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

By 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 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. 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 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

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 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. 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 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; and an analysis of the transactions data captured by the system.
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. 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.

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 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-mail. 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). 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

<p>| TABLE 1.3 |
|---|---|---|
| <strong>Number of Transactions by Month and Year (September 1999 to May 2001)</strong> | | |
| 1999 | 2000 | 2001 |</p>
<table>
<thead>
<tr>
<th>Month</th>
<th>Number</th>
<th>Total Value</th>
<th>Average Transaction</th>
<th>Percentage of Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>—</td>
<td>—</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>—</td>
<td>—</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>4</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>4</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>8</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>1</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>—</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>—</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>1</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total for Year</td>
<td>2</td>
<td>113</td>
<td>61</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 1.4**

Transaction by Shipping Address (September 1999 to May 2001)
<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
<th>Amount</th>
<th>Percentage</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>14</td>
<td>667</td>
<td>47.64</td>
<td>8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>15</td>
<td>605.10</td>
<td>40.34</td>
<td>7</td>
</tr>
<tr>
<td>Germany</td>
<td>7</td>
<td>385.4</td>
<td>55.06</td>
<td>4</td>
</tr>
<tr>
<td>Ireland</td>
<td>4</td>
<td>324</td>
<td>81</td>
<td>4</td>
</tr>
<tr>
<td>Korea (South)</td>
<td>4</td>
<td>284.60</td>
<td>71.15</td>
<td>3</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4</td>
<td>205.30</td>
<td>51.33</td>
<td>2</td>
</tr>
<tr>
<td>Singapore</td>
<td>6</td>
<td>200.5</td>
<td>33.42</td>
<td>2</td>
</tr>
<tr>
<td>Brazil</td>
<td>4</td>
<td>158</td>
<td>39.5</td>
<td>2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5</td>
<td>140.8</td>
<td>28.16</td>
<td>2</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>125</td>
<td>125</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>4</td>
<td>117</td>
<td>29.25</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>* 27</td>
<td>843.7</td>
<td>31.25</td>
<td>10</td>
</tr>
<tr>
<td>Grand Total</td>
<td>176</td>
<td>8,790.5</td>
<td>49.95</td>
<td>100</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-ROMs</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Arts and Crafts</td>
<td>7</td>
<td>1.6</td>
</tr>
<tr>
<td>Publications</td>
<td>423</td>
<td>96.1</td>
</tr>
<tr>
<td>Videos</td>
<td>8</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>440</td>
<td>100</td>
</tr>
</tbody>
</table>

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.


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.


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


Source: http://www.idrc.ca/ Accessed on 01/01/2006