

The Significance of E-Commerce in Emerging Markets

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ABSTRACT

The term “e-commerce” is one way to express the potential of ICT to reshape all kinds of economic transaction processes. It affects all stages of communication before, during and after deliver of goods or services, and the payment flow respectively. This paper finds out how within the field of e-commerce a new breed of B2C and P2P market segments for buying and selling digital goods and services is emerging. The paper also focuses on the integration of payments and payment related steps in both areas of retail e-commerce. The paper makes an in depth analysis of the interfaces between actors and their respective systems, e.g. between customer and merchant, merchant and payment service provider, payment service provider and banking system. The paper is basically intended to make us understand how the process of economic development within a community is integrated with the new ICT based services especially e-commerce in developing countries.

Keywords: Advantages of E-Commerce, Principal Components, Community Economic Development, E-Commerce Opportunities and E-Commerce Business Models.

1. INTRODUCTION

Electronic Commerce (E-Commerce) has almost overnight become the dominant on-line activity. Equally quickly it has become a significant element in commercial activities globally, both in the developed and developing countries where suitable infrastructure support is available or likely to be available. E-Commerce, of course, has no single definition, meaning only commercial activity which is somehow linked to or supported by electronic communications. It may be anything from a simple advertising presentation available on the World Wide Web, or an e-mail communication; all the way to an entire multi-million dollar transaction initiated and promulgated in electronic form up; to and in some cases including the actual delivery via the net of information intensive goods or services.¹ (E. Turban, J. Lee, D. King, and

H. M. Chung, 2000: 49-65).

Estimates of the volume of E-Commerce activity vary as widely as do the definitions but figures in the trillions of dollars are being widely circulated.² (<http://www.ecommerce.gov>) The initial and still most visible E-Commerce activities involved commercial relationships between businesses and individual consumers (B2C) such as *Amazon.com*, or *Grocer.com* or between consumers and consumers (C2C) as for example sites such as *eBay* or similar auction sites. However, the major developments which are causing the huge ripples economically and which underlie the astronomical sums which are being quoted are the Business to Business (B2B) undertakings, many of which are known only to those within particular segments of the business community.³ (Steinfeld, Charles and Pamela Whitten., 1999).

2. ADVANTAGES OF E-COMMERCE

The advantages of E-Commerce from a commercial perspective are numerous:

1. Online and more or less *instantaneous searches* with an unlimited number of criteria such as description, category, subcategory, location, color, size, and price range-i.e. The use of computerized information management for a huge and rapidly expanding globally distributed knowledge/information base along with the availability of full color media including graphics, animation, sound and now video and no space or time limitations as to information delivery.
2. Full *two-way 24 hours/day, 7 days/week communications/information access* capability which allows for instantaneous response and feedback concerning product/services and related information.
3. Full *processing of transactions* (including delivery) for information intensive goods such as software, text, images, video, and music; downloadable directly to the consumer's computer at the time of purchase and including the opportunity for limitless product comparison. All of this leads directly to greatly intensified competition in these markets and lower margins, reducing costs to the end user.
4. *The elimination of the need for middlemen (disintermediation)*, leading to lowered transaction costs (including marketing, sales, transaction processing), reduced overhead, and reduced inventory and labor costs.
5. *The delivery of after-sales service and support* directly and low cost.

3. COMPONENTS OF E-COMMERCE

The principal components of e-commerce include:

1. **Web Browser**– A software program that allows people to access the World Wide Web. Internet Explorer and Netscape Navigator are the two most popular Web browsers.
2. **Web Servers**– Computers that host the information that Internet users access via their Web browser. Web servers are special Internet computers that store and deliver (serve) Web pages. A Web page is a specially formatted document that you can view in your Web browser. A Web server can host one or more Web sites.
3. **Payment System/Transaction Manager**– Electronic money exchanges including via (primarily) credit cards, electronic checks, smart cards, digital cash, and electronic funds transfer (EFT).

4. **Standards (existing and emerging)**– Methods for facilitating e-commerce interactions include and are meant to ensure transaction security, reliability, Electronic Data Interchange, and privacy.
5. **E-Commerce Software**– To the end user, the most visible part of the e-commerce system is the software that puts it all together. The basic functions of e-commerce software include: customer registration and authentication, online catalog viewing, order capturing and processing, customer service (e.g. enable customers to check order status and order history), and reporting and analysis (tools to analyze the activity on the e-commerce site for customer tracking). Optional functions include order fulfillment and payment processing, to name a few.
6. **E-mail**– Electronic mail serves as a support E-commerce Web sites.
7. **Mailing List Server**– An optional component of E-commerce is a mailing list server which automates the management of mailing lists for groups of users.
8. Search, Intelligent Agent, and Knowledge Management technologies these include the variety of software tools for “managing” information on the Net-“spiders”, “bots”, “inference agents” and so on.
9. Multimedia and broadband access technologies.

4. E-COMMERCE AND COMMUNITY ECONOMIC DEVELOPMENT

E-Commerce presents significant challenges to Community Economic Development (CED).⁴ (CED-Net@sfu.ca) CED has for the most part been low technology, focusing on those sectors of the economy which traditionally have not been technology or knowledge intensive and with relatively low technical skill requirements such as real estate development or rehabilitation, food retailing, craft manufacture and sale, tourism and particularly eco-tourism and so on. Most regions and communities with a strong interest in CED have been low income, with low skill levels, and little technology or training infra-structure. They have been ill-equipped to take leading edge advantage of the development of technology opportunities and have been “implementers” not “innovators” in technology use.⁵ (C.M. Gurstein (Eds.) 2000: 65-75).

In many cases the Internet has come to be a central element in certain areas of social development and particularly in social advocacy, with those involved in these activities having developed innovative Internet based approaches and even applications. However, overall there has until recently been a strong feeling among those with Internet interests that the Net, whose origin was non-commercial should in fact remain non-commercial. Those with a social activist perspective and highly developed technical skills such as many of those who have been involved in the Free Software Movement and Open Source developments such as Linux, have resisted and even opposed the application of their skills and outputs for commercial purposes even in support of social sector economic activity.

There have however, been a variety of efforts mostly from those already involved in CED to adapt or develop electronic based supports for their economic activities notably the work of the Public Web Market⁶ (<http://development.civicnet.org/webmarket/index.html>), the work of the Centre for Community and Enterprise Networking (CCEN) in Cape Breton, Nova Scotia⁷ (M. Gurstein, 2000: 28-63) and a variety of developing country initiatives some linked to the World Bank and others to other agencies. What characterized these early efforts was a lack of sustained funding which translated into the inability to develop the capacity for

the on-going research and experimentation required to find optimal strategies for Net based commerce.

Lacking the resources or in many cases the skills to explore opportunities, those with an interest, were unable to develop sustained approaches and when initial efforts were only partially successful, they were left to wither. The entrepreneurial zeal and creativity which has marked the progress of the Internet and particularly E-Commerce in the last few years has been notably absent from the not-for-profit sector, partially it might be assumed because the very individualism and entrepreneurialism which has been the basis for development and success in the for-profit (and small business) sectors are precisely what is generally not found in the not-for-profit sector where there appears to be much more concern for general (rather than personal) advancement and much less economic risk taking.

But all of these aside, the range and significance of E-Commerce is such that it can no longer be ignored by the CED sector as it is presenting too great a competitive threat to this sector as to others. The threat to local economic development from E-Commerce is several folds:

- E-Commerce tends to shift economic activity towards pools of skill or in otherwise advantaged locations (because of climate, geography and so on) and away from marginal or disadvantaged regions.
- The success of E-Commerce is often at the expense of local enterprises who now find themselves in direct competition with huge number very low cost suppliers who may be located anywhere.
- The range of goods available on the Net is very large and cannot be matched by any supplier let alone smaller local ones thus putting local enterprises at a significant disadvantage in certain sectors.
- The cost of developing an effective E-Commerce site has risen dramatically and is now out of the range of many local enterprises.
- There is an on-going migration of the variety of information intensive services to the Net and away from local delivery (and local employment) as local distribution or service agents are centralized and down-sized as for example banks, government information offices, the producers of local directories and so on.
- Disintermediation allows local purchasers to by-pass local suppliers or local wholesalers and buys directly from manufacturers thus eliminating whole strata of local intermediaries.

Those concerned with local development ignore the threat (and opportunities) presented by E-Commerce at their peril.

5. E-COMMERCE OPPORTUNITIES FOR COMMUNITY ECONOMIC DEVELOPMENT (CED)

It is notable and interesting that one of the most active areas for business development in E-Commerce has been attempts to develop “community” E-Commerce web-sites or portals. There have been a number of attempts in this direction including failed attempts by Microsoft and a variety of start-ups which looked to create E-Commerce portals. These for example, attempted to provide substitutes for local newspapers with local news, sports and entertainment information, or in other cases civic and civic government information. In general, they are looking to “capture eyeballs” through these locally oriented web-sites, on

the well known principle that individuals are mostly interested in things that are relatively close physically to themselves and their families.

Many of the free-standing commercial “community portal” sites have disappeared or are not being updated. They do not have sufficient advertising revenue to support the cost of the staff required to keep the sites up-to-date. A number of sites linked to local newspapers are still surviving since they can reuse information collected for other purposes, but even these do not appear to be independently profitable.

A second development of some interest is the current concern with developing “community networking” among a number of the major Internet supplier firms such as for example, Nortel and Newbridge. They are looking on this as a way of generating sufficient traffic in local communities to require the installation of their high band-width networks. All of the major bandwidth suppliers and their associated firms are moving extremely aggressively to provide ever greater amounts of digital delivery capacity without having a clear sense of how all of this bandwidth could be used (and thus paid for). Several of the firms are operating on the assumption that only the development of local applications and a sophisticated user community in local areas will generate the demand of the educational, health and other community based applications they require to justify their services.

The question then, is how local communities can or those concerned with CED adapt the technology and the methodology/business models developing to support E-Commerce applications to their requirements.

6. E-COMMERCE BUSINESS MODELS FOR COMMUNITY ECONOMIC DEVELOPMENT (CED)

A quite large number of business models have evolved in the short life span of E-Commerce to support the transactions and to take advantage of the unique capabilities which the Internet and the World Wide Web afford. A number of these models are being or could be adapted to support local and CED enterprises along with the enterprises at a distance for which they were originally developed. There are a number of E-Commerce business models and here the paper suggests how they are being or could be used in a Community Economic Development (CED) context.

7. THE WEB-SITE AS AN ON-LINE BILLBOARD

The first and still most common use for the WWW is as a substitute for conventional display advertising whether in paper, billboard or other format. The idea is that one does one’s advertising copy and then finds someone to put it into HTML and onto a server and then waits for the traffic to flow. Of course, sometimes it does and there are anecdotes about rug weavers and hammock makers who have increased their sales by factors of 1000 or more but there are fewer stories about the hundreds and thousands of local business folk who have paid for display web-sites and found that no one visited them.

A variation on this are sites which attempt to consolidate information and links relating to a sector or region (also known as a “portal”). The advantage of a portal is that where one enterprise might have difficulty in generating traffic to the site, a site which gives access to a number of enterprises might generate much more traffic. This principle has proven partially true, but the problem has been that the proliferation of sites has now been matched by the proliferation of “portals” all competing for the same users and often in overlapping areas.

Those concerned with CED might consider developing local enterprise portals (a number of them already have done so). These portals would have the advantage over competing portals in that they might be in a position to start off with a relatively loyal band of local users with an interest in local information, local products and the promotion of local community interests. In some cases, the development of local portals of this kind can be scaled up to include regional portals through which local portals can be accessed and at some point, these web-sites and those who are using them to display and present their goods and services will have a sufficient breadth and depth to become of interest to the larger world. At this point of course, they begin to come into competition with commercial sites with large promotion and advertising budgets, but CED based portals have been successful by using word of mouth and informal lines of communication to bring attention to their sites (academic or religious groups, not-for-profit networks, newsletters and so on).

8. THE ATTENTION BUSINESS: PORTALS AND TRAFFIC-BUILDERS

The first and still most common business model on the WWW is based on the initial function of the web-site as a place to display/present information or graphics and in this way capture “attention”. Having captured the attention, the use to which that attention was put has been primarily to push advertising at the site user and then to charge the advertiser for having captured the users attention and used it in this way. The more “attention” captured and thus the more and more elaborate, eye-catching, knowledge and service rich the site/portal, the more the advertising on the site could be sold for.

Community groups equally of course, could create web-sites or portals of local or other interest and capture the attention of their own clientele. The attention of this clientele might be of less interest to commercial advertisers but might be of some interest to others who would be similarly willing to pay for the delivery of their information-public health, education, civic-to this clientele as well. It might also be of interest to other groups with a for example interest in selling CED produced goods or services who might be willing to pay or exchange services for this opportunity.⁸ (Romm, T. Celia and Fay Sudweeks. 1999: 44-57).

9. ADDING VALUE: A “SERVICE” MODEL

A number of web-sites have been developed whose function is to grab attention by providing the user with one or another type of service-email, web hosting, rate calculations and so on. The notion here is again that by getting the user’s attention this in turn can be re-sold. In the CED world it may be possible to see a different opportunity. Since the local users will be one’s with a clearly specifiable range of interests and service requirements, it should be possible to develop a range of locally focused services including information, news, links, useful applets and so on which are of sufficient value to their local users that they may either be willing to pay a subscription fee, or give a contribution to support the site or alternatively it may be possible to find someone willing to sponsor the site simply to be associated with it. This kind of development serves two functions-developing a local E-Commerce activity (and employment) and also providing an otherwise unavailable or costly set of services to the local community.

One interesting example is the development by a local business of a web portal which substitutes for what used to be their or their suppliers catalogue (and part of their inventory) which allows customers to comparison shop through the Net, order through the local dealer’s portal at the price offered through the Net. The local supplier receives a commission from the ultimate seller of the good, but also the local supplier

will be in a preferred position to enter into after-sales service contracts both with the goods supplier and with the consumer. In this way the local supplier maintains their position in the commercial cycle. This model is very likely one that could be adopted by local consumer co-operatives for CED service enterprises as well.

10. A COMMUNITY “E-COMMERCE COMMUNITY” MODEL

A very “hot” area in commercial E-Commerce is the building of “virtual communities” in association with web-sites and linking these to their associated products or sponsors. The notion is being that if an individual comes to identify with a (in this case “virtual”) community then they are more likely to accept the norms of that community and their behavior as a consumer will be influenced as a result, including and not incidentally overcoming the distrust which seems to accompany much on-line interaction. The business model here is based on the assumption that these “virtual communities” represent a set of consumer “loyalties” which have commercial value and thus these communities can have a commercial value (and can be bought and sold sometimes at very significant values!).

In the context of CED of course, the issue is not the creation of a “virtual” community but rather the creation of a linkage between a real physical community (Baker calls this a “proximal” community)⁹ (Baker, Paul, 2000: 73-89) and the “virtual” world where this community may undertake certain of its activities. The availability of these proximal community linkages for transfer into the virtual domain provides an opportunity for community enterprise developers to use these community ties as a framework within which to construct economic and trade relationships. Thus for example, a proximal community may wish to act together to procure goods and services at more favourable rates than they would receive as individual consumers. This can much more easily be effected on-line than face to face and mirrors directly the types of E-Commerce activities which are being done for commercial purposes. Similarly a proximal community can use the Net to “sell” themselves either as a market or as a supplier of goods or services into the commercial E-Commerce sphere.

11. BROKERING OR FACILITATING TRANSACTIONS

One of the most active areas for development on the net has been the replacement of brokers or mediators in some areas and their redevelopment in others. The range of information access and the speed of communications allows for the development of a new brand of intermediaries who are in a position to negotiate “with the world” on behalf of the individual or the group as for example by putting together groups of unconnected consumers as units for negotiating best prices with suppliers.

Such a development would work well in the CED world as well where previously unconnected CED groups or activities regionally, nationally and even internationally could find their negotiating strength considerably amplified by creating a common cause for commercial activity or for the variety of lobbying efforts which would support their activities.

Another interesting possibility here would be the use of the forms and information management capability of the Web for handling scheduling and resource allocation as for example, in co-operative purchasing environments. An example of this would be a car co-op where a number of individuals would go together to purchase one or more cars for joint use.

A current problem with this is the book-keeping and scheduling involved and the cost of maintaining an

office and a staff to manage this. In a web environment the scheduling could all be done in a web displayed interface where individuals could see dynamically updated scheduling and automobile availability and in real-time enter their own scheduling requirements into the system which in turn would be immediately available to everyone with suitable access (this would of course, be best done within a secure or password protected environment).

12. AUCTIONS OR DYNAMIC PRICING

A very familiar by now form of business activity on the Net is the “auction” as for example that undertaken by eBay. These are now also available for a very wide range of goods and services where previously auctions were unknown such as for airplane tickets, hotel rooms, industrial components and so on. The unique communication and information management features of the Net (not excluding the capacity of the net for facilitating and presenting feedback on suppliers and purchasers) have facilitated this development.

Apart from the conventional auctioning of goods and services by CED enterprises, a much wider range of auction activities have been suggested as being possible in the context of the Internet. Thus for example, the development of regional, national and even global markets with “dynamic (auction)” pricing for recyclable and waste materials-one person’s waste is another person’s raw material.

Also the use of this model to sell perishable food products produced by CED or co-op enterprises expands potential markets considerably and can assist in managing the problem of wastage and inventory control for small and local enterprises as easily as for larger businesses.

13. E-MONEY

An intriguing development is what is being called E-Money or money which only exists in the virtual domain. An example of this is “Beanz.com” which provides a facility for electronic payment in an on-line currency they call “Beanz” which can be used in the purchase of goods or services from co-operating sites or businesses. Individuals in this case, receive “Beanz” for visiting web-sites, for undertaking transactions on web-sites and so on. Importantly the management of the transaction and of individual client and supplier accounts is done electronically and for free to the user, through the “Beanz” site (and back office).

14. CONCLUSION

The future as they say in technology circles is wireless, mobile, multi-media (voice, video, 3D) and broadband. All of these technology changes are rapidly developing and being incorporated into on-line and E-Commerce activities. From a CED perspective they are also following the path of earlier on-line technologies with a very steep decline in entry cost and ease of use or the non-professional user. Thus while CED enterprises need not be “first” users they certainly need not be “last” users nor should they be. Commercial firms are discovering that at least one leg of the stool on which virtual commerce is resting and will continue to rest is face to face physically delimited communities and it is here, where the on-going and future strength and opportunities for growth and development of CED rests. By recognizing that E-Commerce and the opportunities it presents is no more technologically or dare it is better to say that they are ideologically daunting than credit cards or ATM machines and thus the possibility for E-Commerce to enhance the growth and local contribution of CED is significant.

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