities and discusses some of the project's successes and failures. Four pilot sites have been established <http://www.moradabadcluster.org; http://www.saharanpurcluster.org; http://www.chandericluster.org; and http://www.firozabadcluster.org>.

India: Online Marketers

The Foundation of Occupational Development (FOOD), a non-governmental organization (NGO) in South India, successfully experimented with the use of online marketers (e-marketers) to promote product sales for rural women co-operatives and NGOs. These e-marketers were thoroughly trained in Internet technologies and custumer service issues to assist the artisans and customers. FOOD has set up the Indiashop, an online e-commerce portal highlighting a variety of Indian clothing, crafts, and jewellery <http://www.xlweb.com/indiashop>.

Vietnam: Policy Environment

For e-commerce to flourish, the policy environment must be conducive to the unique elements of its activities. PAN funded a study of the policy

environment for e-commerce development in Vietnam to assess the current policy framework, determine the readiness of businesses to develop e-commerce activities, and suggest policy recommendations to the Vietnamese Government. This chapter outlines the role of the government in e-commerce, including the establishment of the Department for Information Technology and E-Commerce at the Ministry of Trade in early 2003.

Challenges in E-Commerce Adoption

Each chapter in this book deals with a unique situation that depends both on the form of e-commerce used and the social and cultural norms of the customers and vendors. However, several challenges are common to setting up virtually any e-commerce system. For example, when the PAN e-commerce mall was established in Singapore as a regional portal, one of its main objectives was to establish a secure form of online payment using credit cards. This was a significant challenge because of the need for encryption technologies, the existing social norms that often prohibit such online transactions, and the limited number of credit-card holders in some Asia-Pacific countries.

E-commerce purchases often complement regular storefront acquistions, however more frequently, these electronic purchases compete with conventional storefront operations. Issues common to traditional storefront stores, such as touching, packaging, and shipping the product, suddenly become very important factors to consider when setting up an effective and profitable e-commerce portal. The research reported in this book looks at most of these e-commerce adoption criteria.

E-commerce is expected to become increasingly important to businesses in Asia. The research reported in this book presents insights into how this technology might be better adapted to rural settings, and how policy decisions can affect e-commerce development.

Note

1. OECD Guidelines for the Interpretation of the Definitions (WPIIS Proposal April 2001) <http://www.oecd.org/dataoecd/34/16/2771174.pdf>.

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Action Research on E-Commerce for Small Artisans and Development Organizations
Pan Asia E-Commerce

Aniceto C. Orbeta, Jr.

In the World Bank's *World Development Prospectus 2001*, the first of the four broad conclusions in the chapter assessing e-commerce in developing countries states: "Firms in developing countries should enjoy productivity gains and expanded demand with the spread of electronic commerce." Many would scoff at this statement, especially given the collapse of Internet market values. But keen observers believe that "there is a big difference between believing in the new economy and in believing unrealistic stock prices that were attached to firms in the new economy" (Kirkman and Sachs 2001). If the new economy can bring enormous benefits to the developing world, our major concern should be to focus on work that would enable artisans and development organizations to share in these benefits. Otherwise, the digital divide will reinforce the income divide.

This chapter documents the efforts of Pan Asia Networking, a programme initiative of the International Development Research Centre (IDRC), which experimented with a live Internet laboratory where artisans and development organizations could learn the ropes of e-commerce in a

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learning-by-doing manner. It documents these efforts from the perspective of both Pan Asia Networking and the participating development organizations. Transactions data, although limited, are also examined.

E-commerce and Micro, Small, and Medium Enterprises (MSMEs)

There are two sets of requirements for e-commerce to flourish — infrastructure and environment. Mann, Eckert, and Knight (2000) pointed out that e-commerce depends on three infrastructure systems: communication, payment, and distribution and delivery. In addition, the Sacher Report (OECD 1997) argued that e-commerce could only flourish if it achieved or approximated the acceptance accorded to over-the-counter transactions. The latter depends on the socioeconomic, cultural, and legal environment of all actors. The slow uptake of e-commerce in developing countries in general, and among MSMEs in particular, is the result of the confluence of these two sets of factors.

The benefits of e-commerce can be reaped by suppliers, producers, consumers, and society in general. Given its objectives, this chapter focuses on the benefits to producers and suppliers.[1] There are several ways to classify the benefits of e-commerce to producers and suppliers. The benefits revolve around six themes:

- expanded reach;
- 24 (hour) × 7 (day) presence;
- the potential to eliminate intermediaries;
- the opportunity to update catalogues in real time and the potential for personalized offerings;
- lower transaction costs; and
- a revolutionary way to manage customer and supplier relations (i.e., order tracking, self-service information retrieval, and individualized dialogue).

The first two are more obvious; whereas, doubt has been cast on the third with the rise of the so-called "infomediaries" — firms that provide information sorting services. Lower transaction costs and improved management of customer and supplier relations are well established

and documented. OECD (2000) pointed out that the current focus of "accounting" for e-commerce benefits has been placed on static[2] benefits, but argues that dynamic benefits — new products, new business models, and new practices — will far surpass these static benefits.

Orbeta (2002) pointed out that, in contrast to the older Electronic Data Interchange (EDI) that was available only to large firms, the low market-entry and transaction costs, and wide geographic reach of e-commerce through the Internet, makes it available even to MSMEs. Large transaction volumes are no longer necessary to justify the creation of a website, even for firms of modest size.

Although the benefits are applicable to all types of firms, what would be the main concerns for MSMEs — the focus of the Pan Asia e-commerce project? A review of some recent research shows several patterns. A survey of thirty-four Australian SMEs that were using e-commerce showed that the benefits were related to the size of their investments (Kennedy 2001). Gains from efficiency in business operations had a direct relationship with the amount of investment (i.e., the greater the investment, the greater the gains in business operations), and SMEs benefitted more from increased revenues. The study also found that website set-up and maintenance costs were significant hurdles for MSMEs wishing to engage in e-commerce. These findings echo those in the PricewaterhouseCoopers — APEC (1999) study on SME e-commerce in the APEC region, which suggested that lack of trust and confidence in the facility were the major impediments to e-commerce adoption by MSMEs. The fears emanate from security, legal, and liability issues. As pointed out in the Sacher Report (OECD 1997), the ideal situation for e-commerce is to approximate the trust accorded to over-the-counter transactions. Obviously, this only comes with exposure and hands-on experience with the facility. Several studies (PricewaterhouseCoopers — APEC 1999; OECD 2000; UNCTAD 2001, 2002) have identified lack of awareness and limited internal capabilities of firms as a big barrier. This barrier includes limited knowledge of business models and e-commerce technologies, and the fact MSMEs are unconvinced of the benefits of e-commerce. These studies are in consensus in proposing massive awareness programmes to counteract these impediments. They have proposed that governments should provide a leadership role by using e-commerce in their own operations.

E-commerce Developments In Asia[3]

To provide a geographic context to the Pan Asia e-commerce initiative, it is valuable to provide a brief overview of e-commerce developments in Asia with a focus on MSMEs and developing countries in the region. The e-commerce trends in Asia reflect the state of infrastructure development and the socioeconomic and legal environment. According to Orbeta (2002), the main factors influencing e-commerce development in the region are:

- The high cost of Internet connection relative to per capita incomes;
- Low financial-sector development reflected in low levels of credit card ownership (although some argue that this indicates a preference for cash transaction). In addition, many countries, such as Vietnam, India, and Indonesia, impose strict regulations on payments in foreign currency;
- The logistics capacity is not well known; and
- Face-to-face or personal transactions may be preferred.

Given these considerations, it is clear that while global trends[4] in e-commerce are replicated in Asia, several features unique to the region have emerged:

- The use of the ubiquitous corner store as both a pick-up and delivery point. This is in contrast to the Western model of delivery to the household. It is noteworthy that this is happening even in highly developed Japan where 7-Eleven corner stores are used as payment and pick-up points.
- There is a proliferation of public access points or Internet cafes. The obvious reason for this is that average per capita incomes are low relative to the cost of connectivity at home. In Mongolia, Internet cafes are being used as integrated order, payment, and pick-up points (Orbeta 2001). In addition, alternative access devices, such as mobile phones, are increasingly becoming important in countries such as the Philippines.
- In contrast to the Western model of payment by credit card, cash on delivery (COD) and bank transfer are accepted modes of payments. One Chinese e-commerce provider said that 96 per cent of transactions are paid COD, and the other 4 per cent are paid using debit cards because these are gifts that obviously cannot be paid by COD.[5] In addition, new ways of making payments are emerging. For example,

riding on the popularity of the short messaging system (SMS) in the Philippines, mobile banking has been introduced with services that include bill payment and fund transfer.

- E-commerce applications to serve niche markets are unfolding. For example, websites selling gifts and offering money-transfer services, directed at the large number of overseas workers with better purchasing capacities, have emerged in the Philippines[6] and Vietnam.

Not discounting the fact that there are still transactions being negotiated via email, there are two groups of business models. The first model is a common website for members, such as the Handicraft Association of Nepal (www.nepalhandicraft.org), the site established by the NGO Rehab Craft in Cambodia (www.camnet.com.kh/rehabcraft), or a government-sponsored website (for example, www.smethai.net in Thailand and www.smeda.org.pk in Pakistan). The second model uses a private application service provider (ASP) to handle the setting up and maintenance of an electronic store for a fee (for example, www.myayala.com and www.divisoria.com in the Philippines and www.tvc.com.vn in Vietnam). The first model usually has only electronic catalogues on their websites; whereas, the second model also includes payment services.

In terms of the types of products bought and sold via e-commerce, the global trend of transactions being dominated by digitally deliverable products such as stocks, bill payments, and software is also true in Asia. There are, however, important deviations. One is the popularity of products and services that cater to foreigners and to overseas workers. This would include handicraft products and tourism services. This is not difficult to understand because these are the products and services that tourists and overseas workers tend to buy. In addition, targeting the foreign market is easy to understand given that is where higher purchasing power can be expected. There are, however, reasons for focusing on the domestic market. For example, restrictions on payments across borders, such as in Vietnam, India, and Indonesia, force sellers to focus on the domestic market. In the case of China, the focus on domestic markets is due to the large size of the internal market, which reduces the immediate need for cross-border e-commerce, particularly for MSMEs.

Finally, the business-to-business (B2B) aspect is known to dominate current e-commerce transactions (Orbeta 2002; UNCTAD 2001). Unfortunately, there is not much documentation on the extent to which

MSMEs have been connected to the global supply chain. The need to connect MSMEs to the global supply chain is critical if we intend to prevent the digital divide from reinforcing the income divide. The existing B2B exchanges, such as BayanTrade (www.bayantrade.com) in the Philippines, involve the biggest conglomerates. Bringing the MSMEs into these exchanges continues to be a challenge.

Research Methodology

Three main sources of data were used for this chapter: interviews with the people responsible for this effort to determine the reasons behind the initiative, their experiences in setting up and managing the e-commerce platform, and their future plans; an e-mailed survey asking similar questions of the co-operators;[7] and an analysis of the transactions data captured by the system.

Pan Asia E-commerce

This section draws heavily on interviews and documents provided by the people behind Pan Asia e-commerce. Pan Asia e-commerce is one activity carried by the Pan Asia Collaboratory.[8] PAN focuses on finding applications of information and communications technologies (ICTs) that are appropriate for solving development problems. The intended clients are non-profit institutions and national and regional research and development agencies with limited existing capacities and a desire to use ICTs in their development work. Pan Asia Networking has been involved in the following types of activities:

- establishing connectivity and public sector ISPs;
- enabling development and research into the use of web-based applications;
- establishing telecentres in rural areas;
- funding research and development into Internet technologies, systems, and policies; and
- experimenting with focused applications (e.g., distance education).

E-commerce naturally emerged as one of PAN's applications. Pan Asia e-commerce provides a platform for selling products classified under

five categories — publications, videotapes, CD-ROMs, photographs, and handicrafts.[9]

The effort to design this Internet laboratory for live experimentation and training illustrates the applied research aspect of the Pan Asia Networking programme. It has provided hands-on experience in ICT tools and media, particularly on e-commerce technologies, to developing country organizations. While learning the ropes of e-commerce technologies, these organizations have experienced the demands created by an expanded market for their "creative" products. Table 1.1 provides a summary of the sequence of events that have taken place.

As of February 2002, twenty-five partners[10] from thirteen countries in Asia had set up e-stores. These countries include Bangladesh, China, India, Indonesia, Lao PDR, Malaysia, Mongolia, Nepal, Pakistan, the Philippines, Singapore, and Thailand. Several more organizations have expressed interest in putting up an e-store but the agreements have not yet been finalized. Usually, the organizations that have participated, or expressed an interest, have already co-operated with IDRC in other endeavours.

As an inaugural activity, a regional e-commerce training workshop was held in August 1999 and attracted thirty partner institutions from developing countries in Asia. The workshop was designed to train the partners in setting up and maintaining shops from their remote sites.

TABLE 1.1

Sequence of Events in the Development of Pan Asia E-Commerce Site

- The e-commerce website was completed in the last quarter of 1998 — one module was ready at this time, the Virtual Bookshelf (VB).
- Pan Asia did a soft launching of the system on their own publication (Pan Asia Networking Yearbook) and the first online order was received on 30 November 1998.
- By the beginning of 1999, a Mail Order System (MOS) module was completed.
- Both systems (VB and MOS) were demonstrated at a training workshop in Singapore in August 1999, which represented the formal launching of the e-commerce website.
- A WebCT-based electronic classroom was developed for continuous consultation, learning, and discussion.

Subsequently, a WebCT-based electronic classroom was developed for continuous consultation, learning, and discussion. The electronic classroom was a necessary vehicle to discuss both shared and individual problems. In addition, it served as a consensual channel for contributing opinions on the design of the shared e-commerce mall.

Motivations Behind the Initiative

What prompted Pan Asia Networking to initiate this effort? Early on, Pan Asia realized that the very limited use of ICTs, particularly e-commerce, by development organizations was due to:

- lack of e-commerce infrastructure and policy in most countries;
- lack of "development-oriented" e-commerce sites;
- cost and affordability;
- difficulty in obtaining merchant accounts;
- lack of appropriate business knowledge and technical skills; and
- absence of a peer group to share experiences.

To address these problems, Pan Asia e-commerce built a platform to experiment with the use of e-commerce tools and technologies and to share their experiences among like-minded institutions. The effort addresses a number of critical issues:

- lack of infrastructure;
- the need to share experiences to build appropriate business and technical skills among client development organizations with minimal experience in e-commerce; and
- the need to create a common shopfront as an effective cost-saving strategy.

Those using the Pan Asia e-commerce mall paid a "one-shop" fee to the e-commerce provider and could infinitely increase its number of partners and suppliers at no additional cost. At the same time, each of these partners also enjoyed its own unique shopfront and brand name within the mall. Such features differentiate Pan Asia e-commerce from other e-malls. It is not profit-driven because the key objective is not to generate revenue, but to build capacity. It puts a premium on the learning-by-doing aspect and the sharing of experiences among like-minded institutions.

What Pan Asia Networking has provided is an e-commerce platform, which MSMEs usually find too costly to set up and to maintain by themselves. The fear that is often associated with new technology is slowly being alleviated by the hands-on experimentation that is conducted with similar institutions.

The Business Model

The Pan Asia business model involves the set up of an e-commerce platform that includes hardware (servers connected 24 × 7 to the Internet) and software (e-commerce management modules from customer ordering, payments system, and e-store management). The partners and suppliers are notified by e-mail of orders, and they take care of delivering goods to the customers. For the service, Pan Asia Networking collects 20 per cent of sales. The Pan Asia e-commerce mall also collects a token joining fee of US$1 that is payable when the first sales payment is made to the partner or supplier. This e-commerce business model was a natural outgrowth of the activities of the Pan Asia Collaboratory and made use of its existing connectivity, human, and infrastructural resources.

The model is very similar to other e-retailers such as Amazon, except that the Pan Asia Networking mall does not warehouse products for sale. It merely accepts orders and payments from customers. Payment settlement between the partners and suppliers and IDRC are done periodically in batches.

Features of the Pan Asia E-Mall

Products are offered by a number of development organizations from different countries. The shops are set up and managed remotely by the partners and suppliers. The e-commerce servers, payments, and accounting systems are centrally managed. Order fulfilment is decentralized (i.e., the suppliers deliver the products directly to the customers).

In terms of security, the servers have Verisign certification. Payment transactions are done via lines with SSL (Secure Sockets Layer) encryption. Credit card validations are done in real-time through a Singapore gateway. Credit card information is not retained by the system.

There are two main modules in the e-mall. One module is the Mail Order System (MOS), which handles online ordering and payment for most products. Payment by credit card and bank draft is allowed. The other module is the Virtual Bookshelf System (VBS), which handles electronic publications. In the VBS module only credit card payments are accepted. Two other modules have been developed and are functional — Video-On-Demand and Grameen Check for textiles.

Future Plans

Consistent with IDRC's mission of building research capacity in the developing world, the Pan Asia e-commerce mall is being rebuilt at the ASEAN Foundation in Jakarta where the Pan Asia Collaboratory is being relocated. The programme will continue to be supported by IDRC's Pan Asia Networking and by the ASEAN Foundation. The e-commerce mall continues to invite more participants.

Partners' Assessment of Performance

The co-operators were asked about: their considerations for participation; the products offered; their experiences in setting-up and managing their e-store; what they had learned from the experience; and their future plans. The survey instrument is provided in Annex A. Twenty of the twenty-five co-operators who had set up an e-store by February 2002 responded to the survey. Nine had set up stores in 1999; five in 2000; four in 2001, and two in 2002. Most of the co-operators had previously collaborated with IDRC in other activities.

Considerations for Participation

Most of the collaborators participated because they wanted to try e-commerce in a cost-effective manner. Another major reason for participation was the institutional trust that had been developed with IDRC in previous collaborative efforts. Finally, another popular reason was the opportunity to network with other development organizations.

Products Included in the E-Store

The partners offer from as low as 5 per cent to as high as 100 per cent of their products they produce. Their major considerations in including a product in the e-store are quality, shipment, production capacity, costs, and benefits.

Set-up and Management of the E-Store

The majority of co-operators found the process to setting up and managing their e-stores to be relatively easy. In addition, they found it very easy to add and remove products. They also appreciated the fact that the e-store could be managed remotely. Only one respondent observed that it was much more complicated to maintain the PAN-based store front than a conventional website offering products.

Most of the complaints were related to delivery of products. For example, international deliveries require special packaging, otherwise the product might get damaged in transit. Although these problems are well appreciated by long-time exporters, the co-operators, who were members of development organizations, often had no prior experience with this aspect of the transactions. Another common and related concern is the freight and postage cost, which often seemed to be very high relative to the value of the product being ordered. The co-operators also realized the importance of timely delivery, especially for products that are purchased as gifts for special occasions.

Online Transactions

Most of the participants are a bit disappointed with the volume of transactions. Only one, whose products were doing well in a conventional outlet, has had a considerable number of transactions in the e-store. Of course, several have just set up their e-stores and are not expecting transactions right away. One co-operator recommended that promotional efforts must be done to improve transactions levels.

Most of the collaborators do not have conventional stores. It is therefore impossible to compare the performance of their e-store with their conventional store. For those who have conventional stores, the common

appreciation is that sales at the e-store are low (about 10 per cent) compared with the conventional outlet.

Learning Points

Among the positive highlights are: the easy set-up and management of the e-store; the opportunities for networking with other development organizations; and the learning-by-doing aspect of the co-operation.

The negative experiences (see Table 1.2) include the realities of global delivery and freight and postage costs; the importance of timely delivery particularly for items that have been purchased as gifts for special occasions; and the realization of the need for proper packaging if the products are to reach customers in good condition.

In spite of these negative experiences, the co-operators were unanimous in saying that the experience had been worth the effort. The hands-on training on a new and alternative way of selling products was the source of this common appreciation.

Pondering the main incentives for participation, many pointed out that they would not have ventured into experimenting with this new facility unless they had prior knowledge of IDRC activities, particularly in helping

TABLE 1.2

Problems and Challenges Faced in Running E-Shops
(According to One Organizer)

- Partners have severe limitations in allocating resources to run their e-shops. Staff who are computer-savvy are hard to come by, and after they are trained, people leave, and are not easily replaced.
- Internet connectivity is always a challenge.
- Leaders of institutions do not understand or are not convinced of the benefits of e-commerce; therefore, this activity is not given priority in their management plans. This leads to e-shops that are not updated very often, and the lack of planned efforts to promote e-shops to their audiences.
- Potential fraud.
- Delivery is a problem. Partners were sometimes late in delivery or not able to deliver the same goods showcased on the e-shops because of stocking problems. This can lead to dissatisfied customers, but fortunately the e-mall had few problem of this type.

development organizations. Their trust in the institution was the key to their decision to participate. Another consideration was that the partners could be introduced to e-commerce technologies and could add an additional sales outlet at minimal cost.

Future Plans

The general consensus regarding future plans was that the co-operators will continue the effort and expand the number of products that are offered in the e-store. In fact, with the exception of one respondent, nobody has considered another e-commerce provider. It seems that they are not significantly deterred by the low number of transactions and the demands of global delivery, which they may consider to be only start-up problems. The respondents also recommended the expansion of the number of participants and the need for a concerted promotion plan to improve the volume of transactions.

When asked about the possibility of eventually devolving the effort to some other organization, only a few suggested that the effort would not survive without the support of Pan Asia Networking. Those who found this possibility to be reasonable recommended that a non-profit organization (preferably with some research orientation) should handle the operation.

Transactions Data

Among the important indicators of performance are transactions data, which were examined for the period September 1999 to May 2001. There were 176 transactions recorded in the database with a total value of US$8,790.50. The number of transactions per month peaked at twenty-three in October 2000. The number of transactions has stabilized at lower levels since this date (Table 1.3).[11] Another notable pattern is that the geographic distribution of orders follows the well-known pattern in e-commerce transaction volume — it is dominated by developed country customers (Table 1.4), particularly the United States (36 per cent). This is documented well in OECD (1999) and Orbeta (2002). Essentially, besides having higher purchasing power, developed countries have better infrastructure to facilitate e-commerce transactions (OECD 1999). In

TABLE 1.3

Number of Transactions by Month and Year
(September 1999 to May 2001)

	1999	2000	2001
January		—	16
February		—	15
March		4	11
April		4	9
May		8	10
June		4	
July		9	
August		16	
September	1	14	
October	—	23	
November	—	19	
December	1	12	
Total for Year	2	113	61

TABLE 1.4

Transaction by Shipping Address (September 1999 to May 2001)

Country	Number of Transactions	Total Value	Average Transaction	Percentage of Grand Total
USA	51	3,198.2	62.71	36
Australia	15	784.6	52.31	9
Japan	15	751.3	50.09	9
Canada	14	667	47.64	8
United Kingdom	15	605.10	40.34	7
Germany	7	385.4	55.06	4
Ireland	4	324	81	4
Korea (South)	4	284.60	71.15	3
New Zealand	4	205.30	51.33	2
Singapore	6	200.5	33.42	2
Brazil	4	158	39.5	2
Switzerland	5	140.8	28.16	2
Ecuador	1	125	125	1
Sweden	4	117	29.25	1
Others*	27	843.7	31.25	10
Grand Total	176	8,790.5	49.95	100

Note: * Includes purchases from: Italy, Belgium, Finland, Denmark, Spain, Taiwan, Afghanistan, Greece, Hong Kong, Sri Lanka, Netherlands, Thailand, Macau, the Philippines, England, France, Austria, Turkey, India, and Malaysia.

fact, UNCTAD (2001) noted that many websites featuring developing country products (including the Pan Asia e-mall) are hosted in developed countries to take advantage of this fact. Finally, another pattern is the dominance (96 per cent) of publications in the transactions — arts and crafts and videos accounted for less than 2 per cent each, and CDs were less than 1 per cent (Table 1.5). It may be that because publications are more homogeneous products than arts and crafts, consumers are more likely to buy publications online.

Most of the co-operators do not have conventional stores; therefore, it is difficult to compare the two types of retail outlets. However, the few that do have conventional outlets mentioned that the number of transactions at the e-store were relatively small (between 10 and 15 per cent of total sales). When reviewing the volume of transactions, several considerations need to be taken into account. First, e-commerce is a very new concept. Second, the Pan Asia e-mall is smaller than other conventional e-commerce outlets. Third, the experiment was implemented in a learning-by-doing mode, which is more conducive to an initial flat learning curve. Finally, most of the products on the e-mall are highly specialized and not very trendy; therefore, they are not likely to generate high transaction volumes. As emphasized in Orbeta (2002), if a product does not sell in conventional stores, it would be assuming too much that it would sell in large volumes online. In fact, a Pan Asia partner has validated this observation, where the transactions in both the e-store and the conventional store are relatively high.

TABLE 1.5
Items Sold by Category (September 1999 to May 2001)

Item	Total	Percentage
CD-ROMs	2	0.5
Arts and Crafts	7	1.6
Publications	423	96.1
Videos	8	1.8
Total	440	100

Conclusion

Given Pan Asia's involvement with the application of ICTs to development problems, the introduction of e-commerce as a subprogramme was a natural progression in its mandate. The primary reason was that e-commerce would add value to their efforts to improve connectivity and the use of ICTs by development organizations. When Pan Asia Networking introduced the e-commerce initiative in 1999, many of the countries where the partners were operating were still worried about the first-tier problem of getting connected rather than doing e-commerce over the Internet. E-commerce was a way to add value to the Internet infrastructure that Pan Asia Networking was helping to establish in many areas, be that Internet connections or the effective use of personal computers. As Dr Enkhbat of Datacom in Mongolia emphasized, to make Internet connections in remote areas sustainable, people must be able to save or earn money (Orbeta 2001). E-commerce provides such an opportunity.

When assessing the performance of this initiative by looking at transaction volumes, one must realize that e-commerce, for most of the products, merely facilitates the transaction. There are only a few new products that accept e-commerce as their natural home (e.g., digitized text, voice, and images). E-commerce today is still dominated by static benefits (OECD 2000). This is particularly true in the case of Pan Asia e-commerce. As emphasized by Orbeta (2002), if one cannot sell over-the-counter, one cannot hope to sell electronically. It is not surprising, therefore, that one collaborator was doing well in the e-mall because their products (publications) were also doing well in their conventional outlet. Most of the products offered for sale in the Pan Asia e-mall are highly specialized, and turnover would be expected to be slow even for over-the-counter sales. Statistics have shown that worldwide e-commerce transactions favour goods that can be delivered electronically, e.g. stocks trading, bill payments, software, and digitized entertainment products (OECD 1999). This is because electronic delivery mimics over-the-counter transaction and minimizes uncertainties in the transaction.

E-commerce needs to jump several hurdles in trying to approximate over-the-counter transactions. The key difference is that the exchange of values in over-the-counter transactions is simultaneous, i.e., one gets the product as soon as payment is made. In e-commerce, the transaction goes

through a number of layers (from ordering and payment to delivery) with each layer introducing some degree of uncertainty. In many of the areas where the collaborators of Pan Asia e-commerce are operating, the rules governing these transactions are not yet well established. Knowingly or unknowingly, IDRC's Pan Asia Networking guarantees some aspects of the transaction, particularly the authenticity of the supplier. In the Asian context, Pan Asia acted as a go-between between two strangers — the supplier and the customer.

The key service provided by Pan Asia e-commerce was the opening of market opportunities for the products of development organizations. Goods, which otherwise would have limited market outlets either due to the nature of the products or to limited marketing capacities of their suppliers, are now being offered worldwide. No forecast can be made of whether the products will find buyers or not. This is a risk every producer has to face. If transactions are to be improved, products must be selected carefully. The collaborators also mentioned the need for more concerted promotional activities. One benefit of electronic communications is that it facilitates greater interaction between producers and consumers. It is expected that more customization of products to match consumer preferences will occur as e-commerce continues to flourish. This may prove to be useful for Pan Asia e-commerce as well because many of the products that are being offered for sale are "creative" products.

Alternative uses and designs of products can be suggested by would-be customers and discussed directly with suppliers. Therefore, efforts to enhance interactions between Pan Asia e-commerce suppliers and consumers would go a long way to improving the marketability of products. This is the first step in reaping what OECD (2000) calls dynamic benefits from e-commerce.

The likelihood that the Pan Asia e-commerce effort will be sustainable depends on the marketability of the products being sold. In addition, acceptance of e-commerce is slow in Asia for a variety of reasons. Many of the participating organizations emphasized that their participation was largely based on the trust they had developed with IDRC through other activities. It is reasonable that these organizations may find it more beneficial to work with other e-commerce providers in their own countries rather than with some regional organization that they hardly know. This fact

needs to be considered when scheduling the devolution of the effort to an independent organization.

Finally, a B2B component could be a promising area given that the bulk of electronic transactions occur between businesses, e.g., producers and input providers (OECD 1999; UNCTAD 2001). However, B2B exchanges are usually between input suppliers and final product producers who are dealing in large volumes. Therefore, it would be necessary to determine if the current set of NGOs and public sector development co-operators are the right players to enter into B2B exchanges. Should B2B sales be pursued, careful selection of co-operators and their products would be essential.

Annex A
Pan Asia Development of E-commerce —
Process Documentation Instrument

Purpose of the Instrument

A researcher was commissioned by Pan Asia to document, draw lessons from, and put its e-commerce initiative in the context of the e-commerce developments in Asia. A published research report is expected to come out of this activity.

This instrument is one of the data-gathering instruments designed to help capture all aspects of the Pan Asia e-commerce initiative. This is intended to capture information that will complement the web transactions and financial statistics.

We are interested in all aspects of the experience, so would appreciate candid answers and comments.

Thank very much for your cooperation.

SET-UP
- How did you come to know the IDRC Pan Asia E-commerce initiative?
- When did you actually participate?
- What were your major considerations in deciding to participate?

E-STORE
Products
- What products are on the website?
- Does it include all or only a portion of your products? If a portion, what is the approximate proportion in terms of number and in terms of value? Which products are included? What were your major considerations on including a product?

Experience
- *Setup*: What were the highlights of your e-store setup experience? How does it compare with setting up a conventional store?
- *Day-to-day management*: What were the highlights in your day-to-day e-store management experience? How does it compare with managing a conventional store?

Transactions
- Are you satisfied with the transaction volumes? If yes, why? If not, why not?
- If you have a conventional outlet, can you compare the transaction volumes in the e-store and the conventional store?

LEARNING POINTS
- What are the highlights, both positive and negative, of your e-commerce experience that you want to share with those who are considering to participate?
- Is it worth it? and why?
- What were your main considerations for choosing the Pan Asia e-store?

FUTURE PLANS
- What are your future e-commerce plans?
- Do you currently have another e-commerce service provider? If yes, why? If no, why not?
- Are you considering other e-commerce providers? If yes, why? If no, why not?
- If IDRC devolves the further development and management of the effort to an independent organization, what form of organization you would prefer?

OTHER COMMENTS
- Please provide us other comments that will help us document better your e-commerce experience under the Pan Asia development e-commerce initiative.

Notes

This commissioned paper was prepared with financial support from the Pan Asia Networking programme of the International Development Research Centre (IDRC). The opinions expressed are solely those of the author, not of either PIDS or IDRC.

1. See Orbeta (2002) for a more comprehensive review.
2. Static benefits are derived from existing products and procedures.
3. Orbeta (2002) provides a more comprehensive overview of the developments in e-commerce in Southeast Asia.
4. These include the dominance of digital products and B2B over B2C transactions. See Orbeta (2002) for a detailed discussion of the trends.

5. "B2B and E-commerce: Looking Beyond Harsh Realities". China Business Summit 2001, World Economic Forum, <http://www.weforum.org>.
6. See, for example, <www.epadala.com.ph>.
7. Annex A provides the questionnaire used in the survey.
8. The Pan Asia Networking (PAN) is a programme initiative of IDRC focusing on ICT for Development issues in Asia. A major project under this program is the PAN Asia Collaboratory. The e-commerce mall is one of several applications developed under the PAN Asia Collaboratory project for experimentation and training of PAN partners. The other applications include web hosting, video-on-demand, e-conferencing, and mailing lists.
9. See <http://www.panaseanemall.org>.
10. There are now twenty-seven partners. New partners were added from Canada and Sri Lanka, and RELC (Regional Language Centre) in Singapore left the e-commerce mall.
11. More recently sales have increased. The number of transactions increased to 222 in 2003 compared with 191 in 2002. This resulted in an increase in sales to US$13,583 (in 2003), which is about 41 per cent higher than the 2002 sales of US$9,612.

References

Kennedy, D. "Findings from 34 Case Studies on the Use of E-commerce". Paper presented at the PAFTAD 27, Australian National University, Canberra, 2001.

Kirkman, G. and J. Sachs. "Subtract the Divide". *World Link,* 2001. <http://www.un.int/unitar/patit/NYtraining/2003SemI/worldlink SUBTRACTTHEDIVIDE.htm>.

Mann. C., S. Eckert, and S. C. Knight. *Global Electronic Commerce: A Policy Primer.* Washington, D.C.: International Institute of Economics, 2000.

OECD. "Electronic Commerce: Opportunities and Challenges for Government". Also known as the "Sacher Report". Organisation for Economic Co-operation and Development, Paris, 1997. <http://www.oecd.org/dataoecd/54/25/1893999.pdf>.

————. "The Social and Economic Impacts of Electronic Commerce: Preliminary Findings and Research Agenda". Organisation for Economic Co-operation and Development, Paris, 1999. <http://iris.sourceoecd.org/vl=2823439/cl=158/nw=1/rpsv/~6681/v1999n1/s1/p1l>.

————. "Realising the Potential of Electronic Commerce for SMEs in the Global Economy". Conference for Ministers Responsible for SMEs and Industry

Ministers, Bologna, Italy. Organisation for Economic Co-operation and Development, Paris, 2000.

Orbeta, A. "Enabling E-commerce in Developing Countries: The Mongolian Case". Report prepared for Pan Asia Network, International Development Research Centre (IDRC), Singapore, 2001.

————. "E-commerce in Southeast Asia: A Review of Developments, Challenges and Issues". In *Information Technology in Asia: New Development Paradigms*, edited by Chia Siow Yue and Jamus Jerome Lim, pp. 111–96. Singapore: Institute of Southeast Asian Studies, 2002.

PricewaterhouseCoopers — APEC. "SME Electronic Commerce Study". Telecommunications Working Group (TEL), Asia Pacific Economic Cooperation (APEC), Ottawa, Canada, 1999.

UNCTAD. *E-commerce and Development Report 2001*. Geneva: United Nations Conference on Trade and Development, 2001.

————. "Electronic Commerce Strategies for Development: The Basic Elements of an Enabling Environment for E-commerce". Background Paper to the Expert Meeting on Electronic Commerce Strategies for Development, United Nations Conference on Trade and Development, Geneva, 2002.

2

Direct Marketing of Artisanal Products through the Internet

Rajveer Singh

This chapter documents the experiences and lessons learned in four artisan clusters in north and central India by infusing the use of ICTs (information and communication technologies) to leverage marketing activities.

In the current global setting, micro-producers and artisans face the loss of their traditional markets because of a weakening of their backward and forward linkages. The gradual shift of the local market to national and international markets without proper support from business development services (BDS) for designs, market intelligence, and access to raw material has resulted in high-cost inventories and a mismatch in demand and supply. Producers are therefore forced to sell their products at distressed prices. Crafts provide employment to the second largest number of people after agriculture and form an important part of the Indian economy. The current crisis faced by the crafts sector threatens the livelihoods of millions of people, a large proportion of whom live in poverty.

There are more than 1,000 artisan clusters in India. The major problem for these clusters is their isolation from the transmission process of marketing. Hitherto, the government machinery took the lead in the marketing of their products through different co-operative societies. However, in the absence of social capital among the artisans, the co-operatives were monopolized by a select few in the communities. The

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trickle down effects of such efforts failed. As a result, the vulnerability of already marginalized communities increased. The globalization process of the 1990s further reinforced the conviction that it was necessary to have sustainable interventions in the lives of these artisans.

Most of these artisan-based communities have become vulnerable to market forces. This project tried to develop ways to help four such artisan communities in India by applying ICTs as a cost-effective solution to their problems.

Research Design

There are a number of ways to sell a product: from a barter system to marketing on e-Bay. Although the process was very simple and straightforward in a barter economy, it has become very complex in the case of e-commerce. The degree of difficulty is further increased when poor backward and forward linkages exist. In this project, we tried to understand the hurdles that impede e-marketing from remote locations with the poorest backward and forward linkages.

The idea behind the project was to support several artisan-based communities by creating a comprehensive cost-effective marketing solution for artisan products through ICT channels. The plan was for the products to be supplied directly by the artisans to consumers and retailers, which would ultimately do away with wholesalers. This approach was based on the assumption that there is a huge gap between the price at which the product is sourced and the price at which it is made available to the customer. The project tried to work out an ICT-based marketing channel that was beneficial to both customers and artisans. During the course of the research we found that many of the products made by the artisans were outdated. Therefore, to revive the tradition and to make the products relevant to modern tastes, special inputs were provided on designs. Artisans generally do not work on credit because they live hand to mouth; therefore, supplies must be paid in cash in advance. To address this issue we negotiated with the senior artisans to help the other crafts people obtain supplies. We also created a marketing consortium to address the issue of immediate credit requirements. The project went beyond the boundaries of ICT intervention alone.

Objectives

The basic objective of the project was to optimize the use of ICTs in the marketing of artisan products from four locations in north and central India — Chanderi Sarees, Saharanpur Woodcraft, Moradabad Brassware, and Firozabad Glassware. The artisans were usually linked to their markets through buying agents or large traders. This prevented them from reaching a broader range of direct buyers and obtaining superior market intelligence. Moreover, bypassing the intermediary agents could provide the artisans with greater margins. The project sought to provide additional linkages that would create new business avenues for the artisans.

Methodology

The project was designed to improve the socioeconomic empowerment of rural artisans through a multifaceted approach that included capacity-building for the artisans to improve their economic situation and foster regional development.

The project team consisted of ten members and six BDS providers. The project leader laid the groundwork by establishing relations with other institutions, local non-governmental organizations (NGOs), trade bodies, and computer training institutes and by building trust with the artisans. Consultants were used to review the products that were being produced and to offer opinions on their sales potential in domestic and international markets. The consultants stressed the need to create a collection of products appropriate to the targeted clients. They observed that two clusters (Moradabad and Chanderi) had greater possibilities for online selling because of the nature of their products. Other important steps that were needed included targeting of markets, providing technical training, initiating e-marketing, and participating in trade fairs — all of which required a group approach.

Starting the project was not as simple as clicking on the Internet. All four locations were manufacturing traditional products. The conventional channels of marketing through the government had vanished, and most of the artisans were left to sell through the open market. The existing structure of these clusters did not allow fair access of their product to their conventional buyers. As a result, there was outward migration and

resettlement of artisans from these clusters. The use of ICTs offered a cost-effective marketing opportunity. However, the biggest challenge was to introduce ICTs where electricity and telephone connections were not working properly, and Internet use was almost non-existent.

The main difficulties that the project faced at the initial stage were: lack of trust among cluster members; low levels of literacy in general and of IT awareness in particular; and poor IT infrastructure. The burst of the dotcom bubble and overall economic slow down also negatively affected the task of convincing artisans about the viability of direct marketing through the Internet and made the project even more challenging.

The major milestones of our methodology were established in four 6-month segments: building trust and understanding key marketing issues; getting the artisans involved, experimenting with ICTs and marketing inputs, and providing training; providing technical training, targeting ICT marketing, creating websites, and initiating catalogue-based marketing; and collecting more market information and designing inputs, organizing dissemination and publicity, and trying out the online order system.

Initial Survey and Diagnostic Studies

Both field and desk research were used. For the field research, project members visited the cluster areas and were involved in individual and group meetings. For the desk research, project members collected data from secondary sources. Emphasis was given to the field research because there were hardly any sources of reliable information. The project wanted to identify true artisans and manufacturers who were actually making the products.

The initial diagnostic studies and survey provided very practical information about the existing socioeconomic set up of the clusters. Particular attention was given to the existing marketing and supply chain management system (see Table 2.1 and Figure 2.1).

Strategy

The strategy was primarily focused on improving the marketing skills of artisans by opening e-marketing channels for them, and improving their range of designs by linking them to new marketable design ideas. As

TABLE 2.1

Components of the Existing Marketing System

Category	Activity
Artisan	Artisan develops a product and sells it either to a local trader or a domestic consumer. Their mode of business is B2C (business-to-consumers).
Local Trader	A trader procures the product from the artisan and sells it to the exporter. Traders are involved in mainly B2B (business-to-business). More than one local trader can be involved.
Trader-Exporter	A trader-exporter sells the product mainly to big buying houses overseas, and is mainly involved in B2B.

**FIGURE 2.1**

Existing Marketing Set-up
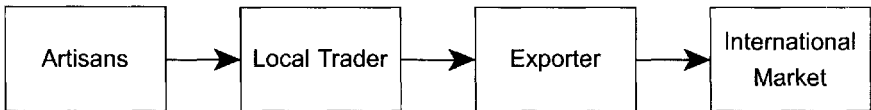
shown in Figure 2.2, the idea was to educate the artisans on how to use e-commerce and their websites for marketing so that they could sell their products directly and thereby shorten the marketing chain.

The diagnostic studies included ice-breaking meetings with individual artisans, designers, senior artisans, traders, exporters, and even some buyers of the products from these clusters. Increased faith and a sense of momentum that something beneficial was being done for the artisans was a very helpful outcome of this exercise. The characteristics and problems common to all four artisan clusters are shown in Table 2.2.

Sensitization and Networking

Creating awareness was a big challenge. The first step was a diagnostic study. A step-by-step approach was then adopted to sensitize the artisans

FIGURE 2.2

Proposed Marketing Set-up after ICT Introduction
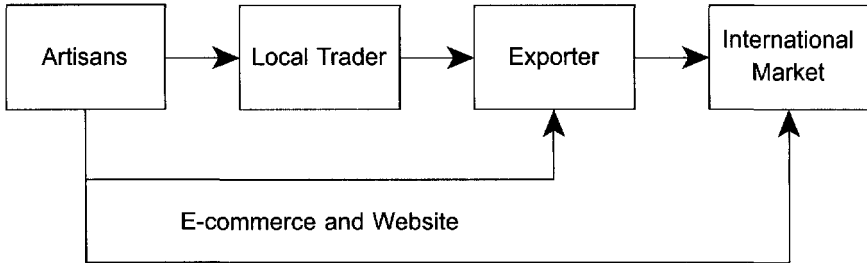
TABLE 2.2

Characteristics and Problems Common to
All Four Artisan Clusters

Characteristics
- Clusters have specialized skill base
- Designs are deeply rooted in the culture
- Manufacturing process is labour intensive
- Isolated from the markets and lack market knowledge
- Low access to capital and lack of institutional linkages
- Craft languishing due to erosion of traditional markets
- Products have good potential for capturing niches in international markets

Problems
- Low level of literacy, particularly lack of IT awareness, was the biggest barrier to helping artisans and entrepreneurs understand the benefits of IT and e-commerce.
- Lack of trust due to adverse competition. Trust and co-operation among the artisan does not exist, and artisans are sometimes sceptical of why someone would be concerned about them and would be willing to help them.
- Infrastructure bottlenecks. The infrastructure (computers, ISPs, connectivity, and cybercafes) needed to support the development of e-commerce is non-existent.

and manufacturers in each cluster. Awareness was developed on issues such as computers, IT, and e-commerce. The sensitization process consisted of individual meetings with the artisan community and local cluster co-ordinators (LCC), followed by group meetings, training programmes, and the collection of designs.

We met the artisans and manufacturers of artisan products in each cluster individually. The objective was to educate them about the benefits of using IT in their businesses. These observations were made at the meetings:

- Artisans were initially sceptical and not interested in listening to project members;
- With much persuasion they agreed to spare some time;
- Artisans expressed happiness over the information provided to them regarding the benefits of ICTs; and
- Artisans began to express their problems.

An LCC was appointed in each of the four clusters to co-ordinate activities, do handholding, and ensure a bottom-up approach to make the project participatory. The person was deliberately selected from the clusters themselves to ensure long-term sustainability of activities after the project ended. The LCC had a reasonable understanding of local social structures and trade intricacies, and a basic understanding of computers and the Internet.

Group meetings were used to minimize the cost of scarce local resources and to create social capital in the cluster. Most of the artisan work on cut-throat competition due to limited marketing opportunities. However, with the ICT intervention they realized for the first time that there was scope for artisans to sell their products online. But it took a very long time. Creation of the group website at one location was a big challenge because one of the participants refused to provide his personal website link to the group site as he thought it would marginalize his marketing efforts. Finally, the project succeeded in putting up four collective sites with the participation of more than one hundred artisans.

Computer Training

Initially, a two-month computer training course was provided to a group of ten artisans and entrepreneurs selected from the four artisan clusters. The

course content was business oriented. To provide training to these artisans, links were made to a local computer institute.

After the sensitization process, when the artisans started to show their interest in the concept of using IT and e-commerce, an attempt was made to create a network among all four clusters to create stability and improve co-ordination. A collective approach was adopted in most activities.

Product Designs

Personal visits to the clusters were undertaken to collect primary data in the form of photographs and physical products. It was essential to collect photographs of different products. No design catalogues or documentation were available in printed or digital format because the artisans hardly keep any record of their designs. The normal practice was to make a sample for the order, which was then approved by the buyer and sent back for manufacturing. The whole process took more than a month. The project tried to shorten the period needed for approval by using digital images. An online gallery of available products might also create opportunities for direct orders. Based on this assumption, design samples of various products were collected from all four clusters. It was found that there was a dire need for product innovation and for design upgrades to meet international standards.

E-Commerce Seminars and Workshops

E-commerce sensitization workshops were held in each cluster and were attended by 35 artisans in Saharanpur, 45 in Firozabad, 100 in Chanderi, and 60 in Moradabad. These workshops provided hands-on training on computers, Internet, and ICTs to the artisans and manufacturers to rid them of their initial hesitation and confusion over e-commerce. They were also designed to make the artisans aware and knowledgeable to the concept of Internet and e-commerce. During the workshops, the following information was provided to the participants:

- rationale for using IT and e-commerce;
- scope of e-commerce;
- practical aspects of e-commerce; and
- hands-on training (training material was supplied in Hindi).

The concepts of the Internet and e-commerce were demonstrated on computers. The participants browsed the Internet and were delighted to work on the computers. Some artisans opened e-mail accounts. Others had queries about marketing issues. They wanted to know how to start exports and what formalities were required. The answers were provided to them by representatives from Indiasocial.org.

In these workshops, the artisans raised genuine concerns. In Chanderi, for example, some participants raised the point that while purchasing a product such as a saree, people want to touch and feel the fabric. How would this be possible when selling the saree online? This point was thoroughly discussed, and it evolved through consensus that this is a genuine limitation of online selling. Two proposed solutions to this problem were for the project to improve the visibility of the products, and for the artisans to develop new products with visually improved designs.

As a whole, the response was good in all four clusters. Most of the artisans who attended the workshops wanted to be part of the initiative and were enthusiastic to use computers. They also found that computers could be used to develop designs and for online advertisement.

In Moradabad and Chanderi some artisans and manufacturers requested personal training because they were interested in using IT. Therefore, a short-term (fifteen days) computer-training programme focusing on the Internet was started at Moradabad and Chanderi.

Design and Product Development

To make artisans and entrepreneurs aware of the importance of new product designs, and to give them an idea on the latest trends in domestic and international market, a design initiative was organized. The design workshops were attended by 30 people in Saharanpur, 35 in Firozabad, 110 in Chanderi, and 35 in Moradabad.

There was a need to improve the designs. Most of the designs were obsolete and did not meet international expectations. It was realized that new designs and product development would need to be an integral part of a new marketing strategy. Therefore, awareness programmes were organized on innovative product designs and new marketing techniques. These programmes were mainly intended to help the artisans share their experience among themselves, get a first-hand idea of international trends, get expert advice, and associate with other members of the group.

New design and product development experts were invited to cover the following issues:

- Why are new design and product developments necessary?
- What are the benefits of new product development?
- What is the strategy for new product development?
- What is the process for new product development?
- What are the current international trends in design?
- How can ICTs be used as a design tool?

The designers shared a collection of international designs and catalogues with the participants in these workshops.

Marketing

Follow-up Workshop on Online Marketing

For the artisans, the concept of marketing over the Internet took a lot of time to understand. Initially, they were not able to distinguish between the Internet and e-mail. They gradually started to understand the difference between a static catalogue and a dynamic e-commerce site. Therefore, to provide clarity on e-commerce as a concept and its functionality in the minds of the members, a second set of e-commerce workshops were organized. The workshops also helped the artisans to better understand the different aspects of e-commerce.

Participation in Local Trade Fair

Participation in the trade fair was essential to promote the products offline — an important way to support online marketing efforts. It also provided a taste of competition among the artisans. Direct interaction with the customers provided them with deeper insights into customer demands and knowledge about the latest trends in the market. More than 500 products from the four clusters were displayed at the fair. The fair also provided an opportunity to promote the websites. The fair lasted eight days (23–31 August 2003) in Pragati Maidan, New Delhi. Because most of the items were related to home decor, it was deliberately decided for the project to participate in Sajavat (a trade fair organized by the India Trade Promotion Organization). The event generated more than 200 national and international enquiries.

Preparation for Online Sales

One of the project's major activities was to launch an online portal. Because the individual artisans did not have the technical and financial capacity to sell products online, a great need was felt for a common platform where artisans could jointly display and sell their products. This common platform would help optimize the cost of technology and reduce the cost of marketing through joint efforts. Indiasocial.org took the initiative of addressing this need and launched the online portal for the artisans at <http://www.clustershop.net>.

Development and launching of the online portal was a tough task given the background of the people and the products they were selling. The cause of concern was not the technical part, but ensuring that the system worked smoothly once the channel became operative. Their was also a need to obtain full support and co-operation from the cluster members, so that orders and queries generated through this channel would be processed smoothly. Although the training workshops and seminars were useful, there were still a few problems while implementing and processing orders:

- Because the products are handmade (not machine-made), they are not identical to the products shown online, and this has often created problems;
- The product range available with the manufacturers changes very quickly, and due to limited labour and resources, it is very difficult to update products on the website at that pace;
- Although it is a joint marketing channel, manufacturers are often reluctant to display their best items online because they fear their designs will be copied; and
- Some manufactures did not have the basic documents and approvals from government authorities (such as a sales tax number) that are necessary for any trading activity. Once again, this hampered order processing.

Project Outputs

Creation of Cluster Sites

In line with the project's methodology, the prerequisites for the appropriate use of ICTs were defined. The immediate results of the capacity-building intervention were the development of an appreciation of ICTs as a marketing

tool and the creation of four websites (one for each cluster): <www.moradabadcluster.org>; <www.saharanpurcluster.org>; <www.chandericluster.org>; and <www.firozabadcluster.org>.

These sites initially hosted generic information about the clusters. However, with more technical inputs, the artisans started to appreciate the essence of the Internet as a potential marketing tool, and participation by the craft community in these clusters finally increased. At the time of writing, there are twenty-five artisans represented on the website at Firozabad, fourteen at Chanderi, twenty-seven at Moradabad, and twenty-two at Saharanpur.

Generation of Enquiries Through Websites

The Internet presence has resulted in the receipt of letters of intention to purchase from these clusters. In total, more than seventy general enquiries have been received (see Table 2.3). However, it was difficult to determine the amount of business these enquiries have generated as most of the artisans would like to keep information on their business contacts closely guarded. However, the increased interest of the artisans to include their information in the catalogue shows that they have realized the potential of ICTs as a marketing tool.

So far, a substantial number of enquiries have been received. A milestone was reached when the first enquiry was received on the cluster website of Chanderi in September 2003. The enquiry was from a Ms Kalpana from Connecticut, USA, who asked for a particular type of Chanderi saree. A

TABLE 2.3
Number of Enquiries Resulting from Website Contacts

	Clusterwise (Open or General)	Specific (Closed)
Firozabad	35	14
Chanderi	18	12
Moradabad	16	3
Saharanpur	6	2

stream of enquiries has now started to pour in from all parts of the world through all four cluster websites. This was particularly encouraging because it broke the isolation of the artisans and created a soft link between the artisans and their market. This demonstrated that a website can be an effective medium of demand generation. The fact that Chanderi, which is not easily accessible even by road, has reached an international market place is a remarkable achievement.

Efforts were made to determine the trends in the online enquiries. Out of the total of seventy-five general enquiries (Table 2.3), Firozabad received the highest number of enquiries (thirty-five) and Saharanpur the lowest (six). The fact the Saharanpur website did not have many members at the beginning may partly explain why fewer products enquiries were received.

Open versus Closed

We also looked at whether the enquiries were directed towards any specific manufacturer (closed) or were common or general enquiries (open). Of the seventy-five enquiries, thirty-seven (50 per cent) were considered to be general in nature (i.e., open to all); whereas, thirty-four (45 per cent) were directed to a specific manufacturer within the group members, and four (5 per cent) were considered to be both open and closed. Some enquiries were even directed to manufacturers who were not members of the project. This analysis was particularly important because it showed that the sites that were more attractive and had better quality photographs of their products received more individual enquiries. This emphasizes the importance of the quality of the photographs as well as of the site.

Table 2.3 indicates the number of open and closed enquiries that were received. In Chanderi, it is worth noting that 67 per cent of the enquiries (twelve of eighteen) were directed to specific manufacturers, i.e., closed. The reason could be that the sarees were better displayed on some of the manufacturers' individual websites. In Firozabad, this proportion of closed enquiries was 40 per cent (fourteen of thirty-five); whereas, in Moradabad and Saharanpur the enquiries were more open in nature.

Domestic versus International

By looking at the origins of the enquiries, we determined that forty-three of the enquiries were from domestic buyers and that thirty-one were

international. Some of the domestic enquiries were not related to buying and selling; whereas, most of the overseas enquiries were related to buying or selling. Taking this factor into account, it can be assumed that interest in buying and selling was almost equal in the domestic and international markets. This analysis demonstrates that there is both a domestic and international demand for these handicraft items and that any marketing strategy should try to tap opportunities in both markets.

Buying versus Selling

Our analysis of the nature of the enquiries was very important as it indicated whether the enquiry was from a potential buyer of the product or someone trying to sell products (supplier). More than fifty (75 per cent) of the enquiries were related to buying the products, and some people offered future opportunities as they wanted to market these products in their own region. Five enquiries were from people who wanted to provide the raw materials required for these products, which again shows the tremendous scope for online marketing. There were fourteen other enquiries with varying themes. Some were related to human resource requirements; whereas, other people were looking to replace their old damaged belongings that had emotional value. One enquiry was from a writer asking for the history of Moradabad to help her write a book. There were also enquiries congratulating the efforts of Indiasocial.org for taking up the cause of artisans.

Direct versus Indirect Exports

A total of thirty-three enquiries were received with regard to export possibilities. Of this total, almost 82 per cent (twenty-seven) were direct export opportunity; whereas, 18 per cent (six) were indirect export opportunity, i.e., through India-based buying and export houses.

Bulk versus Retail

An analysis of bulk versus retail enquiries showed that there was more interest in bulk sales. This is very important to manufacturers as bulk sales help them achieve economies of scale. The artisans also wish to establish good relations with their bulk buyers as this can lead to secured demand

and assured income. In the case of retailing, individual products become more costly for the end user, but they also add costs and bring less income to the manufacturer. This can also give a negative impression in the minds of the end users that these products are costly. The analysis showed that almost 63 per cent (thirty-five) of buying enquiries were related to bulk purchases; whereas, for 29 per cent (sixteen) of the enquiries it was not possible to determine the volume required. Only 10 per cent (five) of the enquiries asked specifically about products for retail.

Generation of Enquiries during the Fair

The tremendous interest shown in the artisan products displayed during the Sajavat fair resulted in many enquiries. In total, 207 local enquiries were generated during the fair. Over 75 per cent (157) of these enquiries were related to buying the products. Other enquiries varied in subject. Some expressed appreciation to Indiasocial.org, while others wanted to know more about the artisan clusters. There were even enquiries from people who offered support to market these products.

Out of the 157 enquiries about buying, 70 per cent (109) were retail enquiries; the rest (forty-eight) were bulk enquiries. An order of less than 100 pieces of a particular product was classified as a retail order; that exceeding 100 pieces was classified as a bulk order. With the Sajavat fair being a national fair, the number of retail enquiries was higher than the number of bulk orders as most of the purchase decisions were made instantly. This show was an ideal opportunity to obtain direct interaction between the artisans and the buyers. It also provided new insights to the artisans, and the buyers gained a better understanding of the beauty and aesthetics of the handicraft products.

The project received a good response from those who participated in the fair. People showed enthusiasm for the handicraft items. They particularly appreciated the fact that these came directly from the artisans. The project participated in the fair with the purpose of displaying the products, but people kept insisting on buying the products. Some buyers were interested in purchasing craft items for the forthcoming festive season. A few industrial houses wanted to buy the items in bulk and use them as corporate gifts for the forthcoming Diwali and New Year festivals. Statues of Gods and Goddesses were particularly in demand.

Online Promotion

The common e-commerce site <www.clustershop.net> was launched. Efforts have been made to promote the site on all major search engines. The site was promoted extensively at the Sajavat trade fair. These activities provided consumers with a common perspective and a way to source the products directly from the artisans. The response has been tremendous in terms of enquiries.

An e-commerce portal with payment gateway services from WorldPay was launched in August 2003. Initially, the scope of the e-commerce portal will cover the domestic market, but it will gradually be expanded to international markets.

Offline Promotion: Advertisements and Brochures

To supplement the online promotion of the e-commerce portal, and to build on the success of participating in the fair, advertisements were placed in newspapers in most of the major cities of India, including a separate advertisement in local-language papers. The intention was to reach a wide range of audiences who would become aware of this platform for buying authentic handicrafts and handloom products. Combined brochures were also prepared for distribution to individual and institutional buyers. About 4,000 brochures have been distributed to potential buyers from different parts of the country and from abroad (see Figure 2.3).

FIGURE 2.3
Covers of the Marketing Brochures Created for Each Cluster
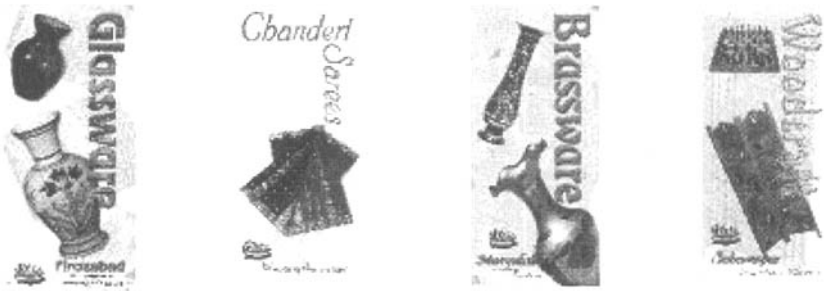
Impact of Project

In terms of IT awareness and use of the Internet (Table 2.4), Firozabad and Chanderi have raised their levels from Low to High. Artisans in these clusters are interested in having an Internet presence and have started to develop their websites with assistance from Indiasocial.org. In Saharanpur, artisans have been slower to register their Internet presence and will need more extensive intervention from Indiasocial.org. In the case of Chanderi, Indiasocial.org has taken the innovative step of promoting individual artisans (along with their products) who are specialized in certain aspect of saree making. For example, one renowned artisan, Mr Tulsi Ram Koli, has been awarded the President's Medal for saree weaving. In a small place like Chanderi, where there are no cybercafes and where literacy is abysmally low, artisans are still asking for help to develop their websites. In Moradabad, the population was generally aware of IT and e-commerce, but such knowledge was limited to a small group of artisans and entrepreneurs. Poor artisans had very limited knowledge, and capacity-building interventions are still necessary to make these artisans aware of IT and

Interview with Mr Mehfooz Ahmed, The Craft, Saharanpur Cluster

What benefits did you derive from this programme started by Indiasocial.org?

Indiasocial.org provided me two months of training under this programme. I heard many things about information technology during the course of interaction with you (Indiasocial.org). You provided me addresses, whom I contacted. Although I went there to procure orders, they encouraged me and provided lots more information. Now, what I do is search on Google to know more about enquiries and contact them through the e-mail address provided on the sites. Through this process I am continuing. Now I am in touch with more and more buyers. They ask for details about the products, including further photographs and a rate list. They ask different kinds of questions about the products, which I am answering through e-mails. For this I am very thankful to all of you. You people motivated me to do all this. Although I am very small artisan, I have bought a computer. With great difficulty I could mobilize 30,000 rupees (US$800) to buy a computer. This has benefited me a lot. For this I am really grateful for the support provided by Indiasocial.org.

TABLE 2.4

The Impact of ICT Awareness Generation in the Four Clusters

	Level of Awareness*	
	Before Intervention	After Intervention
Saharanpur	Low	Medium
Firozabad	Low	High
Chanderi	Low	High
Moradabad	Medium	Medium

Note: * Low awareness — no awareness with zero use of IT; Medium awareness — awareness with limited use; and High awareness — high awareness and advanced use.

e-commerce. A number of artisans are, however, coming forward to register their web presence with assistance from Indiasocial.org.

Challenges

Common Issues

- *Element of doubt* — Initially the artisans were sceptical about the objectives and motives of Indiasocial.org. It took some effort to convince them about the project.
- *Lack of local contribution* — Initially there was little or no support from the local population to achieve the project objectives.
- *Problems with local cluster co-ordinator* — In Firozabad and Saharanpur, the clusters faced problems in appointing an LCC. It was difficult to find a suitable person who could take up the job with commitment.
- *Problems with designers* — It was difficult to find good designers who could provide design inputs to the clusters. There were foreign expert designers, but their charges were too high to be afforded by the artisans. Finally mid-level designers were identified with the help of local support institutions such as the National Centre for Design and Product Development (NCDPD), the Government Handloom and Training Centre (GHTC), and other partner such as FISME (Federation of Indian Micro and Small and Medium Enterprises).

Going Online

- *Lack of trust among artisan communities* — In most of the artisan clusters, social capital is very low. They were reluctant to give prices of their products and were also unwilling to display their best products mostly due to the fear of replication by other craft producers.
- *Lack of necessary documents available with the artisans* — The small artisans and craft producers were willing to sell for direct export, but they were not aware of the documentation and other formalities that were required for the process. There was no agency in the clusters to support such activities. Even if they received enquiries through their websites, they could not fill the orders because they did not have the required documents and legal status.
- *Lack of business development service (BDS) providers* — Most of the artisan clusters do not have the necessary support services. Some of these problems are related to basic services, such as packaging facilities and container services. These services are extremely important for any export activity (for example, packaging is a major issue for exporting glass items).
- *Illiteracy and its compounding effect* — Although the project is still in the process of launching its online shopping channel, it has already started to receive enquiries on the existing websites. Problems were faced in offline processing of the orders because of the geographic distance of the buyers. The terms and conditions cannot be as comfortably discussed online as they can in a face-to-face meeting. Also, the artisans and manufacturers are not very proficient in using the Internet and in communicating effectively with the buyers. One of the important barriers to this connection is the language barrier, as most of them cannot communicate in English. Therefore, there is a communication gap between the buyer and the manufacturer. Also, the small manufacturers do not have their own computers and must go to Internet cafes for their correspondence on the Internet. There are inadequate number of Internet cafes in the clusters, and those that do exist charge high rates. In Chanderi, for example, the charges are as high as 60 rupees per hour, which is almost one and a half times their daily earnings. These problems are compounded by the non-availability of electricity and poor bandwidth.

- *Problem in sending samples* — In the case of bulk enquiries, buyers usually ask for samples and generally they ask that these be sent for free. Because future orders depend on the approval of this sample, it becomes imperative to handle these enquiries carefully. Most of the artisans are unable to send any free sample because sample production also involves a high cost, and it is difficult to convince the buyer to purchase one product as a sample. The project is looking for ways to solve this problem.

- *Status of Indiasocial.org* — Indiasocial.org faced some problems in making the online payment system available to outside countries because of the non-availability of a permanent FCRA (Foreign Contributions (Regulations) Act) account, which is a must for receiving overseas payments. The project was unable to sell through clustershop.net because it could not transfer payments to the respective artisans. For the time being, the project has decided to direct all inquiries to the artisans and to offer only domestic online transactions until proper arrangements can be made for foreign online trades.

- *Social capital* — In a competitive environment, it is natural for successful members to dissociate themselves from the group. After the artisans started to receive enquiries, some made requests to delink their websites from the main website of the cluster. This has marginalized the objectives of the communities. Those requesting to delink feel that this kind of information-sharing puts them at a disadvantage because the buyers have a better bargaining position. However, this tendency goes against the basic principle of the cluster approach, which is co-operation. In future, a more cohesive approach among the groups will be needed to share and promote their work collectively.

Future Directions

This was the first time an NGO made the effort to bring artisans and crafts people together to undertake common marketing. It was not easy to share the designs with the buyers and to have regular discussions with master weavers and master artisans. However, the initial efforts to sensitize the artisans to the latent capacity of ICTs proved to be very helpful. It helped

create a conducive environment, with varying degrees of trust, in all four clusters for a collective ICT initiative. The slowdown in the global market after September 11 created some negative thinking in the clusters and diluted the impact of the project's interventions. There are also limits as to how long the artisans are willing to wait for results, as these interventions are time consuming and technical in nature. The inputs and contributions from Indiasocial.org played an important role in motivating these low-income artisans.

The ever-increasing participation of the members in the initiative is an important indicator of increased awareness, improved trust, and consensus on the effectiveness of ICTs. These give enough encouragement to the project to move ahead. The learning that the research team and the participants experienced while working together on this project was very enriching. This will definitely enable them to harness the power of ICTs for the benefits of artisans in other rural clusters in India.

This study suggests that the use of the Internet for B2B (business-to-business) and B2C (business-to-consumers) sales will face these limitations:

- The project failed to create sustainable interactions at the cluster level due to the poor communication infrastructure. The responsibility for intermediation remained with Indiasocial.org, and this organization had to obtain the necessary government permissions to undertake different activities, such as facilitating international trade.
- Most of the artisans are poor. Therefore, to maintain the supply chain it is necessary to have a source of revolving funds through an intermediary. There was no budget for revolving funds in the project.
- Designer inputs are indispensable to link the artisans with current world tastes and trends. There was limited provision for such intervention in the project.
- Quality, standardization, and time are the main constraints in the supply chain for artisan products.

The overall response to the project intervention was very encouraging in all four clusters. Indiasocial.org will try to undertake the following actions to help continue the project's efforts:

- It will help create a sustainable network within the clusters to manage their online sites. In the meantime, Indiasocial.org will manage the online e-commerce site.
- There are more than 1,000 artisan clusters in India. The experiences of these four clusters will be shared with other clusters to leverage the use of ICTs in similar settings.

3

E-Marketers
An Innovative Approach to E-Commerce

Loyola Joseph and Santosh Narayanan

The Foundation of Occupational Development (FOOD) research team observed that in rural areas women's co-operatives and non-governmental organizations (NGOs) that were producing indigenous products were working in isolation within a market that was restricted to their local area. With the advent of Internet e-commerce, these groups have the potential to expand their market to include national and international markets. In addition, the elimination of intermediaries from the distribution channel has the potential to lessen the amount of exploitation that occurs.

To explore the possibility of leveraging e-commerce as a non-profit mechanism, FOOD established an experimental Internet e-commerce website for the sale of products made by rural artisans and women's co-operatives. Running this live e-commerce website enabled FOOD to experiment with the various components that go into an e-commerce store, such as site design, secure technologies for shopping, credit-card authorization, and delivery of products and supplies. From these experiences, FOOD found that the success of an e-commerce site largely depends on securing the trust of the users — who are more comfortable with "offline" shopping experiences.

It was felt that adopting a new approach to promoting e-commerce for a non-profit cause would help expand the market for products made by

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rural women's co-operatives and NGOs. Our research on e-commerce included online marketing and customer relations. FOOD initiated research through this project to create a network that would help co-operatives and NGOs in rural and remote areas to amalgamate to market their products globally, and without intermediaries.

FOOD explored the possibility of using e-marketers to promote products made by women's co-operatives and NGOs. An e-marketer is an online marketing agent (or virtual salesperson) that mobilizes online traffic and draws customers to an e-commerce store. For e-commerce promotion to be effective, the e-marketer must provide not only publicity for the website but also online customer service to the users. Each e-marketer is attached to one particular product segment featured in the e-commerce store.

To promote the products online, e-marketers need uninterrupted, low-cost access to the Internet. In India, Internet access is relatively affordable, but the telephone bills that one incurs in connecting to the Internet are prohibitive — often five times more than the access cost a user will pay to the Internet Service Provider (ISP).

FOOD India tried to organize high-speed uplink facilities to an Internet gateway, which would provide permanent Internet facilities to the e-marketers. FOOD also explored the possibility of using high-speed wireless routers to connect different telecentres. These telecentre were to be used by e-marketers to perform their day-to-day promotion work using FOOD's Internet gateway. As a result, the e-marketers would have 24-hour-a-day Internet access without hourly telephone bills. FOOD proposed to use high-speed 1.5 Mbps point-to-multi-point microwave technology to provide Internet access to ten of its telecentres established within a 12-km radius of FOOD's office.[1]

The e-marketers concept was, by design, a non-commercial undertaking. The purpose of the project was to analyse whether e-commerce could be a viable proposition for small and micro enterprises in rural areas of developing countries. Because the target group for this project was small and micro enterprises that could not bear the cost of developing an e-commerce store, FOOD initiated efforts to create an overarching e-commerce website with facilities such as shopping carts and credit-card processing. The project was designed to generate employment opportunities for the disadvantaged and indigenous artisans working in the rural

co-operatives and for the educated unemployed youth who would work as e-marketers.

Research Methodology

The methodology adopted for this project had seven elements.

- *Creating a short list of women's co-operatives and NGOs, organizing an orientation programme for the short-listed groups, and collecting information on the products to be offered through the e-commerce store (4 December 2000 to 10 February 2001)* — FOOD's research team identified and visited women's co-operatives and NGOs from four districts in Tamilnadu whose products were to be featured in the e-commerce store. We collected details on the products (including name, description, price, height, and weight) directly from the producers. The team collected details on more than 1,000 products produced by the women's co-operatives and NGOs including products such as Kancheepuram sarees, wooden handicrafts, wooden wall hangings, jute wall hangings, jute bags, copper products, paintings, curios made out of sea shells, and papier mâché toys. The project team also explained the concept of e-commerce and the objectives of the project to the potential beneficiaries. The artisans and entrepreneurs were very receptive to the project and expressed their willingness to co-operate in successfully launching the e-commerce store.

- *Designing and hosting Indiashop (12 February 2001 to 28 February 2001)* — Based on the product details that were collected, FOOD designed an e-commerce store with an interface that included a shopping cart and a credit-card validation and payment system. The e-commerce store was hosted online on FOOD's Internet server.[2]

- *Providing access using wireless routers for high-speed Internet access (1 March 2001 to 16 March 2001)* — To provide Internet access, FOOD used a Wireless Internet Service Provision (WISP) system <http://www.mikrotik.com/3index.html>. This was an integrated system that connected users wirelessly to the Internet within a range of about 12 km. The WISP data-links connected a wireless Internet router at FOOD's office to ten telecentres that had been established

by FOOD and were used to provide Internet access for the e-marketers. The WISP system provided high-speed data links, a cost-effective solution for prolonged use by multiple users, and reliable 24-hour Internet access. During the course of this project, DSL Internet access became widely available, and because the cost of DSL access was cheap, FOOD also provided access via DSL lines for e-marketers who were telecommuting. FOOD also equipped its office with Internet access kiosks and with office automation facilities such as desktop publishing (DTP) and photocopiers. These features enabled e-marketers to telecommute and interact more effectively with the e-commerce store.

- *Researching online promotion and customer-relations strategies for the e-commerce site (19 March 2001 to 27 April 2001)* — One of the first tasks of FOOD's research team was to shop at other e-commerce stores that were already online. By conducting this exercise, FOOD researchers got a feel for what worked and what did not from the customer's point of view. These researchers also gained valuable insight that helped them design a marketing strategy for Indiashop. The good (and the bad) design methodologies used by these other. online stores were observed to set a benchmark for implementing the Indiashop online store.

  The FOOD research team investigated various techniques and technologies for online marketing and customer relations by extracting the best practices from other similar websites. These helped FOOD conceptualize how the e-marketers could effectively use e-mail to promote the shop, how to optimize site design, how to effectively use search engine promotion, how to maintain communications with potential and current customers, and how to deliver products more efficiently. A guideline document was prepared based on our research. This was provided to the e-marketers to assist them in their marketing and customer service efforts.[3]

- *Training for the e-marketers (1 May 2001 to 31 May 2001)* — FOOD provided training to the e-marketers on online marketing and customer service delivery strategies. The training was followed by hands-on sessions during which the e-marketers were given computers and asked to log in to the Internet and use several of the search engines and

websites available to become familiar with web browsing, using search engines, and designing web pages. Our team guided and assisted the e-marketers during this learning process. Each e-marketer was provided with an e-mail account and space on FOOD's server to enable them to store their work files and e-mail communications.

- *Launching the e-commerce site (4 June 2001 to present)* — After completing the training programme, each e-marketer was associated to a particular product segment in the Indiashop e-commerce store. The e-marketers were provided with online Internet access and began experimenting with the skills they had learned. Within a few months, many of them were successful in promoting sales of the products entrusted to them. The e-marketers were paid a commission for mobilizing sales for the products featured in the e-commerce store.

- *Monitoring and refining strategies (ongoing)* — FOOD India held regular meetings with the e-marketers and the producers to create awareness, to encourage communication, and to analyse the direction of the marketing and sales efforts. This process allowed the team to collect important feedback from the producers on whether they saw any improvement in their financial status through the sales made from the online shop. In addtion, this interaction illustrated whether the producers were receiving enough publicity for their activities by being a part of this umbrella e-commerce network. The meetings also enabled the organizers to analyse the practical problems faced by the e-marketers and to exchange ideas, successes, or failures in the strategies adopted. Suggestions made by the producers and the e-marketers were incorporated into the overall strategy for Indiashop.

Research Findings

Survey of Visitors Who Browsed or Bought Products from Indiashop

A survey was conducted by FOOD of the users who visited or bought products from the Indiashop site. Users were sent an e-mail survey that was to be completed and e-mailed back to the research team. The findings of this survey were useful in evaluating the strategies. Table 3.1 provides a summary of the findings.

TABLE 3.1

Summary of Responses Provided by Visitors and Users of the Indiashop Website

1. Overall, how satisfied are you with the website? (Mark as 1, 2, 3, 4 or 5 with 1 being extremely satisfied and 5 being totally dissatisfied)
Response 1 = 8%; 2 =15%; 3 = 60%; 4 = 15%; and 5 = 2%

2. What aspect of the site should we enhance, to reach your level of satisfaction?
Suggestions given by the users included: improving the shopping cart facilities on the website, instituting free shipment or reduced cost of shipment, enhancing graphic design of the site, and delivering 24-hour-a-day online live support. Based on the feedback from the users many of these suggestions have been implemented.

3. Please rate the importance of the following features while using the E-commerce website (with 1 being extremely important and 4 being insignificant)

	Percentage of respondents selecting each response			
	1	*2*	*3*	*4*
Ease of Navigation	76	15	8	0
Product Ordering	65	27	6	2
Product Pricing	57	34	7	2
Product Quality	45	37	11	7
Product Selection	8	24	67	1
Product Shipping	62	18	15	5
Customer Service	87	12	1	0

4. Compared to your other online shopping experiences, how would you rate this website on each of the following: (with 1 being much better and 5 being much worse)

	Percentage of respondents selecting each response				
	1	*2*	*3*	*4*	*5*
Ease of Navigation	6	12	52	11	19
Product Ordering	8	47	35	10	0
Product Pricing	6	7	39	45	3
Product Quality	25	5	67	2	1
Product Selection	10	60	15	5	10
Product Shipping	3	5	40	30	22
Customer Service	42	23	30	5	0

5. After using this project website how do you rate your level of satisfaction with the following: (with 1 being extremely satisfied and 4 being very unsatisfied)

	Percentage of respondents selecting each response			
	1	2	3	4
Convenience	14	47	26	13
Customer Service	62	28	7	3
Ease of Navigation	13	35	32	20
Site Graphics	0	56	40	4
Site Usefulness	5	20	72	3
Value for the Price	7	35	32	26

6. Would you recommend this website to others?
Absolutely 26%; Most Likely 64%; Unlikely 7%; and Absolutely Not 3%.

7. What are the most important reasons for you to shop online?
Easy to Place an Order 54%; Cheaper Prices 32%; Faster Service and Delivery 7%; Easy Payment Procedures 4%; and Large Selection of Products 3%

Merchant Credit-Card Account Providers

After completing the development of the e-commerce site, the next major decision was to find ways to accept online payments. FOOD conducted research into the available methods for accepting payments over the Internet. The existing online payment options were e-checks, electronic fund transfers, credit cards, and an account with a private company such as PayPal.

Many of the methods listed above such as PayPal or e-checks are feasible only for organizations in the United States or Canada because they require the merchant to maintain a North American checking account. Moreover, electronic fund transfers are too expensive due to the processing fees charged by the banks. This hefty fee makes electronic fund transfers feasible only for the transfer of large amounts of money.

There are various merchant credit-card account providers in the United States, Canada, and elsewhere that offer an online credit-card payment gateway service. This service applies to online stores that accept payments from major credit cards like MasterCard, Visa, and American Express.

During the course of this research, FOOD noticed that some banks in India have also started offering payment gateway services for online stores. A summary of the various merchant credit-card account providers is shown in Table 3.2. Setting up credit-card processing for the online store involved: complying with the terms and conditions of the merchant-account providers; and linking the shopping cart on the e-commerce site to the validation system provided by the merchant-account provider. As orders were placed online, the merchant-account provider notified FOOD about the order details. FOOD staff then processed the order by contacting the respective NGO or group that produced the ordered items. The product was then packed and delivered to the customer via courier. After the products were dispatched, FOOD project staff proceeded to the administration area on the merchant-account provider's server and tagged the order as "shipped".

The merchant-account providers mail a cheque for the total amount accumulated from FOOD's online store on fifteen- to thirty-day intervals, depending on the payment schedule noted in Table 3.2. The cheque typically takes one week to arrive at FOOD's office. Once the payment arrives, it is dispatched to the respective producer(s) after deducting the e-marketer commissions.

Initially, FOOD used Vantage Services for merchant credit-card bank services. However, this organization's policy towards "charge backs" (when the customer purchases a product and later refuses to accept the order and

TABLE 3.2

Details of Some Merchant Credit-Card Account Providers

	2Checkout	CCNOW	HDFC Bank	Internet Secure	Vantage Services
Set-up fee	US$49	No set-up fee	US$1,600	US$495	US$185
Deposit	No deposit	No deposit	US$1,100	No deposit	No deposit
Monthly fee	No monthly	No monthly	US$160	US$35	US$75
Transaction fee	US$0.45	Nil	US$1.10	US$1.50	US$0.75
Credit-card processing fee	5.5%	10%	5%	3.85%	8%
Payment schedule	Every 15 days	Every 30 days	Every 3 days	Every 30 days	Every 15 days
Country of origin	USA	USA	India	Canada	USA

asks for a refund) was not only to refund the customer's money back but also to charge a hefty "charge back" fee to FOOD for the transaction. Because this incurred a large expense, FOOD signed up with CCNow (a secure online retailer) merchant-account provider to determine whether their services would be feasible for this non-profit initiative. CCNow does not charge any set-up or monthly fees; however, they charge a higher percentage (10 per cent) on each credit-card transaction validated through their system. FOOD has not had any problem with the services of CCNow, except that payments took nearly forty-five days to reach the producer. This was the case because CCNow's payment schedule ran only once a month, and it took another seven to ten days for the mailed cheque to arrive at FOOD's office.

Finally, FOOD signed up with 2Checkout for merchant-account services. 2Checkout charged a one-time set-up fee of US$49, a fee of US$0.45 for each transaction, and a sales commission of 5.5 per cent. The payments from 2Checkout were sent to FOOD every fifteen days by priority mail and were received by FOOD within three weeks of shipment. FOOD's researchers continue to monitor and evaluate the various credit-card services to determine the pros and cons of each service.

The issue of "charge backs" needs to be considered, and an appropriate policy needs to be adopted by FOOD. Charge backs are essential when the buyer refuses to honour the purchase, and chooses to cancel the order through their credit-card provider. Oftentimes, the buyer opts for a charge back because their credit card was illegally used by someone else to purchase products. Other examples of charge backs occurred when buyers opted to return the product and claim a charge back for personal reasons.

Different merchant-account providers have different policies with respect to charge backs, and care must be taken to ensure that one understands this policy well before signing up with a merchant credit-card account provider. In many cases, there is no standardized method that exists to resolve a customer dispute or charge back. Because the popular motto is "the customer is always right", these disputes and charge backs can lead to significant challenges.

FOOD experienced problems when customers ordered a product that was shipped, but refused to accept the package and demanded a refund. For a non-profit online store, the cost of production and shipping cannot be written off because many of the products are made specifically to

fulfil the order. In this case, the producer loses all of the costs incurred during the making of the product. Because e-commerce and its various activities are still in a start-up phase, there is no international law that protects the customer or the merchant in case of disputes arising out of online transactions.

Monitoring E-Commerce Site Statistics

An important aspect of e-marketing consist of monitoring site statistics, e.g., the origin of site visitors, what sort of information are they looking for, how often does a visitor visit the site, and how do visitors find the site. Monitoring of site statistics allows the organizers to know about the products that are in high (and low) demand, to understand the effectiveness of online and offline promotion strategies, and to study whether the site content is useful enough for visitors to return. FOOD started with a simple counter on the Indiashop page to monitor the number of hits to the site. It soon became obvious that measuring the number of hits was not a very valuable measure because it did not give any details about the visitors or the visits. FOOD then installed a server-based web-log file analyser called Analog. This program provides details on the nature and origin of the visitors.

In the course of exploring better options for measuring site statistics, FOOD India came across a free service offered by Web Trends called Web Trends Live. This free service enabled FOOD to measure a variety of statistics with regard to the Indiashop site. The Web Trends Live statistics program can be installed on any site simply by adding a button on the page to be monitored. The Web Trends Live program works in the background whenever that particular page is loaded and stores information about each visit to the page. Based on the information collected, the Web Trends Live program prepares aggregated reports on various aspects such as total pages viewed, unique visitors to the site, new visitors, returning visitors, most viewed pages, countries where the visitors come from, the web browser's default language, the ISPs that are routing the visitors to the site, the search engines that are referring the visitors, and the keywords used by visitors to arrive at the site. These reports are all available on a daily, weekly, monthly, and yearly basis. The average monthly statistics (until December 2001) are shown in Table 3.3.

TABLE 3.3

Average Monthly Statistics for the Indiashop Website

Statistic	Value	Remarks
Monthly page views	8,310	There are more than 8,000 page views on average every month
Monthly unique visitors	1,320	More than 1,000 new visitors come to the site every month
Average page view per visitor	5.4	On average each visitor viewed 5 pages before leaving the site
Average visit length	4 minutes 23 seconds	On average each visitor spends about 4 minutes on the site
Top 10 referring domains	http://xlweb.com http://search.yahoo.com http://www.google.com http://directory.google.com http://search.msn.com http://in.lycosasia.com http://search.123india.com http://aolsearch.aol.com http://search.netscape.com http://www.dinamdinam.com	These are the top 10 sites on the Internet from where visitors were coming to the Indiashop. Visitors arrived from the link to Indiashop on FOOD's home page at <xlweb.com> as well as from Yahoo, Google, MSN, Lycos Asia, and similar search engines.
Web browsers used	Internet Explorer: 82.74% Netscape: 13% Others: 4.25%	Most visitors use the Internet Explorer browser
Top 5 languages used by visitors	English: 93.70% German: 1.36% French: 1.11% Japanese: 0.85% Korean: 0.51%	Most visitors use English; however, German and French language browsers are also significant, and their numbers may increase if multilingual versions of the site are offered

TABLE 3.3 – continued

Statistic	Value	Remarks
Top 10 visitor countries	United States: 82.91% Australia: 3.1% Canada: 2.52% Singapore: 2.06% United Kingdom: 1.95% Malaysia: 1.26% Japan: 0.80% South Africa: 0.57% Switzerland: 0.57% New Zealand: 0.46%	Most visitors come from the USA; however, the potential exists for Indiashop products in other countries such as Australia, Canada, Singapore, U.K., and Malaysia. Future promotional efforts could target these specific countries.
Top 5 visitor time zones	GMT+0800: 10.89% GMT+1000: 10.51% GMT+0200: 8.56% GMT−0500: 8.56% GMT−0400: 7.98%	The 24-7 nature of the online store is demonstrated here. The need to have e-marketers online throughout the day is emphasized because the time zone of visitors coming to the site is varied.
Most requested pages	/ /kanchi/ /blouses/blouses.htm /embroider/ /silkdhoties/ /ddress/ /jute/ /blouses/blouses2.htm /shawls/shawls.htm	The most requested page was the Indiashop home page itself, followed by the "Kancheepuram sarees" section, the "Blouses" section, and the "Embroidered sarees" section.
Top entry pages	/ /jobs.htm /embroider/ /blouses/blouse.htm /kanchi/ /links.htm /jewellery/ /prodreq.htm /sculpture/ /silkdhoties/	Most visitors came directly to the home page of the Indiashop. Some of them come to the "job opportunities" page where job opportunities are offered to the e-marketers. Others come directly to various product category pages such as Kanchipuram

		sarees, blouses, and jewellery. Some visitors also come to "links" page where FOOD has provided some screensavers and other freebies.
Search engines that refer visitors	Yahoo: 72.11% Microsoft Network: 9.79% Google: 9.50% AOL NetFind: 3.86% Dogpile: 0.89% AltaVista: 0.59% GoTo: 0.59% Excite: 0.59% HotBot: 0.59% IWon: 0.30% Metacrawler: 0.30% Netscape: 0.30% FindWhat: 0.30% Dmoz: 0.30%	Most visitors come to Indiashop after being referred from Yahoo. Visitors also find their way from MSN, Google, AOL NetFind, and Dogpile.
Search phrases used by visitors	Sarees: 16.91% Saree: 15.43% Dhoti: 10.09% Shawls: 3.26% Indian saree: 2.67% Saree shops: 2.37% India shop: 1.78% India shopping: 1.48% India sarees: 1.48% Indiashop: 1.48%	The most commonly used keyword to access the site was "saree". This means that the promotion of the site on the keyword "saree" has been very effective. Future site promotion and product offerings should leverage on this advantage as well as aim to promote other products in a similar way.

Packaging and Shipping

The most important aspect of running an online store is fulfilling orders as soon as they are placed. To fulfil orders, FOOD evolved a process that started the moment the order was confirmed by the merchant credit-card provider. This process is outlined in Table 3.4.

TABLE 3.4
The Order Fulfilment Process

- A confirmation is received from the merchant credit-card account provider indicating that an order has been placed and the credit card of the customer has been validated.

- An e-mail message is sent to the customer, which thanks them for the order, informs them about the details of the order, and confirms the address to which the order will be shipped. The purpose of the e-mail is to reconfirm whether the order is correct and whether the customer would like the order to be shipped to the address indicated.

- After the customer reconfirms the order by e-mail, FOOD's order fulfilment department looks at the various items ordered and sends a note to the respective producers to deliver those items to FOOD.

- After the items of an order are delivered to FOOD, these are cross-checked for quality purposes and then are properly packaged.

- The package is dispatched to the customer via FedEx courier.

- An e-mail is sent to inform the customer that the order has been dispatched and to thank them for placing the order. This e-mail also provides the customer with a link to sign up for a newsletter where new product additions, freebies, and activities of the non-profit organizations are advertised. This allows FOOD to keep in touch with the customer on an ongoing basis.

- FOOD's order fulfilment staff access the merchant credit-card account provider's website "admin" area and tag the order as "shipped".

Calculating the shipping cost of a product needs to be carefully considered before an item is added to the online store. Many online stores offer free shipping worldwide, or at least in the country of their origin. FOOD initially charged a flat rate for shipping costs for each order, regardless of the quantity or weight of the product. However, when the order had more products, the actual shipping costs started to exceed the revenues collected from the customer. FOOD now employs a system with variable shipping costs that are calculated for each product based on its weight. Although this may increase the cost of the products, most customers do not seem to mind this extra cost as long as it is specifically mentioned as a shipping cost rather than as part of the cost of the product itself.

E-Marketing and Customer Service Strategies

Several factors contribute to the development of a successful e-marketer. These include fluency in English, being a competent communicator and negotiator, and having strong technical skills (including the ability to promote the site in search engines). E-marketing and customer service strategies were researched by FOOD and adopted by the e-marketers.

Sustainability

The free training and Internet access provided by FOOD to the trainees was a one-time contribution to the online marketers. FOOD charged a fee for subsequent renewal of an Internet account. Those e-marketers that continued to use FOOD's Internet access paid 5 rupees per hour of Internet access time. This helped generate additional revenue for FOOD. Some e-marketers opted to connect via DSL to the Internet at the rate of 1,000 rupees per month.

The e-marketers were paid a commission ranging from 2 to 5 per cent of sales made by the women's co-operatives and NGOs. This commission helped e-marketers find a way of living within the project and motivated them to expand their client base further. During the last six months of 2001, the e-marketers were promoting the Indiashop actively and the women's co-operatives and NGOs earned a profit of approximately 75,000 rupees from online sales. Before, these co-operatives and NGOs had been selling their products to intermediaries at a low price. This online marketing strategy helped them eliminate these intermediaries and to realize increased profits from their sales.

FOOD is in the process of scaling up this project to cover rural entrepreneurs from other parts of India. To do so, it is partnering with CAPART (Council for Advancement of People's Action and Rural Technology), a division of the Government of India.

Fulfilment of Project Objectives

The primary objective of this project was to explore the possibilities of promoting sales of products made by women's co-operatives and NGOs in rural areas by using the services of e-marketers. Research in this project

showed that these techniques have helped fulfil the project objectives and developed a good start in boosting the income of the co-operatives and NGOs that are connected and featured at Indiashop. The producers earned a profit of 75,000 rupees over six months in 2001. FOOD will continue to run Indiashop after completion of this project and is hopeful that the e-marketers and producers will earn a sustainable income from the e-commerce activities.

FOOD's plans for the future include posting detailed profiles of each artisan along with video clips of them at work to enable shoppers to get a first-hand impression of the crafts and the artisans they are supporting by shopping at Indiashop.

The secondary objective of providing 24-hour Internet access to the e-marketers without having to pay hourly telephone bills was also achieved. Initially, wireless routers were used, but later DSL Internet access was provided. The DSL Internet access service became popular after it became widely available during 2001. The cost of access is about 1,000 rupees per month. The service was tested by FOOD and found to be reliable. Some of the e-marketers are using the DSL service by pooling their resources and sharing the DSL line with other e-marketers.

The objective of researching and using online marketing and customer service methodologies for the Indiashop was successfully achieved. The survey sent out to users of the Indiashop site, showed that more than 60 per cent of the respondents were extremely satisfied with the customer service experience from the Indiashop. The personalized approach and follow up by the e-marketers has resulted in some of the buyers coming back to purchase more products from the Indiashop.

However, a real-time chat capability (which FOOD had hoped to provide originally) was not very effective because many of the users of the site were from the United States, and the time difference made it difficult for the e-marketers to answer live chat queries (it was midnight in India by the time users in the United States started visiting the Indiashop). One solution we are exploring is to solicit e-marketers from other countries so that when the e-marketers in India sleep, their counterparts in the United States and other countries can answer online chat requests originating from different time zones. We have had some enquiries from aspiring e-marketers in Europe and the United States, many of whom are quick to realize the benefits and opportunities that e-marketing provides.

Project Outputs and Dissemination

The e-commerce shop researched, developed, and hosted online marketing and customer service techniques. In addition, the e-marketers were trained and affiliated to the online shop to promote the products (see Table 3.5). Three of the e-marketers who were trained were later absorbed by FOOD as permanent staff in the organization.

FOOD has demonstrated the experience of the Indiashop project and the e-marketers concept to several other NGOs and government departments in India throughout the duration of the project. Based on the success the project achieved using e-marketers to promote products made by women's co-operatives and NGOs, CAPART has shown an interest in partnering with FOOD to scale up the project further in other parts of the state and the country.

FOOD is hosting a home page for all project reports at <http://xlweb.com/emarketers/>. The project site is also being promoted by FOOD as part of its efforts to disseminate information on its research and development activities.

Future plans for the Indiashop include posting detailed profile information on the artisans along with video clips of them at work. This would enable users to get a first-hand view of the crafts and the lives of artisans that they will be supporting by purchasing products from the online store.

Capacity Building

As a result of conducting the research into the areas of e-commerce and e-marketing through this project, FOOD's research team earned valuable

TABLE 3.5
Project Outputs That Were Realized

Number of women's co-operatives and NGOs short-listed	15
Number of products showcased on the Indiashop	1,173
Number of e-marketers trained	92
Profits realized by the producers from Indiashop	75,000 rupees (US$1,700)

knowledge and experience in the field. FOOD is now better equipped to handle issues related to deploying e-commerce websites for non-profit organizations. Nearly 100 e-marketers were trained in different skills, ranging from answering e-mail, to searching on the Internet, to promoting websites, to delivering customer service. Moreover, the women's co-operatives and NGOs, who are selling their products on the Indiashop, have been oriented to the benefits of ICTs, particularly the Internet and e-commerce. As a spin-off of the project, some of the non-profit organizations that are marketing their products at the Indiashop site have also built their own web pages to disseminate information on their respective activities.

Social Impact

Establishing an e-commerce site and developing the e-marketer concept has helped women's co-operatives and NGOs increase their revenue and the scope of their market. For example, one woman handloom weaver in Kancheepuram (known for its hand-woven silk sarees) spends nearly a month to weave rich silk sarees. In the past, she used to sell a saree for a meager price to an intermediary who made regular visits to the village. This intermediary sold these sarees to shops in Madras for a much higher price. By the time someone purchased the saree from a shop in Madras, the cost of the saree would have increased ten times from the fee originally paid to the weaver.

When FOOD visited the weaver in Kancheepuram and sensitized her on the subject, she was very enthusiastic and allowed FOOD to take photographs of the sarees she was making. They posted these details at the Indiashop site, and within two to three months, the project received a direct order for two sarees at a very good price. The weaver was very happy, and she is now regularly in touch with FOOD staff to provide details of the new designs that she is currently weaving.

FOOD also has a network with a group of artisans in Madras who are experts in making embroidered sarees. These people have practised the artistic elements of this hand embroidery for generations. However, the group is on the brink of extinction because of severe competition from large companies that are making huge investments in automated electronic embroidery systems. When FOOD approached this group, they shared

their problems and challenges. Many had already left the group and had accepted other jobs with daily wages. The FOOD team obtained details about the sarees and started to promote them on the Indiashop website. The e-marketers were successful in finalizing a couple of orders for the embroidered sarees, but the real breakthrough came when a buyer in England indicated interest in making a wholesale purchase of embroidered sarees. After negotiations, FOOD was able to get an order for seventy-five embroidered sarees from the buyer. FOOD is following similar avenues to see if more wholesale orders can be collected for the products featured on the Indiashop website.

Many of the e-marketers trained under this project have found permanent employment as online marketers with the Indiashop project as well as with other outside companies. Some of the e-marketers have also been hired as staff by FOOD. FOOD is confident that the e-marketers will find themselves in a more favourable position to find employment because of their newly developed ICT skills.

A Visit from Sweden

A group of Swedish teachers visited FOOD in October 2001 on a mission to explore the effects of globalization on non-profit organizations in developing countries. FOOD made a presentation on various projects and soon after the presentation of Indiashop project, many of the visitors immediately logged in and visited the site through the computers inside the FOOD office. After viewing the e-commerce site, one of the Swedish teachers was clearly surprised to see an e-commerce website featuring small entrepreneurs in villages, because many big shops in Madras still do not have websites. The group also made a number of purchases on the Indiashop. The products were promised to be delivered by the time they completed their mission and returned home.

Overall Assessment

The objectives of this project were to explore whether e-commerce could be a proven source of income for women's co-operatives and non-profit organizations working in rural areas. Furthermore, the project wanted to examine if educated, unemployed youth could be trained to function as

e-marketers, not only to promote products online but also to find a sustainable source of income for themselves. FOOD feels that this project did prove that these objectives were achievable.

The artisans and non-profit organizations successfully sold their products online and realized the benefits that ICTs could bring for them in the future. As a spin-off from the project, FOOD also noticed that many of the non-profit organizations now want to post their organization details and activities on their respective home pages.

The e-marketers put the emphasis on the non-profit nature of the project and worked to make the system beneficial to the artisans producing the products. Many of the visitors to the Indiashop appreciated the efforts that FOOD undertook and agreed to promote the sites and the products made by these women's co-operatives and NGOs. FOOD is hopeful that more and more people will start buying from such a non-profit e-commerce shop.

E-commerce and online marketing are being practised in developed countries. With the results from this research project, FOOD can refine and adopt the strategies for the benefit of local rural communities.

Future Directions

FOOD is hopeful of sustaining the rapid progress that has been made during the course of the project, and intends to add more products to the Indiashop. FOOD has partnered with CAPART, which has demonstrated an interest in scaling up the project to bring similar benefits to women's co-operatives and rural industries in other parts of India. In addition, FOOD is also working with the Government of Tamilnadu on the RASI (Rural Access to Services through Internet) project. RASI is introducing e-marketing as one of the value-added services that can be offered by telecentres. FOOD is also displaying the project in various other platforms to enable more organizations to partner with it in replicating this successful experience.

Notes

1. Currently (in 2004), FOOD India is using a 512 Kbps DSL line at its head office. In addition, broadband access is slowly becoming affordable and

many ISPs are now offering cost-effective access directly or via Internet cafes, using a connection speed of 128–512 Kbps. All the ten telecentres, from where many e-marketers connect, are using their own independent DSL lines, thus creating a decentralized approach.

2. See <http://www.xlweb.com/indiashop/>.

3. Those interested in obtaining an electronic copy of our Guidelines for E-Marketers should contact the authors at <food@xlweb.com>.

4

Impact of Policy on Development of E-Commerce in Vietnam

Tran Ngoc Ca

E-commerce began gaining momentum in Vietnam in the mid- to late-1990s. Considerable discussion and debate was generated on its feasibility, effectiveness, and policy impact, and many government organizations continued to discuss various plans of action and potential frameworks for e-commerce development. However, there was neither consensus nor an agreed-upon common platform for discussing and understanding e-commerce issues among policy-makers, researchers, and entrepreneurs. The process of accepting and implementing e-commerce solutions was deferred, and as a result, a number of institutional and conceptual difficulties were faced. The policy environment in Vietnam was not created to support e-commerce technologies and transactions. This deficiency negatively influenced the introduction and integration of e-commerce into Vietnamese society and the economy.

The scope of this study[1] extends beyond the macro level of government organizations. It delves into the problems faced by Vietnamese enterprises in their efforts to use e-commerce to reach their business targets. To examine the impact of e-commerce on globalization and economic integration, we assessed the readiness of organizations to conduct e-commerce activities. The concept of readiness includes two notions:

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the *capacity* and the *willingness* to adjust to the requirements of e-commerce development. In particular, the project focused on the readiness of enterprises as wealth creators and important actors in the National System of Innovation. Business-to-business (B2B) relationships tend to be the first and most realistic form of e-commerce development; therefore, enterprise were given special importance to this study. The project also investigated the problems faced by grassroots organizations based in remote, rural, and underserved areas, and identified ways these organizations could cope with the shift to a new mode of economic activity. The conclusions and recommendations are aimed at governments, business managers, and academics.

The study had three specific objectives:

- To conduct a preliminary assessment of the policy environment to identify gaps between the existing policy environment and the environment required for effective e-commerce development;
- To assess the readiness (capacity and willingness) of Vietnamese businesses, both state-owned enterprises (SOEs) and private, large, and small and medium enterprises (SMEs), to develop e-commerce activities; and
- To recommend policy measures and a framework for e-commerce acceptance and implementation in Vietnam.

Research Methodology

Issues

The study addressed the following research issues:

- The lack of readiness on the part of government institutions, both in terms of their perception and commitment to e-commerce. These organizations include key infrastructure, legal, and policy-making bodies;
- The role of the state in the development of e-commerce practices, and its relationship with the private sector in promoting e-commerce development;
- The legal infrastructure related to e-commerce;
- The roles of various governmental or ministerial agencies with regard to e-commerce and their implications for e-commerce development;

- The e-commerce readiness of private enterprises in Vietnam and the impact of the policy environment in building this readiness;
- The required policy environment for e-commerce development and deployment; and
- Lessons and recommendations to improve the policy environment

Hypotheses

For operational purposes, the project examined the following hypotheses:

- Conflicting overarching objectives of the government and different government organizations about e-commerce issues create barriers to the development and application of e-commerce in Vietnam; and
- The absence of competitive pressure and lack of skilled human resources lead to low e-commerce readiness for enterprises.

Research Questions

To clarify the research issues and to test the hypotheses, several research questions were examined:

- What is the role of the state in the process of accepting and implementing e-commerce: supportive or restrictive? What aspects should be considered? Should the government support or control the development of e-commerce in Vietnam? If so, to what extent?
- What role does the regulatory system play with regard to e-commerce acceptance and implementation in Vietnam? Which of the various government departments should participate in conceiving this regulatory system? What are their responsibilities and interests with regard to e-commerce development? Given the current management structure of various government bodies, what are the main obstacles to supporting e-commerce development in Vietnam?
- What e-commerce policy exists in other countries? What did they do to overcome the obstacles to developing the required policy environment? What are the lessons we can learn from their experiences?
- Are Vietnamese businesses ready for e-commerce deployment? What are the aspects of this readiness? How should these aspects be assessed? To what extent are they ready? If businesses are not ready, what are the

reasons and problems behind this? What influence does the overall policy environment have on the e-commerce readiness of these organizations?

• What is the required policy environment for successful e-commerce development in Vietnam? What steps need to be taken to develop a policy environment that is conducive to e-commerce activities? What lessons and conclusions can be drawn about the policy environment? What recommendations can be made to tackle the difficulties and improve the environment for accepting and implementing e-commerce?

Policy Component and Flexibility

The rapidly changing policy environment in Vietnam provided an opportunity to turn the findings from the study into policy recommendations and to develop a scientific framework for the policy-making process. Therefore, the project involved policy-making to an extent that was not planned in the original work plan. Some of the findings and recommendations of the study were considered during working group discussions, and in the last stage of the project, various contributions were made to the policy-making process.[2]

When the project began in October 2001, e-commerce adoption in Vietnam was experiencing difficulty. There was considerable confusion among some organizations (mainly the Ministry of Trade, or MOT) with regard to the strategies and approaches that would further e-commerce development. Institutions changed responsibilities frequently, which led to both a lack of consistency in how they dealt with e-commerce issues and a lack of continuity in staff. There were also differing views on e-commerce development among departments within the MOT.

The project continually engaged in dialogue with the MOT. Proposals were put forward and comments were provided on e-commerce activities implemented by the Ministry. Project staff helped the MOT draft an Ordinance on E-Commerce (a form of legislation) that is expected to be enacted by the President. Recently, this document has been undergoing a merger with a new Law on e-transaction being drafted by the National Assembly. Some members of the MOT were also directly involved in the research activity of the project — as experts rather than as representatives of the Ministry.

Due to some difficulties within the MOT itself, the initial policy proposals were not very effective. By the end of 2002 (one year after the project started), two reports: "The Role of the Government" and "Analysis of the Policy Environment" were circulated and discussed among various groups such as MOST, MOT, and other government offices. However, no official policy action took place. In December 2002, a policy window opened with the return of the former Minister of Trade, who had initiated the process of e-commerce in the MOT. A synthesis of the two previous reports was prepared and submitted to the Minister via an unofficial channel. The report introduced several recommendations, both in policy and in organizational modifications. The recommendations included setting up a new independent department in the MOT to deal with e-commerce (rather than being a sub-unit of other department) and incorporating domestic activities involving e-commerce with other international commitments of the Vietnamese Government when entering free trade agreements (not previously linked with each other).

In February 2003, the Minister set up the Department for E-Commerce at the MOT and appointed a new director for this department to reorganize its activities. There was also a proposal to set up E-Commerce Council with the Minister of Trade acting as the Chairman of the Council. The new department studied the recommendations and analysis of our project. Last year (2003) was devoted to the implementation of scheduled activities. The new Department for E-Commerce has become an official and close partner of the project.

As a result, this IDRC-funded project has made significant contributions to changes in the Vietnamese policy landscape with regard to e-commerce development. In the last survey of the e-readiness of SMEs, the project team worked even closer with the newly created e-commerce department in conducting the survey and ensuring that the research and policy actions were in agreement with each another.

One of the important lessons learned during this process was that, due to conflicting interests, it was not always effective to gather opinions of all related stakeholders in a single discussion. Opinions of organizations sometimes need to be collected separately through individual interviews and discussions. In addition, different stakeholders understand the same concept differently. Therefore, fine-tuning of questions is required to make the concept more universally acceptable to various groups.

Research Findings

The project findings have been grouped into six areas:

*   collection of information and database development;
*   role of the state in the development of e-commerce;
*   impact of the policy environment on e-commerce development;
*   learning from other countries' experiences;
*   developing research tools and surveying the readiness of firms; and
*   analysing case studies.

These research findings contributed to the achievement of the project's objectives, both by generating new scientific knowledge and by developing policy.

Collection of Information and Database Development

During the course of the project, data relevant to e-commerce development in a number of countries were collected. In addition, overall socioeconomic development data about Vietnam and information and communication technology (ICT) development data related to the e-commerce acceptance and development were collected.

   Using these data sets, the study was able to identify some urgent issues. These issues included a lack of legal documentation and policies, and a weak incentive system for ICTs in general and for e-commerce in particular. A study previously done by the MOT identified a range of issues as being crucial to e-commerce development in Vietnam (see Table 4.1), but no legal and policy framework had been prepared.

Role of the State in the Development of E-Commerce

The state's role in accepting and implementing e-commerce is contradictory. It is simultaneously supportive and restrictive of e-commerce activities. In fact, in many cases, the role of the state is restrictive because it tries to control or manage things (in terms of supervising others) rather than to create a conducive and supportive environment. This is true both for ICT and e-commerce policy. This study found that the state intervenes in cases where it perhaps should not, and refrains from providing sufficient support when it should.

TABLE 4.1

Issues Identified as Important by the Ministry of Trade

- Increased awareness
- Legal infrastructure
- Technological infrastructure
- Cryptography
- Electronic payment
- Standards in industry and commerce
- Protection of intellectual property rights (IPR) and customers
- State management and the role of the state
- Skill-development training
- Sociocultural aspects
- National security

The role of the state can be seen in three contexts: as a supplier; as a demand generator; and as a creator of a favourable environment. On the supply side, government instruments were insufficient, especially in providing infrastructure, technology, facilities, and training. On the demand side, the government could not trigger the use of e-commerce by using purchase and procurement policies through public enterprises. The weakest aspect seems to be the state's failure to create an environment that is conducive to e-commerce development by enterprises. In addition to the legal framework, other issues such as finances, taxes, and investments are important to consider. Enhancing the role of the state in these areas would be an important breakthrough to e-commerce development in Vietnam.

The creation of a new Ministry of Post and Telematics (MPT) and the Department for E-Commerce in the MOT led to some minor adjustments in the study's final conclusions and recommendations.

Impact of the Policy Environment on E-Commerce Development

The perspectives and understanding of ten ministries and government agencies involved with e-commerce implementation were examined. In many cases, these viewpoints were contradictory. Here are some observations on the policy environment for e-commerce:

- The e-commerce regulatory system in Vietnam lacks a legal framework, documentation, and appropriate policy to guide regulatory management.
- The legal framework for e-commerce is weak in the areas of taxation, customer protection, intellectual property rights (IPR), e-payment, security infrastructure, standardization, public security, technology infrastructure, sociocultural aspects, training, and human resource development. In addition, the wording of the legislation makes it unsuitable for e-commerce regulation because it has limited jurisdiction force.
- The Vietnamese Government is committed to join different free trade agreements such as e-ASEAN, the paperless trading of APEC (Asia-Pacific Economic Co-operation), and the WTO (World Trade Organization). However, there is a difference between these commitments and the hesitant efforts that the government has made to realize e-commerce policies. The current policy environment, including the legal framework, does not take sufficiently into account the needs of private enterprises, which are the major stakeholders for ICT and e-commerce development.
- The state, judging by its policy actions (such as its procurement policy), will not assume a pioneering role in facilitating the market demand for e-commerce. The e-commerce policy environment reflected a similar situation to that of ICT policy. There were no close linkages between policies and policy-making bodies, making the system fragmented. There was little consensus and harmonization among key institutions on the pace, extent, format, and nature of e-commerce development in the country. This often led to the creation of inappropriate policies, which sometimes were contradictory or ineffective in accomplishing their purpose.
- Differences of opinion were quite prevalent between ministries that support a faster and stronger integration process (e.g., ministries dealing with foreign affairs, commerce, science and technology, and international law) and those that seem to be overly cautious in dealing with the issues (e.g., ministries dealing with culture and information and security). These differences arise due to conflicting interests. For example, sometimes the policies of a sectoral monopoly are meant to preserve the interests of certain industries (e.g., post and

TABLE 4.2

Failures of the Policy Environment for ICTs and for E-Commerce

General Policy Environment Issue	ICT Problem	E-Commerce Problem
• Integration and interaction of different factors within the policy environment	• Lack of co-operation between sectors to promote ICTs • Inconsistent and some irregularities in the functioning of macros	• The policy-making process is fragmented. There is weak linkage between different domestic policies, or between domestic policies and international commitments of the Vietnam government. The plan for economic integration also lacks a comprehensive and proactive strategy. • State management of e-commerce is not functioning properly.
• The nature of some central policies leads to differences in importance and understanding	• No consensus reached on the operational formats for ICT policies	• Various Ministers or agencies consider their own policies as the central ones. They do not take into account the need for interaction or harmony with other policies • Sectoral monopoly still exists.
• Limited co-ordination between policy-making organizations, policy-making,	• Differences between Directive No. 58 (an important document	• There is insufficient co-ordination and co-operation between policy-making

and policy implementation activities limits policy impact

issued by the Party Central Committee on ICT Development) and specific activities to promote ICTs

agencies. Even the existing linkages are occasional, irregular, and inconsistent in nature.

- Lack of dialogue between policy-makers and those influenced by policies (e.g., enterprises)

- The draft plans for ICT had insufficient involvement of enterprises and people

- There is little or no dialogue between policy-making organizations and those affected by the policies (e.g., enterprises, individuals, and local communities). In cases where there is dialogue, it exists only on an ad hoc basis.
- Lack of information to analyse the impact of e-commerce.

- Suitable policies to encourage and support demand from enterprises

- Policies seem to be too cautious and restrictive, rather than facilitating.

- Lack of legal or regulatory documents related to e-commerce.
- The non-specific nature of the legal and regulatory documents, which are sometimes too general or vague.
- The focus of many of the documents is not appropriate to the activities of e-commerce.
- The views expressed in the documents still represent a cautious or old mentality.
- The state cannot play a pioneering role.

telecommunication and finance), but this can be at the expense of overall development in other sectors.

- Although e-commerce development started much later than ICT development, the problems (or policy failures) of e-commerce are more complex than those for ICTs. Overcautiousness and hesitancy portrays the attitude of the government, which is preoccupied with managing or controlling the sector. Another important weakness for e-commerce policy is the absence of legal and policy documents. The failures of the policy framework are presented in Table 4.2.

Clarifying Ministerial Responsibilities

Before the creation of the Department of E-Commerce in February 2003, a wide range of agencies and departments were working under different ministries to deal with e-commerce issues. The Ministry of Trade alone had three departments for this purpose: the Department of Trade Promotion (supported enterprises to familiarize them with e-commerce, but did not have any authority or vision to implement policies); Department for Multilateral Trade Policies (dealt with integration issues including that of e-commerce activities, but lacked overall vision for integration), and the Trade Information Centre (provided information on the creation of trade points but lacked a comprehensive view of e-commerce). Besides these, many other ministries, such as the Ministry of Justice and the Ministry of Science and Technology, were also involved with different aspects of e-commerce.

E-commerce policies must be viewed in the context of other policies. Co-ordination is important to create a sound policy environment, but this was lacking in the Vietnamese e-commerce system. Co-ordination among the government organizations that participate in setting up regulatory systems is rather formal and inefficient. Responsibilities are not clearly defined and there are often conflicting interests.

The process of information sharing and dialogue among the stakeholders is irregular and the organizations seem to work independently. There is even evidence of information hiding. Most of the cases of co-operation are formalities, with little co-operation. With the introduction of the new MPT, it is still unclear who is taking the leading role in e-commerce development in Vietnam. Although in principle the MOT is the authority

for e-commerce, the MPT seems to have the same responsibility, but lacks capacity, knowledgeable staff, and infrastructure. Considering the current management structure within the various government bodies, the main obstacle is the lack of an organization that is powerful and competent enough to act across different sectors (see Table 4.3).

Learning from Other Countries' Experiences

A study of legal systems in other countries revealed that different e-commerce issues such as consumer protection, privacy policy, electronic signature, trust mark, domain registration, electronic payment, and taxes are covered by different legislation. The guidelines in various documents

TABLE 4.3

Issues Related to the Organization of Agencies Responsible for the Development of ICTs and E-Commerce

Issue	Impact on ICTs	Impact on e-Commerce
Status	• Absence of a supreme agency that could manage the overall development of ICTs. The newly created MPT is a ray of hope.	• Lack of a multi-sectoral and multidisciplinary agency that could deal with the complexity and overall development of e-commerce. • Depends on some units within the MOT. Other ministries and agencies also take part in the implementation of e-commerce policy to various extents.
Problems	• ICT policies are implemented by a number of agencies in addition to the MPT. This created rivalries, and there are no linkages between the agencies. • There is a need for a co-ordination mechanism that would be cross-sectoral and inter-ministerial.	• There is a practice of information monopoly. Organizations do not share, or are hiding information. • Petty competition among agencies • Co-ordination (if any) is a formality and means little in reality. • Crippled by short-term vision and a lack of strategic direction. • Actions respond to pressures rather than to needs.

of the United Nation Commission on International Trade Law (UNCITRAL) address the most common themes and provide a good reference for Vietnam.

Study tours to Canada and Europe, as well as experiences from Asia-Pacific, demonstrated that an institutional framework is necessary for e-commerce development. In Canada, for example, Industry Canada (part of the Government of Canada) deals with most e-commerce issues. In addition, other national and provincial institutions are in place to handle issues of e-commerce development. The Council of E-Commerce (national) and the Programme in Montreal run by the Ministry of Culture and Communication of Quebec (provincial) are two such examples.

Canadian experiences, such as the Institute of Information Technology at the National Research Council Canada (NRC) and its project on clustering for Nova Scotia and Halifax, are valuable contributions to developing Vietnam's initiatives to serve remote and rural areas. Social science institutions such as the New Economy Initiative of the National Council of Social Sciences Research are also actively involved in promoting ICTs and e-commerce.

European experiences in training (e-UK University initiative) to support enterprises (e-Business Group of CBI, e-Business Council, e-Business Forum, and the digital economy mission of the French Ministry of Economy and Industry) are important. To illustrate the importance of e-commerce, the Government of the United Kingdom has appointed an e-envoy at the highest level of government to facilitate e-commerce activities.

Developing Research Tools and Surveying the Readiness of Firms

Preliminary interviews with some private enterprises revealed that physical infrastructure was an important but not crucial factor in e-commerce readiness. Other factors, such as management, proved to be a decisive element. In some cases, private enterprises that had poor management, particularly poor information management, could hardly do anything with their well-equipped facilities. Legal and cultural aspects were also considered important.

Another survey on private enterprises pointed out that virtually all firms are aware of the importance of e-commerce to their businesses and would like to undertake such activity if possible. However, due to many

difficulties, not all are ready to embark on e-commerce applications. Most cases revealed that larger enterprises (with more than fifty employees) are more ready to deploy e-commerce than smaller ones.

A July 2003 survey of the readiness of SME indicated that the majority of enterprises could identify products for sale via e-commerce (88 per cent), but that only 41 per cent could identify the technology and 47 per cent the required human resources for e-commerce. Only 33 per cent could assign specialized staff to take care of e-commerce; whereas, 63 per cent planned to train new staff for this purpose. Of the enterprises that were applying e-commerce at the time, 76 per cent of the firms intended to use e-commerce in business-to-business (B2B) transactions; whereas, 39 per cent considered that they were already involved in such a business mode.

Another interesting finding is that the enterprises did not identify e-commerce as being dependent on gender issues. However, most of them agree that projects located in remote places are at a disadvantage for using e-commerce. As a result, they would like to see government policy measures on issues such as taxation, training, and awareness building, specifically targeted to rural or remote users. Some details of the survey are presented in Table 4.4.

Analysing Case Studies[3]

In Hai Duong, Hanoi, and Ho Chi Minh City, seventeen companies were extensively interviewed. Here is some general information on these companies. ETC was set up in 1995, has 200 million dong in capital and seventeen employees, and created ETCNET in Hai Duong province. Electricity Company No. 1 is located in the same province and started to use IT for business administration in 1995. Ha Thang ICT is based in Hanoi and specializes in software development, networking, and supplying hardware. In Ho Chi Minh City, two IT companies and four companies using IT in their businesses were studied. These companies were: Paragon Solution Vietnam (PSV) (100 per cent foreign investment); Kim Yen Limited Co. (Camon Tour); import-export company Fideco; security service company and security trading company Bao Viet; and Nha Dat Limited Co. Some of these companies are located in the Saigon Software Park (SSP). In addition, a range of other companies such as Rang Dong Plastic, Thanh Cong, Phong Phu Textile, IBM, ACER, Phu Lam Shoe-Making,

TABLE 4.4

Results of a Survey of SME Conducted in July 2003

Type of Ownership		Economic Sector	
SOE (state-owned enterprises)	58%	Industry and Construction	37%
FDI (foreign direct investment)	8%	Agriculture	0%
Other	34%	Trading and Services	32%
		Mixed	32%

Type of Business Activities		Firm size	
Wholesale	71%	Less than 10 staff	5%
Retail	53%	From 11 to 50	16%
Sell tangible products	58%	More than 50[a]	76%
Sell intangible products	32%	No. of employees not provided	3%

Does e-commerce matter?		Expectations from e-commerce[b]	
Not sure	5%	Extended customer reach	89%
Not necessary	3%	Attracting new customers	89%
Necessary	92%	Increased revenue	70%
		Improved profitability	68%
		Improved customer satisfaction	57%

Why use e-commerce[c]		Attraction of e-based transactions[d]	
Creating new sales channel	92%	Best service	63%
Building company image	82%	Availability of products	42%
Launching new products	58%	Quick delivery	39%
Preparing for export	45%	Cheapest price	29%
Trying new idea	29%	Trust	29%
Being supportive	26%	Specialized website for product	3%
Follow others	0%		

E-commerce readiness		IT infrastructure readiness	
Product-wise	88%	Have computers	100%
Customer-wise	59%	Have leased lines	21%
Technology-wise	41%	Have LAN	58%
Human resource-wise	47%	Have WAN	11%
		Have Internet access	97%

Organizational Preparedness	
Have specialized e-commerce personnel	32%
Plan to train staff in e-commerce	63%
Have separate e-commerce unit	18%

Notes:
[a] Mostly in traditional manufacturing and trading.
[b] Most focus on enlarging market.
[c] 26 per cent of the firms reported that they get some kind of support (from the government) for e-commerce development, and 45 per cent of the firms said that e-commerce is a step to increase exports.
[d] Although in "Expectations from e-commerce", the potential of e-commerce to "improve customer satisfaction" received relatively low consideration; here "best service" is considered most important.

Nhat Vinh, and VNET, which work in manufacturing and the service industries were studied.

Some General Trends

The following conclusions and trends can be drawn from the findings of these studies:

- *Understanding e-commerce and identifying its benefits to the business community* — All organizations are aware of the importance e-commerce has in their business activities. Some companies have experimented with alternate communication and transaction methods, and some have started to set up an electronic supermarket. This e-supermarket hosts information on sales, and markets a dozen companies from a single website. Sales over the Internet are the first step of e-commerce. However, sales activities have not yet begun to take place. E-commerce applications in private enterprises still experience many difficulties.

- *Technological infrastructure* — Unreliable connections to the Internet and to telecom networks are concerns for many companies. Because of the low level of reliability and slow connectivity, online transactions often get "jammed" and need to be abandoned. Enterprises dealing with tourism and export-import businesses (Camon Tour, Fideco) face these problems quite often. Although they contact their Internet service providers (ISPs) to solve problems, sometimes the ISPs do not supply proper technical support. Other software companies (those located in the SSP) who attempted to subscribe to a separate leased line or to an independent port still faced problems, which include bureaucratic hassles, legal restrictions, cost, and other technical problems. Lack of standardization also posed a considerable obstacle to users who were connecting to, or building up, a system.

- *Legal infrastructure* — Protection of intellectual property rights (IPR) is the most serious problem for companies that produce software products. Software products are copied on a massive scale (copied software is available even in government organizations) and no effective action is taken to solve this breach of IPR. Many companies such as Lac Viet (producer of multimedia software on tourism and culture) feel that software development in Vietnam has little or no future

because of copyright infringement. Another important legal aspect is transactions over the Internet. The e-commerce environment is still very disorganized due to a lack of legal regulations on electronic information exchange and the expense of credit card services (7 per cent charge). These problems have led to many difficulties in dispute settlement, not only between business partners, but between the partners and management organizations in finance, tax, customs, and security.

- *National security* — The blocking of access to selected websites by private enterprise has hindered access by software companies to knowledge resources that are essential to their operations. When companies need to be involved in networks with local partners, they find that some Internet connections are blocked without just cause. Selective access to information, whether it is right or wrong, must be exercised with proper judgement. The government should be restrictive only with information that is clearly immoral or corrupt, such as pornography. In contrast, access should be more easily given to information that comprises knowledge resources or that could be vital for economic activities. Things have improved recently but more needs to be done.

- *Incentive policies for e-commerce* — With the hurdles placed in front of private enterprises, such as high taxation, telecom fees, and Internet connectivity costs, incentive policies to help these enterprises embark on e-commerce activities are needed. The taxes levied on the IT industry are similar to those applied to other services. With the introduction of VAT (Value Added Tax), the tax levied on software products has increased year after year (from 0 per cent to 10 per cent in four years[4]) rather than decreased, as would be the case for an incentive policy. Fees for leased lines are too high (US$2,000 per month for a 64 KB line[5]) and many companies indicated that they could not afford these prices. Some respondents suggested that it is not security that was a concern, but the existing business monopoly that raises fees and makes telecommunication services cumbersome. The telecommunications industry itself has not benefitted from monopoly practice, but it has affected the development of other sectors. SMEs, due to their lack of resources, hope that the government will reduce taxes (for a period of time) on their businesses to support

the building of websites and the development of e-commerce activities. In the last few years, things have begun to improve as connection costs have declined.

In this context, businesses have plans with regard to e-commerce development. Despite the difficulties, companies will continue their e-commerce activities. To deal with difficulties in the payment system, some companies have chosen to explore foreign partnership options. For example, Fideco (a seafood export company) chose an Australian partner to receive payment directly on their behalf. Camon Tour Co. (tourism) also decided to use a company in Singapore as an external e-commerce focal point to solve difficulties with online payment. This is a common trend in e-business to overcome difficulties with the banking system in Vietnam. Regardless of government policies, businesses will continue their e-activities in a way that is most appropriate to their resources and situation.

• *Government understanding of the needs of businesses* — Most of the enterprises argue that the government does not have suitable mechanism to understand or study the business needs of their companies, particularly in relation to ICT development. These opinions often remain unaddressed or are responded to with inconsistent action. Policy steps are also inconsistent or even contradictory in some cases. In the formulation of the ICT master plan and strategy (approved in 2002), representation from the business community was limited.

Many businesses feel they have suggestion to make with regard to the role of the state. They think that the government lacks a clear vision of the role of the state — either to be supportive or restrictive or to create a favourable environment for business operations. The enterprises feel that their suggestions could be an important guide to the actions of the government with regard to IT and e-commerce development in the country. They believe that the government should help create favourable conditions in such areas as legal framework, taxation, infrastructure, standardization, and network security.

In relation to human resources development for enterprises, two observations were made. First, enterprises have weaknesses in their communication capabilities in English. They also lack the ability to

link issues of a complex problem to potential solutions. In general, they do not have enough capacity to manage projects and to write adequate technical reports. Second, new university graduates do not have enough capacity and need to be retrained before they can work for businesses.

The Vietnamese social environment is still not conducive to the introduction of e-commerce in business. Customers prefer to pay by cash and to touch and see things before they pay.

E-Commerce in Companies: Business-to-Business (B2B) or Business-to-Customers (B2C)?

Currently, different stakeholders (e.g., government, enterprises, policy-making organizations, and policy-makers) understand e-commerce in different ways. Considering the difficulties with an electronic payment system in Vietnam (including electronic signature and security), some stakeholders believe that e-commerce is a distant concern and cannot be implemented in the immediate future.

Some enterprises are already carrying out e-commerce transactions directly with their customers (B2C). However, the implementation of e-commerce combines modern communication means with traditional payment systems. For example, in the cases of Fideco and Camon Tour Co., all communications, transactions, and advertisements are done over the Internet and by e-mail; whereas, all payments are received by the traditional system of a letter of credit from a bank. Although the system is slow, this is the first experimental step by the enterprises to endorse e-business.

There are also diverse views on the market for e-commerce. Some see a market for export-oriented activities; whereas, others advocate developing e-commerce activities for the domestic market. Although there is consensus on the need and benefits of e-commerce, opinions vary in terms of capabilities, degree, and direction.

A case study of nine traditional villages with small enterprises was conducted to understand how e-commerce could be used for business development in such a setting. Among these villages, there was one from Hanoi province specializing in ceramics; three from Ha Tay province specializing in ceramics, fabrics, and casting; three from Nam Dinh province

working with casting, fabrics, and construction materials; one from Ninh Binh province specializing in peanut processing; and one from Binh Duong province specializing in ceramics and porcelain. The case study suggested that it would be rather difficult to successfully implement e-commerce practices in these villages and enterprises. In addition, the study also proposed measures to overcome such difficulties. One of the most interesting test cases was ceramic production case in the village of Bat Trang (see below).

A comparative analysis of selected villages is presented in Table 4.5. Only a few of the villages are prepared to take on ICTs and e-commerce even on a limited scale. The majority of the villages (other than Bat Trang) do not have enough infrastructure (e.g., access to PCs, Internet access, or training), human resources, or purchasing power to adopt e-commerce.

Project Impact

The project has had the most noticeable impact on the e-commerce policy-making process. The findings of the project (although preliminary and tentative in some cases) have helped clarify issues, reinforce messages to policy-makers, and prepare the legal framework for e-commerce development in Vietnam.

The immediate impact of the project was that it led to the creation of a new department in the MOT, which changed the direction of policy-making and institutional arrangements. With the appointment of a new Minister in the MOT, the project could generate significant impacts — although this study is only one of the many factors affecting change.

After release of the survey findings, more impacts have been achieved. The responses and the tendencies reflected in the survey of enterprises gave impetus to the development of policies to address the issues that were raised. This information about the status of Vietnamese enterprises also provided challenges that could be addressed by future actions.

Project Recommendations

General

- To make best use of ICTs in society, it is necessary to consider information as a source of knowledge for development rather than as

Bat Trang Village: Using the Internet for Traditional Ceramic Production and Export

One of the most interesting examples of the first steps towards e-commerce in rural areas was in a ceramic project in Bat Trang village. Here, family traders and artisans use the Internet to market their products. The village is about 10 km north of Hanoi, has 6,692 inhabitants, and 1,600 households. There are about 1,000 kilns (still using coal fuel) and nearly 100 gas kilns.

The use of ICTs has developed since the beginning of 2000. Initially, e-mail and the Internet were used because they provided a cheaper and faster method of connecting to buyers in non-Asian markets, particularly in Europe and North America. Traditional buyers from Japan, South Korea, and Taiwan seemed to be slower with payment. The villagers' attempts to search for new customers and markets attracted them to Internet-based marketing.

At present, about twenty enterprises have websites to showcase their products. This number is not large, and the enterprises use the websites only as points of contact and to advertise their products to foreign markets. However, this has been a catalyst for the entire community. Now, 15 per cent of households in Bat Trang have computers, and 100 per cent of residents have access to a telephone. Other enterprises have also recognized the advantages and have started to use ICTs. Most of the websites only have general information and images of products to prevent others from copying the product designs.

Bat Trang residents who have graduated from university design some of the websites. To facilitate the use of ICTs, the Commune Council has communicated with a computer company in Hanoi to organize a computer training course in Bat Trang. The training course started with four computers, had a fee of US$9 per programme and lasted about 1.5 months. They offered three lessons per week and allowed students to use the computers from 8.00 a.m. to 11.00 p.m. The training fee was deducted from the commune fund. About sixty residents have now finished their computer training course and many Bat Trang residents continue to create demand for further training courses. In addition, learning the English language has been given a special priority, and many individuals are hiring English teachers to teach in the village.

TABLE 4.5
Findings from a Study to Determine the Potential of Seven Villages to Use E-Commerce in Vietnam

Provinces	Nam Dinh		Ha Tay		Binh Duong	Bac Ninh	
Village	Xuan Tien	Phung Xa	Thang Loi	Van Siem	Hung Sinh	Dong Quang	Da Hoi
Area (ha)	350	150	591	297	286	553	13,211
Population	10,185	6,500	7,506	6,058	7,215	15,200	474
Household	450	250	1,175	1,391	1,314	3,200	2,400
Traditional craft	Food processing	Textile	Embroidery	Wood carving	Ceramics	Wood carving	Steel
Household involved in craft	300	Majority	Majority	471	96	2,300	Majority
Population involved in craft	4,000	2,000	4,385	3,500	3,000	5,000	10,000
Average income	350,000	300,000	400,000	300,000	450,000	500,000	400,000
Total income from craft (in billions of dong)	n.a.	15–18	33.5	25.2	110	171	320
Private enterprises	5	10	None	1	8	78	21
State-owned enterprises	None	None	None	None	None	None	None
Major markets	China	Vietnam, Europe, Japan	Vietnam	Vietnam	Japan, Europe	China, Canada, U.S., Europe	Vietnam
PC available	4	2	1	10	20	7	37

a threat. This would help minimize the attitude of suspicion and hesitancy to share information, reduce information monopolies, and increase the transparency and balance of information access within society.

- It is important to have an overall vision of the economy rather than a specific priority targeted only on a number of industries. In this context, the telecom industry may need to accept losses for the sake of the overall benefit to other sectors. E-commerce may also generate spillover effects by increasing the number of subscribers for the telecom industry itself. The uptake of e-commerce depends very much on widespread development.
- The introduction of e-commerce needs to be seen as a new paradigm of development in all socioeconomic activities. As a result, this development needs to be supported by a proper policy framework and institutional arrangements.
- The government should encourage dialogue between important stakeholders and create a forum for enterprises to discuss IT issues, software development in general (which is useful for e-commerce development), and e-commerce in particular.

Policies

In addition to the policies already adopted by the various ministries, here are some other specific policy recommendations.

- *Investment policy* — The government should devise a favourable investment policy in relation to e-commerce. The role of the government should be clear and distinct and be supported by actions, not by restrictions. The government can stimulate demand in the sector by using purchase and procurement policies of public enterprises and by building infrastructure. The government could also consider setting up a special fund to support e-commerce development. The fund could be managed by the state agency for e-commerce management and be used to support enterprises that want to initiate e-commerce activities. SMEs should be provided with more support on issues of IPR, standardization, infrastructure, and human resource development.

- *Taxation policy* — This is part of financial policy and should be targeted at supporting enterprises (e.g., ISPs and digital content providers) that deal with e-businesses. The government could consider providing incentives for better and cheaper access to telecom infrastructure. Reducing the prices of e-services to an affordable rate for the majority of end users is an important step in this direction.
- *Pricing policy* — There is a need to stimulate subscribers to e-commerce. Increasing the number and use of credit cards and developing an inter-enterprise payment system could facilitate e-payment, which is an essential ingredient for e-commerce success.
- *Other policies* — A range of other policies should deal with diversified issues such as developing the technological infrastructure, setting up the legal framework for e-commerce, and training people in new way of production and trading. The government should consider formulating specific need-based policies to help remote, rural, and poor areas and specific target groups, such as women, youth, and the disadvantaged, to take up e-commerce. These actions could help promote e-commerce among these groups and help them to cross the digital divide.

Institutional Arrangements

- It is important to set up a multisectoral, inter-ministerial agency (with participation from ministries such as finance, banking, trade, justice, post and telecom, and science and technology) to work on a legal framework for e-commerce.
- A national focal point on e-commerce should be created. This could be a National Council for E-Commerce Development that would include representatives from concerned ministries, agencies, and the private sector and would act as an advisory body. There could also be another body, the National Committee for E-Commerce that would formulate and implement policies to help develop e-commerce.
- To overcome the current fragmented policy structure, the government should promote transparency and openness in activities related to e-commerce policy-making. It is also important to set up a network of organizations and experts working on e-commerce development and promotion.

Notes

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2. The project provided recommendation for the policy-making process, both in terms of policy measures and changes to institutions dealing with policy-making. The project engaged policy-makers at different levels at the outset of the research. As such, the project was not a typical academic project because it had an explicit policy orientation.
3. These studies are continued from previous surveys for another project on using ICTs for business (Tran Ngoc Ca et al., "ICT in Business and for Business", Report of the VCIT Project, 2000). Data have been updated and complimented by another round of in-depth interviews with new companies in 2003.
4. Figure for 2002.
5. Figure for 2000.

Index