Research Paper

Commerce

A Study on the Barriers in the Adoption of E-Commerce

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ABSTRACT

Electronic commerce touches all major aspects of economic life and presents a series of complex issues. It involves the integration of many elements of technology, infrastructure, business operation and public policy. All these elements need to operate together as smoothly as possible to yield the maximum benefits to public. E-commerce technologies present unique opportunities and challenges for businesses, and most importantly, e-commerce requires new skills and forms of industrial organization, E-commerce adoption barriers to businesses can be grouped according to two distinct factors: e-commerce is either "too difficult" or "unsuitable" for the business Thus e-commerce makes it possible for businesses to communicate as widely with different parties. This paper's focus is not on comparison between small and large enterprises; it is rather on barriers for any businesses adoption to electronic business. This study was thus initiated to identify the experienced and expected benefits and barriers to adoption of e-business technologies from the viewpoint of various businesses. The barriers found, as a result from overview on various literature that, are presented and related to previous research in this area.

Keywords: E-business, e-commerce, adoption, barriers

INTRODUCTION

The transition of the global economy from an industrial focus to one based on knowledge and information presents numerous opportunities and challenges to countries, especially those in the developing world. This new paradigm has a significant impact on the way people lead their lives. Adoption of e-commerce technologies among businesses has enormous potentials. However, much of the current e-commerce literature to date concentrates on adoption concerns from buyers' perspective; little research has so far been reported from the viewpoint of suppliers. However, lack of infrastructure, prohibitive costs of access to infrastructure where it is available, poor quality of infrastructure, shortage of relevant skills, low levels of literacy and inadequate investment in technological development are hindering progress toward exploiting the new generation of ICTs in developing countries. E-business is defined as a business model which enables buyers and sellers to exchange information and services using a range of electronic technologies (Davies & Garcia-Sierra, 1999). It allows businesses to adjust to novel markets and trade opportunities by increasing their sales, reducing their cost of transactions (Tan et al., 2010) and increasing flexibility in communicating with business partners (Tan et al., 2010; Heung, 2003). Nevertheless, significant difficulties exist for adoption of e-business technologies such as the lack of compatibility between current technical infrastructure and e-business technologies (NOIE, 2000). The research also indentifies a number of key benefits and barriers that owners and managers of SME suppliers should carefully reflect on when considering the adoption of e-commerce technologies. However, research has indicated that the SME contribution to the GDP of many nations has fallen over the past few years (Abernethy, 2002). While the reasons for this decrease are diverse, SMEs are attempting to reverse the trend by turning to global markets. This development has been enabled by the advent of electronic commerce (E-commerce) technology. E-commerce, defined as "the buying and selling of information, products, and services via computer networks" (Kalakota and Whinston, 1997) is radically changing the dynamics of the business environment and the way in which people and organizations are conducting business with one another. The focus in this paper is not on comparison between small and large enterprises, it is rather on discussions about barriers for businesses adoption to e-commerce. The paper continues with a literature review of e-commerce technologies adoption benefits and barriers by various types of businesses.

Purpose of the Study
The main purpose of the study is to investigate the barriers to e-commerce adoption in the businesses and what are the reasons for consumer adoption/non-adoption of e-commerce?

Research Methodlogy
For the purpose of this paper secondary research was undertaken. Textbooks, Articles were the main source used. A very small number of related journal articles were reviewed.

What is e-commerce?
Electronic commerce can be defined broadly as : "The use of electronic networks to exchange information, products, services and payments for commercial and communication purposes between individuals (consumers) and businesses, between businesses themselves, between individuals themselves, within government or between the public and government and, last, between business and government " Using information and communication technology, e-commerce can take place i)between companies ,ii)between companies and their customers and iii)between companies and government departments. Based upon the entities involved in transaction, e-commerce can be classified into following categories as shown in the following figure

- Business to Business (B2B)
- Business to Consumer (B2C)
- Consumer to Business (C2B)
- Consumer to Consumer (C2C
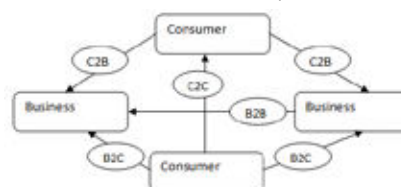
Electronic commerce as a catalyst for trade facilitation

Electronic commerce, or e-commerce, has been defined as the distribution, marketing, sale or delivery of goods and services by electronic means. This definition includes commercial transactions that involve electronic transmission of products, services, commercial information, commercial documents or funds, as well as electronic catalogues, marketing and advertising. It encompasses trade applications of the newer technologies of the Internet, the Web and more established technologies such as electronic data interchange (EDI). Some of these electronic instruments of commerce have been in use for decades. However, the advent of the Internet promises to significantly change the volume, nature and speed of electronic transactions for enterprises in both developed and developing countries. Much of the focus here will be on the manner in which the Internet can improve the ability of firms in developing countries to participate in the international economy.

Operational facilitators for Ecommerce

There are four types of components, which is a precursor for running best in class Ecommerce infrastructure:

The Best practices in data management which includes data capture, data access and data integrity for identifying, making, and maintaining productive relationships with consumers, business partners, and employees The Best practices in analytical capability which means not only ability to rank customers and partners on any given business metrics but also ability to rank certain business rules in order of importance based on data. The Best in breed business relationship managers. The Best in class communication tools for web portals, teleservices, marketing literature, and wireless communications. While these tools are available in its own merit, the emergence of Ecommerce technology means bringing them together to organize, facilitate and fulfill the business rules in the most efficient way. Automation in the integration of these tools for information exchange is the fuel for Interaction engine.

barriers to adoption of e-commerce"?

According to OECD (1998) the most significant barriers of e-commerce for SMEs in the OECD countries are:

- lack of awareness
- uncertainty about the benefits of electronic commerce
- concerns about lack of human resources and skills
- set-up costs and pricing issues
- concerns about security

The five barriers for the adoption and use of electronic commerce discussed by Deschoolmeester and Hee (2000) are;
(1) security, (2) cost and speed of Internet access, (3) cost of investment, (4) legal issues and (5) technology.

Recent studies have shown that many of the barriers reported in the late 1990's by Lawrence and

Hadjimanolis are still current in today's SMEs. Tambini (1999) and Eid et al (2002) found that SME managers are still not convinced that E-commerce fits the products or services that their businesses offer. Studies by Bakos and Brynjolfsson (2000), Sawhney and Zabin (2002), and Merhtens et al (2001) have found that there is still a reluctance for SME managers to adjust their businesses to the requirements and demands placed on it by E-commerce participation. Bakos and Brynjolfsson (2000) and Kulmala et al (2002) found that many SMEs felt that E-commerce did not suit the current mix of customers while Chau and Hui (2001) have reported that many respondents did not see any advantage to using E-commerce in their businesses. Other barriers reported in the literature include a reported lack of technical know how (Mirchandani & Motwani, 2001), security concerns (Oxley & Yeung, 2001; Reimenschneider & McKinney, 2001) and cost concerns (Ratnasingham, 2000; Reimenscheider & McKinney, 2001). For convenience these barriers are summarised in theTable listed below

Table 1: Barriers to E-commerce adoption by SMEs

DISADVANTAGES	REPORTED BY
E-commerce doesn't fit with products/services	Eid et al (2002) Kendall et al (2001) Tambini (1999) Hadjimanolis (1999)
E-commerce doesn't fit with the way we do business	Sawhney & Zabin (2001) Mehrtens et al (2001) Bakos & Brynjolfsson (2000) Farhoomand et al (2000) Poon & Swatman (1999) Abell & Limm (1996)
E-commerce doesn't fit the way our customers work	Kulmala et al (2002) Bakos & Brynjolfsson (2000) Hadjimanolis (1999)
We don't see the advantages of using E-commerce	Lee & Runge (2001) Chau & Hui (2001) Purao & Campbell (1998) Lawrence (1997) Hadjimanolis (1999)
Lack of technical know how	Mirchandani & Motwani (2001) Farhoomand et al (2000) Purao & Campbell (1998) Hadjimanolis (1999)
Security risks	Oxley & Yeung (2001) Reimenschneider & McKinney (2001) Purao & Campbell (1998) Aldridge et al (1997) Hadjimanolis (1999)
Cost too high	Reimenschneider & McKinney (2001) Ratnasingam (2000) Purao & Campbell (1998) Lawrence (1997) Hadjimanolis (1999)
Not sure what hardware/software to choose	Farhoomand et al (2000) Purao & Campbell (1998) Hadjimanolis (1999)

Whereas barriers in the brick-and-mortar world are defined by limits (limited land, limited advertising space, a limited customer base), barriers in e-commerce are defined by the unlimited nature of the Internet. Seemingly unlimited customers are being chased by seemingly unlimited competition. Solutions presented to merchants by Web developers, consultants, and hosting services are likewise as numerous and, at times, contradictory. Finally, all merchants, online or offline, face the barriers presented by consumer psychology. This study is searching for specifying major barriers facing e-commerce some of which are stated as below.

Security Concerns for Consumer Protection

For the promotion of e-commerce, it is vital to prepare an environment where consumers can feel safe upon using e-commerce. In particular, measures should be taken to prevent troubles to be inflicted on consumers, and also dispute settlement procedures shall be considered in case where troubles happen.

i) Protection of personal information

A framework shall be prepared to ensure that the people can use advanced information and telecommunications networks without feeling unease, by ensuring the protection of personal information while giving due consideration to the usefulness of itself.

a) Preparation of the basic regulatory framework for the protection of personal information
b) Preparation of the law on the protection of personal information by sector, including the telecommunications sector.

ii) Information provision to consumers

For the growth of e-commerce, it is indispensable to prepare an environment, by ensuring protection of consumers, where consumers can utilize IT feeling at ease. It is therefore very important in the field of e-commerce that this goal is pursued voluntarily by private-sector organizations. On the other hand, the government shall set rules for consumer protection in response to increasing number of troubles consumers encounter in e-commerce trading. The government shall also provide useful information to consumers and raise their awareness of e-commerce to help them avoid troubles on their own.

iii) Development of alternative means of dispute resolution, or alternative dispute resolution (ADR)

It is essential to nurture trust of consumers in e-commerce, by preparing a system that allows consumers, in the event of disputes, to choose their most favorable settlement method from a variety of options. Efforts shall therefore be made to prepare an environment for the development of simple yet varied ADR, in an attempt to minimize the burden on consumers at

the time when international disputes and disputes requiring in-depth knowledge of IT skills are on the rise.

Confusing Checkout Process
According to surveys, the top reasons customers abandon the check out process are:
1. Hidden charges at checkout
2. Having to register to buy
3. The customer was simply comparison shopping
4. Shipping charges were too high
5. The customer did not have time to complete the checkout
6. The product was out of stock

Customers Cannot Find the Store and Can't Find Products
Customers can quickly grow frustrated if they can't find the exact store and product that they are looking for. Stores with poorly laid out categories or a lack of a search interface can cause a customer to abandon the site.

Customers Can't Touch and Feel a Product
It is far more likely that the product/ service you buy from a faceless entity will be substandard. Virtual" shopping is too impersonal. People love to touch and feel what they are buying and half of the fun is in the out-of-home experience which is not available in the e-commerce model of shop-from-your-home/chair. You take the risk of buying a "small-rickets" item and the portal that sold you the piece folds shop or dons a new avatar.

Lack of Trust
It is very imperative for online businesses to establish trusting relationships with their customers like in the physical world where companies ensure that customers know who they are. However, it is difficult to build trust because a kind of anonymity exists for companies trying to establish web presence.

Language Barrier
Only way to do business in other cultures is to be a part of such cultures. Language plays a very important role in this regard. In the first step you should provide local language versions of your web site. Software packages exist that can translate your web site content into different languages. Some sites translate all of their pages, but if the web site is very large then one can be selective in translation effort. Usually, home page, or pages related to marketing and product information or those related to any local interest/advertisement are given higher priority from translation point of view.

Infrastructure issues
Internet infrastructure includes computers and software connected to internet and communication networks over which data packets can travel. In many parts of the world, telecommunication industry is either owned by the government or is strictly regulated by the government. This government control or regulations have retarded growth of infrastructure to a limit that sometimes it cannot fully support internet data traffic.

Conclusion
Ecommerce prospective is to improve how enterprises operate internally and how it obliges to its customers. Ecommerce is much more than a tool for improving cost-quality services in the businesses. The rapid spread of the Internet as a low cost business medium has improved awareness of electronic commerce which attracted businesses to invest in various forms of e-business technologies. However, gaining benefits from the adoption of these technologies is not easy as businesses need to overcome many barriers associated with their implementation. There is no playing field that does not come with a new set of barriers. The proper tool can overcome any new set of barriers. While large companies can bring vast financial resources to bear to aid them in overcoming barriers and erecting new ones for smaller e-Commerce companies, one does not need to outspend large corporations to level the playing field. Present paper studies the issue of Barriers to international ecommerce include lack of trust, lack of infrastructure, language and culture.trust as a fundamental barrier in adoption to e-commerce. A proper e-Commerce platform and some basic techniques can overcome barriers. A combination of government initiatives and private sector cooperation can bring about a threshold level of participation in electronic commerce that can benefit developing countries in a number of ways.

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