Can E- Commerce be considered as accelerator of development?

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Summary:

As we enter the third millennium, we are experiencing one of the most important changes to our daily lives the move to an internet-based society. Internet has grown like a plant, and many welcome it as a tool for productivity and enlightenment.

As a result, much has changed at home, school, and work and evening our leisure activities. Some changes are already here and are spreading around the globe. Others are just beginning. One of the significant changes is how developing countries are going to conduct their business (marketplaces and trading)

This paper tries to discuss, and analyses how e-commerce application might be developed and gives access to firms in developing countries to global economy. Is there any advantage to develop e-commerce in developing countries? E-commerce may hold out enormous promises for producers in developing countries: easier access to the markets of developed countries, and higher incomes resulting from these new trading opportunities

الملخــص:

ونحن داخلون الألفية الثالثة، تشهد حياتنا اليومية تحولات عميقة وجذرية بميلاد المجتمع الالكتروني ونمو شجرة الانترنيت مغذية الإنتاجية العلمية ومنورة للمسار المعرفي. وكنتيجة لهذا التحول فقد تغيرت أحوالنا بالمنزل، بالمدرسة، بالعمل... كما تغيرت انشغالاتنا وسلوكاتنا.

ولعل أهم مجال تجلت فيه هذه التحولات هو ميدان الأعمال والتجارة. ولو أن الأمر يختلف بين المجتمعات والدول خصوصا النامية، التي منها من دخلته مبكرة ومنها من بقيت مترددة.

هذه الورقة تحاول أن تناقش وتحلل مدى تطبيقية التجارة الكترونية بالبلدان النامية وإمكانيات إدماج مؤسساتها الاقتصادية في الاقتصاد العالمي.

The Electronic Commerce is not new phenomenon:

The history of technology may help put its story realistic perspective. If you know the roots of the Internet, you will have a better idea of its promises, as well as its limitations. You will discover first, that much electronic commerce is not as new concept as many people believe, and second, that much electronic commerce has been carried out without relying on the Internet. Some of these commercial activities have been gradually integrated into the Internet.

Electronic commerce, or E-Commerce, as it is popularly called, is not a new phenomenon. It has been around for at least three decades

Banks have used their own telecommunications lines since the early 1960's to transfer funds electronically from one branch to another and from one bank to another. This may be regarded as the earliest use of commerce executed by means of electronic data transferred through communications lines.

The reason E-Commerce became so visible in the second half of the 1990s was the commercial aspect of the Internet. Once the Internet was opened to commercial activity, this worldwide network became the major carrier of business-to-business electronic data exchange.

The Internet and the new Business model:

To understand E-Commerce one must understand both the technologies that serve as the infrastructure and the business models taking advantage of the technologies[1]. Both technologies and business models currently used are innovative and fascinating. However, we must realize that within several years almost all commerce will be e-commerce to some extent. No one considers doing business via telephone or fax as t-commerce or f-commerce. It is only a matter of time before we realize that there is no reason to call business that is executed digitally via the Internet or other networks "e-commerce"[2]

Business on the web:

Commercial Organizations the world over are looking to the Internet to take advantage of the great potential of the Web as a channel for doing business[3].

E-commerce holds out enormous promises for producers in developing countries: easier access to the markets of developed countries and higher incomes resulting from these new trading opportunities.

E-commerce can take several forms depending on the degree of digitization (transformation from physical to digital) of (1) the product (service) sold (2) the process, and the delivery agent (or intermediary)

The contribution of online markets on the creation of revenue:

According to a study by Boston Consulting group, E-commerce will explode in the next several years. If the market maintains its expected growth of 33% per year, the Internet will account for one fourth of all business-to- business (B2B) purchases by 2003, a total value of $2.8 trillions.

Kevin Jones[4] lists three ways businesses save money and create new revenue: Inventory squeezers, value creators, and product creators.

i. Inventory squeezers save buyers money and enabling them to quickly find information on price, availability, and guaranteed arrival dates of items the buyer need to make products. For example, E-Steel.com lets steel makers reduce the extra inventory they keep to ensure that delivery delays do not prevent them from meeting customer demand. The site links 1,444 companies from 65 countries.

ii. Value creators are companies that would never have existed without the Internet and whose value for customers could be created only with such a large network. For example Albiris.com, a Web hub for used books, helps buyers and sellers find each other by availing the inventories of used book dealers to online book vendors such as Amazon.com. Alibris helps sell books that might otherwise never be sold. Value creators provide intermediary service.

iii. Product Creators are Internet markets that provide services that eventually enable the creation of physical products that would otherwise not have been developed. For example (www.pl-x.com) helps universities, businesses, and research groups exchange intellectual property so that an idea that one organization might never turn into a product can be manufactured and marketed by another.

In this paper, the focus is that firms in developing countries must find a way to sustain themselves financially. They must define what value they are creating for others and who would be likely to pay the service they provide. In other words, they must create a Business Model.

A Business Model is a the principal manner in which a business operates, it is equally important to understand how different business models work, both on and off the web. In fact, in recent years the Web has brought greater ingenuity to business more by spurring the creation of innovative business models than by introducing a new technology.

No business model, whatever the technology behind it, can be successful if it does not, in the end, generate income.

Regardless of business model, B2B commerce has generated the greater portion of online commerce. Forrester Research firm, estimated the volumes B2B in 1999 and made forecasts for 2003. The firm’s estimates are shown in the figure below (Fig 1) [5]

Industry	Estimated Online Sales in 1999 (billions)	Projected Online Sales in 2003 (billions)	Increase (%)
Pharmaceutical and medical	$ 1.4	$44.1	3.150
Motor Vehicles	$9.3	$212.9	2.289
Paper and office products	$2.9	$65.2	2.248
Shipping and warehouse	$2.9	$61.6	2.124
Consumer Goods	$2.9	$51.9	1.790
Construction	$1.6	$28.6	1.789
Food and Agriculture	$3.0	$53.6	1.787
Petrochemicals	$10.3	$178.3	1.731
Heavy Industries	$1.3	$15.8	1.215
Industrial equipment	$1.3	$15.8	1.215
Utilities	$15.4	$169.5	1.100
Computing and Electronics	$50.4	$395.3	784
Aerospace	$6.6	$38.2	578

Figure 1: the past and future of online B2B Transactions

Worldwide B2B transactions over the Internet are projected to eighteen fold, from $403 Billion in 2000 to over $7300 billion in 2004. The dollar volume of B2B is 10 to 15 times greater than that of B2C[6], about 80 percent of what we call E-Commerce is trade between businesses and about 20 percent is between business and consumer.

Electronic marketplaces are the Internet's greatest contribution to the economy.

An Electronic marketplace is an environment where businesses (and Individuals for that matter) can trade through communications technology. Unlike a physical marketplace, trading is in cyberspace, with no need for the parties to convene. Without need for physical location or travel, thousands of organizations can sell within seconds, with full disclosure of transactions. The availability of information to all market participants, a condition that has always been a key of competitive markets, has finally been accomplished through the Internet. This brings it significantly closer to what economist call perfect market: No single entity, seller or buyer, can affect prices. Prices are truly determined by the combined forces of all participants.

Near-perfect markets have been established in industries that recently were quite limited in their use of information technology for transactions, such as the construction industry, the competition significantly brings down the total cost to the buyer.

Not all B2B electronic Market places follow the same pattern. Some serve as auction sites, some serve only as matchmaking sites, and some, link buyers, sellers and service providers.

While venture capitalists and corporate world may have most of their attention directed to Business-to-Business (B2B) ventures and models in developed countries, million of people are exposed to online business mainly through Business-to-Consumer (B2C) activities because there are more consumers in the world than there are businesses. A study by the “Consulting firm the Boston Group” pegged the 1999 B2C volume at $33.1 billion and estimated it almost doubled to $61 billion in 2000[7]

Consumers prefer to shop and buy on the Internet for three major reasons:

- ✓ Convenience
- ✓ Saving time
- ✓ Comparative shopping

Shoppers can shop from anywhere in the world, at any time and with a single of the mouse execute a purchase order. Shoppers can visit numerous vendors’ sites within a short period of time. While it could take several hours to drive to shopping malls and browse stores, they can accomplish much more shopping from the comfort of home in a few minutes.

One of the Web’s greatest advantages over traditional shopping comparative shopping. Numerous sites let shoppers compare item and prices in preset categories.

E-commerce holds out enormous promises for producers in developing countries: easier access to the markets of developed countries especially B2C, and higher incomes resulting from these new trading opportunities.

The obstacles to reaping these benefits for firms in developed countries inside developing countries appears quite hard, in other words the access and communication with consumers in developing countries seems unreachable for different reasons that we can discussed some of them in this paper::

1. Illiteracy
2. Lack of computer-related skills.
3. It is a matter of bridging the 'digital divide' that arises from poor telecom infrastructure
4. This results a low rate of Internet users

1. Illiteracy:

One of the remarks that it seems important from the data in table 1 (According to the statistics from UNESCO [8])

(See details in Appendix A) that the number of illiteracy is increasing over the world from 1970-2000 (847million to 862 million).

If we try to analyze the details of the table is that:

The number of illiteracy is decreasing over the period of 1970 till 2000, and it is estimated to be reduced to 35 million in 2015 Only in more developed countries that, which is not the case in other regions such as Arab countries it started with 48 million and grew to 67 million in 2000, and it is estimated to be raised to 71 million.

Even the statistics demonstrate that the situation is critical for developing countries, but the firms in developing countries can use it as a benefit to get access to the market in the developed countries.

The case for the firms in developed countries to reach the objective by using E- Commerce B2C as a mean to sell their product or services have less chance.

Years	World	African	Arab	American	More dev
1970	847	142	48	49	43
1980	871	161	55	48	32
1990	879	176	62	45	22
1995	872	181	65	43	18
2000	862	183	67	42	15
2005	847	183	69	39	12
2010	824	181	71	37	10
2015	799	179	71	35	8

Fig 1: REGIONAL ADULT ILLITERACY in different region

Years	African	Arab	American	More dev
1970	16.76505	5.66706	5.785124	5.076741
1980	18.4845	6.314581	5.510907	3.673938
1990	20.02275	7.05347	5.119454	2.502844
1995	20.75688	7.454128	4.931193	2.06422
2000	21.2297	7.772622	4.87239	1.740139
2005	21.60567	8.146399	4.604486	1.416765
2010	21.96602	8.616505	4.490291	1.213592
2015	22.403	8.886108	4.380476	1.001252

Fig 2 REGIONAL ADULT ILLITERACY RATE in different region

Figure 2 represents the rates of illiteracy, and even the rate is increasing in all developing countries but in Africa the rate is higher by 3 times over the Arab Countries, and about 6 times over American Countries, and 22 times over more developed countries.

The increasing of the rates of illiteracy is an indicator of the low education and in the same time it can be considered as an obstacle to the firms in developed countries to reach the consumer there.

Because of this reality and also the fact that the B2C is not well expanded over the world is it possible for firms in developing countries to take this opportunity and create a communication between producer and consumers.

2. Lack of computer-related skills:

Another factor may have a negative effect on the accessibility to the developing country's market is the low skills in computer, both the providers and users of Internet-based services require new skills. The lower the skills base, the higher the cost for implementing information technology and training in developing countries - and the lack of information about the consumer behavior are variables that can be the rationale way for introducing e-commerce by firms in developing countries.

Moving forward on these three fronts will help firms in developing countries to access the Internet and to obtain better information on the markets in developed countries. Such information can be of considerable benefit to developing country producers. They are typically information poor while their buyers are information rich, making it very difficult to obtain details about consumer behavior in developing countries.

Redressing this information imbalance would in itself be a major constraint forward to the producer in developed countries. But e-commerce is about more than obtaining better information. Electronic market places provide sector-specific information and bring buyer and seller together.

The availability of information to all market participants is a condition that has always been a key of competitive markets.

3.Infrastructure for telecommunication:

One of the most severe constraints for the firms is limited access in developing countries due to the low capacity connections needed to exchange large quantities of digitized information. There are hopes that developing countries can leapfrog both copper-based and fiber-based land line infrastructure by using wireless technologies, but wireless networks capable of sustaining Internet traffic are unlikely to become reliable and affordable for some time.

4. Internet users:

As results from the above points discussed earlier, (Illiteracy, Lack of computer-related skills, Infrastructure for telecommunication) the Internet users in developing countries and according to the statistics from different sources, many are online throughout the world is an inexact one at best. Surveys abound, using all sorts of measurement parameters. However, from observing many of the published surveys over the last two years, here is an "educated guess" as to how many are online worldwide as of September 2002. And the number is 605.60 million. (See Figure 3)

World Total	605.60 million
Africa	6.31 million
Asia/Pacific	187.24 million
Europe	190.91 million
Middle East	5.12 million
Canada & USA	182.67 million
Latin America	33.35 million

Fig 3 The Internet users over the world and in different regions[9]

It appears clearly that is big heterogeneity between different regions over the world. The proportion Internet Users vary from one region to another for Example Africa (6.31/605.6)=1%, Canada, USA =30%, Europe =31% …

The next figure shows the Internet users in Arab countries, (December, 2001).

COUNTRY	DATE	NUMBER	% POP	SOURCE
Bahrain	Dec 2001	140,200	21.36	ITU
Iraq	Dec 2000	12,500	0.05	ITU
Kuwait	Dec 2001	200,000	9.47	ITU
Lebanon	Dec 2000	300,000	8.38	ITU
Oman	Dec 2001	120,000	4.42	ITU
Palestine	Mar2001	60,000	-	Ajeeb.com
Qatar	Mar 2001	75,000	9.75	Ajeeb.com
Saudi Arabia	Mar 2001	570,000	2.5	Ajeeb.com
Syria	Dec 2001	60,000	0.35	ITU
U.A.E.	Decr 2001	900,000	36.79	ITU
Yemen	Dec 2001	17,000	0.09	ITU
Algeria	Mar 2001	180,000	0.57	Ajeeb.com
Egypt	Dec 2001	600,000	0.85	ITU
Libya	Mar 2001	20,000	0.24	Ajeeb.com
Morocco	Dec2001	400,000	1.28	ITU
Sudan	Dec 2001	56,000	0.15	ITU
Tunisia	Dec 2001	400,000	4.08	ITU

Fig 4 Internet Users in Arab Countries

The rate of Internet users in Arab countries is also very low compared to the population, which is not the case in USA, and Canada the rate exceed 50% of the population

U.S.	Apr 2002	165.75 million	59.1	Nielsen Net Ratings
Canada	Mar 2002	16.84 million	52.79	Nielsen Net Ratings

According to the modest Analysis, which favored Firms in developing countries to get access in Developing countries, and develop B2C, the questions that we can ask are they ready to do it and what are the challenges that must be taken in considerations.

Selling goods in global markets is complicated. Firms that cannot meet the delivery and quality requirements of advanced markets will not find these any easier with e-commerce. On the contrary, providing online catalogues requires firms to acquire new competences. And even for the most competent firms, commerce-readiness involves four significant challenges to firms in developing countries:

- ☼ Speedy transport,
- ☼ Efficient payment systems,
- ☼ Confidence in the product,
- ☼ The availability of redress.

If developing countries producers want to use e-commerce as a means of selling to buyers around the world, transaction arrangements to support e-commerce must be in place:

☼ Speedy transport

There is no point trying to sell products that cannot be delivered at reasonable cost to the buyer's desired location. For digital products this is not a problem, but most developing country exports are not digital, they are material. Electronic transactions often raise expectations for faster delivery, making the transport infrastructure even more critical for the development of e-commerce. The policy lesson is that addressing the 'old' issues of providing efficient road and rail links, port facilities and fast customs clearance is essential for operating in the 'new economy'

☼ Efficient payment systems:

E-commerce requires low-cost and reliable payment systems. While various solutions to the problem of payments for e-commerce transactions are being developed, it is essential that banks in developing countries must participate to make these attributes of payment systems as a criterion of helping the firms to get access developed countries market.

☼ Confidence in the product,

Buyers must be confident that the product being purchased meets the desired specifications. Product specifications are becoming increasingly complex as industrialized economies impose norms relating to product safety and labeling, as well as for labor and environmental standards. This makes e-commerce purchasing more hazardous for the buyer.

☼ The availability of reimbursement.

As in all other forms of commerce, customers must be confident that they can obtain reparation if something goes wrong. The seller's assurance may not be sufficient. E-commerce may be enhanced by online ADR (alternative dispute resolution) mechanisms offering rapid, low-cost redress for disputed transactions. These mechanisms are not intended to replace (slow and expensive) court adjudication, but to supplement it.

To some extent, new e-commerce relationships are already providing some of the solutions to support transaction arrangements. E-commerce portals that bring together buyers and sellers are providing an increasing range of services - from secure payment systems to links with logistics providers, insurance providers and customs clearance services. There are also new private certification agencies developing online certification schemes addressing international quality standards and environmental and employment standards (ISO 9000, ISO 14000 and SA 8000, respectively). Certification schemes are being developed by intergovernmental organizations such as the European Union and the UN agencies as well as by producer associations in developing countries. Some service providers even offer to collect samples from potential suppliers and dispatch them to potential customers. Although such solutions are beginning to become available, their reach is likely to be confined to large producers in developing countries whose operations are based in large urban centers

Conclusion:

Business and individuals use E-Commerce to reduce transaction costs, speed the flow of goods and information, improve the level of the customer service, and enable the close coordination of actions among producers, suppliers and customers. E-Commerce enables consumers and companies to gain access to worldwide markets.

E-Commerce and its related activities over the Internet offer enormous promises for producers in developing countries, it can be the engine that improve local economic well being through rapid integration into globalization of production.

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