

The Adaptation of E- Commerce in Malaysia

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Abstract:- E-commerce or Electronic commerce is the most growing technology nowadays for doing business online. This technology is getting rapid development and adopted by most of businesses in the developing countries. Its growth is very high compared with other types of technologies. The technology is improving in daily bases and most of the developed countries depend on e-commerce to make businesses and trading deals. Some developing countries in Africa and Asia are still trying to track the steps of other developed countries in Europe and America in order to get the high advantage of adopting e-commerce but the adoption is not easy due to many barriers that is demonstrated in this paper.

This paper evaluates the main barriers hindering e-commerce adoption in Developing countries in General and Malaysia in particular. The study will identify the sources of these barriers and attempt to find the right solutions to eliminate them which pave the way for swift adoption to e-commerce in Malaysia. The main objective of this study is to develop the right approach to implement e-commerce in small and medium size enterprises SMEs in Malaysia through analyzing the obstacles and barriers that make the adoption of e-commerce very difficult. This paper will contribute for further researches in this subject in order to develop the right approaches for installation the latest technology of e-commerce in Malaysia.

This study uses interviews for collecting the necessary data for analysis in order to evaluate the barriers that hinder e-commerce adoption. The research's empirical collected data is collected from interviews that will be conducted with selected successful Malaysian companies that use latest e-commerce application in doing businesses and trading online.

Keywords:- E-commerce, Small and Medium Enterprises SMEs, Developing Countries, Internet Security, Information Technology

I. INTRODUCTION

In recent decades, the Internet population has been exploding. The World Wide Web (WWW) users have been multiplying so rapidly that they have widely spread into all walks of life. Researchers and practitioners have recognized the importance of e-commerce technology and its applications for the success of the organizations. Nowadays most of businesses in developed countries are based on computer applications and apply new way of doing business and buying goods through the internet which is called e-commerce or the electronic commerce.

Basically, e-commerce is in the industrial economy to a "knowledge economy in transition to developed countries led to new enterprises as the main driving force, arising from an industrial structure, enterprise structure changes". E-commerce represented by the network economy is changing the way people live. Nowadays, more and more consumers are turning to go shopping on the web.

E-commerce refers to the realization of electronic trade. from the coverage area can be defined as: parties to the transaction by electronic means rather than through direct face to face exchange or conducted interviews of any form of commercial transactions; from the technical aspects can be defined as: a collection of multi-technology, including the exchange of data (such as electronic data, e-mail), access to data (shared databases, electronic bulletin boards), and automatically capture Data (bar codes).

The experience of using e-commerce applications bear many challenges and facing different kinds of barriers, and the adoption process need for careful plans and assessment about the national economy and measuring the technological capacity and infrastructure in a particular country to make the implementation smooth and without series obstacles.

E-commerce presents great opportunities to businesses and small and medium enterprises in particular to develop their annual revenues.

The adoption the e-commerce technology will help developing countries to acquire greater global access and vast open market and help organizations in these countries to reduce financial transaction costs (Kraemer et al., 2002; Humphrey et al., 2003).

II. PURPOSE OF THE STUDY

The study is intended to evaluate the adoption of e-commerce in Malaysia and the different factors and barriers affecting the implementation of e-commerce technology in Malaysian small and medium size enterprise SMEs based on a study sample from selected Malaysian organizations that have been experiencing or intending to adopt the technology of e-commerce in their business.

We analyze the essential elements of e-commerce like consumer satisfaction of Malaysian consumers and their perception to the new technology for doing business and buying goods online, we will examine the main factors that can change Malaysian consumer perception and encourage them to buy goods online.

The research examine the current barriers that hinder the adoption of e-commerce in Malaysia, and determine the main factors that swift the adoption of e-commerce in Malaysia, other questions that would be answers whether improving e-commerce perception among Malaysian consumers will make the adoption of e-commerce successful and remove obstacles, and why Malaysia needs to achieve more development in its payment security online to be in level with developed countries in providing secure and protected e-commerce business.

III. THE RESEARCH BACKGROUND

This research attempts to evaluate the adoption of e-commerce technology by small and medium enterprises SMEs in Malaysia using a designed framework to remove the current barriers and obstacles that prevent swift adoption to the trading technology. Bearing in mind the highly importance of the adoption to the economy of Malaysia in general and to the small and medium companies in particular, this study has been specially designed to detect and evaluate the major barriers and benefits perceived by the companies under study and the factors influencing electronic manufacturing companies in Malaysia to adopt e-commerce.

IV. THE RESEARCH PROBLEM

The government of Malaysia always supported private firms to adopt the latest technologies in all fields of business and trade in order to be in better competitive position in the global market, Malaysia has spent enough funds in the last few years to help small companies to build their electronic commerce systems in order to track the latest technology as the developed countries in Europe and United States.

The adoption of e-commerce is not an easy process and faces many obstacles especially with small and medium enterprises to overcome unexpected obstacles, Malaysian companies intending to adapt the e-commerce technology needs for government aid and support for development to apply e-commerce successfully.

E-commerce has received much attention from Malaysian governments, businesses and regional bodies. This importance has been attributed to several converging factors, these factors include: first, the development of the use of the Internet as a means by which information is disseminated and through which communication and connectivity is enabled; and second, the affordability of personal computers, increase in their computing capability, and the wide use of open standards.

The main problem that will be discussed in this study is the difficulties facing small and medium companies in Malaysia, and the best way to remove the obstacles that make the adoption of e-commerce easier and successful.

V. THE BARRIERS ON E-COMMERCE ADOPTION IN DEVELOPING COUNTRIES AND MALAYSIA

The adoption of E-commerce technologies is revolutionizing the way of doing business in many countries around the world. Yet the adoption is not easy task, there are many barriers on implementing the technology of e-commerce in countries depending on the development of a country and the internet security infrastructure, and some other factors. E-commerce has been expected to be the new driver of any economic growth for developing countries, (Humphrey et al., 2003). Malaysia is one of the countries who stated the adoption of e-commerce in recent years, yet this adoption is not complete due to many barriers that will be discussed in this section.

The great opportunities offered by the Internet technology to bring prosperity to many developed countries like in United Kingdom and USA, and most of European nations. E-commerce become a necessity for developing the economy of countries nowadays, and will grow rapidly and will help the developing countries in particular to overcome their economic problems (Odedra-Straub, 2003). However, previous literatures have showed that the developing countries have not gained the expected benefits from e-commerce (Pare 2002, Humphrey et al. 2003), and this is due to many barriers which was not eliminated before adoption. The study foresees there is still doubt about e-commerce capability to lead small and medium size companies in Malaysia to new age of trades and business opportunities because of many resident barriers, for example Malaysia needs to achieve more improvement to the unreliable telephone connections in many regions in the country which may result a narrow bandwidths provided by many ISPs, with considerable low connections that affect electronic business. For instance a weak telecommunications infrastructure is a massive setback for installing advanced

telecommunication systems for organizations working in urban areas, which lead to weak participation of users in rural areas and make conducting business and electronic trade to be more difficult.

The adoption of E-commerce in developing countries and Malaysia should consider the expected barriers before start implementation process on wide bases. The adoption process bears direct and indirect challenges to the government and especially to telecom administration agencies. There are mix perspectives to the adoption of e-commerce.

The study showed that despite the highly perceived advantages and expectation of e-commerce in Malaysia, the current level of adoption of e-commerce technology by the Malaysian companies' especially in small and medium size companies is low comparing with other developing countries like Singapore and China. This low level of adoption is due to a number of regulations and technical barriers facing these companies, for example uncertain security on financial transaction online and privacy, lack of skilled and professionals in e-commerce technology, in addition to government regulations.

The most affecting barrier on adopting a new technology associated with the internet like e-commerce application is the technical infrastructure and the insufficient physical infrastructures, the financial transactions are critical and should be with zero errors and without security deficient, as well as require providing special regulatory by the government to protect the buyers and sellers from conflicts.

(OdedraStraub, 2003) found that most consumer in developing markets are facing serious limitations in terms of internet connectivity, and the ability to pay securely, and problems associated with delivery of goods, and the most important issue is the intention to purchases products online, studying consumer behavior and buying culture of any region is very critical to obtain a successful implementation of e-commerce.

We found that the ownership of efficient credit card payment systems in Malaysia and providing secure and safe access to the main payment methods for online purchasing is the first step towards successful implementation of e-commerce in small and medium companies, other factors like efficient accessibility, outsourcing with professionals also should be considered.

(Odedra-Straub, 2003) indicated that the essential need to remove the infrastructural barriers in telecommunications system and electronic payment systems, payment security must be accomplished before commencing to apply e-commerce applications in developing countries

(Payne, J.E.,2003) found that the cost on providing human capital who will be responsible to install and operate, provide training for personnel's and maintaining of installed systems, these costs are beyond expectations and issue a strong barrier against successful adoption in many enterprises in developing countries. The Internet is not yet a universally accessible resource in developing countries. Most countries lack the necessary policies and infrastructure that would enable widespread usage of the Internet. In spite of the fact that the necessary conditions for supporting Internet usage are not in place in most developing countries. The Internet has enormous potential as a tool for development.

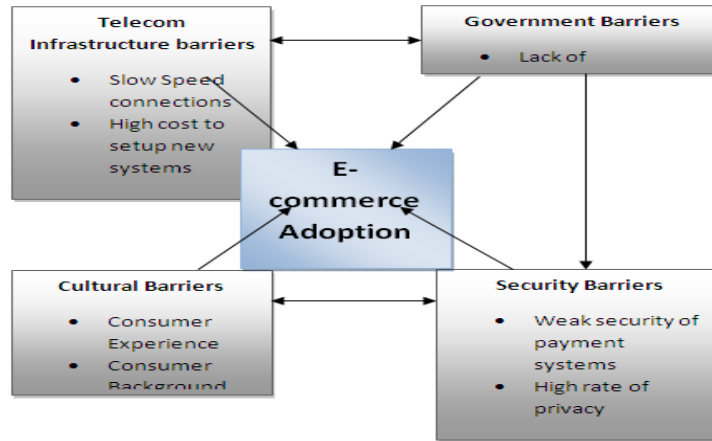
Many studies identified the effect of infrastructural barriers slowing down the adoption of e-commerce in developing countries. Some of these barriers like the lack of credit cards means and facilities by the banks, and the dependence on convenient payment ways only, this is the main barrier that make the process of adoption very difficult, because the main way for making payment transaction online is using credit cards.

Other infrastructure barriers like poor logistic distribution, lack of specialized people in electronic payments, absence of legal system to manage the selling and buying online, and lack of large scale broadband telecommunication systems

Other barriers associated with security, like the lack of internet security, high rate of privacy, problems associated with refunds and returning back products, errors in availability of products, unsafe payment links.

The study identified specific barriers obstructing the adoption of e-commerce in developing countries in general and in Malaysia in particular. Some of the barriers are correlated; Fig-1 shows the framework of the barriers affecting the adoption process of e-commerce in Malaysia and the connection between these barriers.

While cultural barriers play a major role in speed up or slow down the adoption process depending on the knowledge of consumers and consumer awareness about the usage of e-commerce facilities and how experience play an important role in buying decision-making



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Fig-1 (A framework of the barriers affecting the process of adoption to e-commerce in Malaysia)

As shown in the Fig-1 above, some of the barriers are correlated together with a proportional relationship, infrastructure barriers and government barriers are linked together and both affecting the adoption of e-commerce directly. The lack of government policies that regulate the use of e-commerce technology and purchasing online is negatively delay the adoption, and slow connection and the high cost to setup e-commerce applications is an important issue that affect the adoption process directly and indirectly. The last barrier is the security of payment online and privacy problems, many consumer shows high reluctance to buy online because of their fears to lose their credit card information by a trusted websites and hackers.

VI. THE CULTURAL EFFECT ON ADOPTION OF ECOMMERCE IN MALAYSIA

One of the main factors to accept new technology is consumer perception and the culture of communities. If people where highly educated and have good background on the internet and some of its basic application then introducing a new technology to buy products would be easier and can be implemented without series complication.

People rely on different types of information to make decisions, and culture has an influence on the type of information people depend upon (Han & Shavitt, 1994; Hofstede, 1998; Triandis, 1995; Zandpour & Harich, 1996).

Since finding the technology of ecommerce, researchers were busy on the best techniques to convince buyers to change their buying behavior from physical stores to electronic stores, most of researches showed that culture is a vital factor on implementing e-commerce and change the way of buying goods in communities. Some of local cultural characteristics were unique and set significant challenges for companies to get benefits from e-commerce adoption. The study evaluated the various socio-cultural characteristics of the Malaysian community, and identified the main cultural barriers reside in the community of Malaysia the hinder the adoption of e-commerce by SMEs. Among the most affecting primary cultural barriers are the weak background of Malaysian consumers about the different aspects of e-commerce and buying safely online, other cultural barriers are the weak experience or non-experience situation facing small and medium companies when they start to promote their business online.

Research in the marketing area has addressed cultural differences on presentation of information in advertisements related to cultural dimensions, including the individualism vs. collectivism dimension (Albers-Miller & Gelb, 1996; Han & Shavitt, 1994; Zandpour & Harich, 1996).

The study has found that the cultural differences between nations specify how these nations accept new technologies. The culture of any community will also affect consumer perceptions towards buying online, to encourage people in Malaysia to change their buying behavior from physical stores to electronic stores, a dramatic changes must be accomplished on the educational systems of secondary school students as well as college students. Most cultures in developing countries do not support ecommerce and the conditions are not "ripe" because of lack of confidence in technology and online culture (Efendioglu et al, 2004).

The social and cultural characteristics of most developing countries and the concepts associated with online transaction pose a much greater challenge and act as a major barrier to adoption and diffusion of ecommerce.

In order for small and medium size companies to be successful in setup e-commerce stores, they must first understand the culture of their consumers in particular and the Malaysian culture in general.

SMEs in Malaysia must understand well the consumer behavior theories before adopting e-commerce since the electronic buying process is also related to traditional consumer behavior and associated with psychology. There

are 5 stages of a consumer buying process they are: The problem recognition stage, meaning the identification of something a consumer needs. The search for information, which means you search your knowledge bases or external knowledge sources for information on the product. The possibility of alternative options, meaning whether there is another better or cheaper product available.

The study found that the choice to purchase a product online is not easy, the final decision to buy goods online will need to pass some essential steps, Malaysian companies intending to adopt e-commerce must understand these step very well in order to lead the consumer to complete the payment process successfully without hesitation.

The complete buying process that a consumer will most likely, whether recognizably or not, go through when they go to buy a product.

Even though online transaction that are pre-cursors to e-commerce, such as catalog and telephone sales, have existed in developed countries and have been used by the public for an extended time period (Efendioglu et al, 2004),

The study emphasize a must condition for SMEs before building a new strategy for selling their goods online. Malaysian firms should follow the steps of adopting e-commerce by similar businesses in the developed countries before starting to adopt e-commerce; the developed countries have designed special ways to broaden the basis of trust with the impartial application of the law and its adaptation to new technological environment. This is the basis of trust that lies at the heart of electronic commerce in the developed world.

When a country provide a prosper environment for implementing a new technology like e-commerce, the legal terms that regulate payments and buying online would be established as a practical example in developed countries, the company at a disadvantage due to lack of security, whether real or imaginary.

(Mooij, 1994) indicated that product category has a strong influence on the consumer's perception of the product. This issue should be covered well in future studies in Malaysia. Mooij provides a list of products that are deemed to be marketing standards. The list consists of the least culturally bound products: cigarettes, hard liquor, industrial products and services, hi-tech products (computers, compact disc players, television), and hi-touch products (fashion, perfumes, jewelry). On the other hand, culturally bound products like food and decorations would be more difficult to market at an international level.

VII. FINDINGS AND RESULTS

The most reported problems associated with e-commerce applications are largely linked with security and Legal issues, also unauthorized hacking to credit card information, privacy and others.

A survey with some SME's have showed that there are lack of awareness between the employees on consumer behavior and how to manage the their strategy for selling online

The survey showed that most Malaysian shoppers are not willing to reveal confidential credit card information and they do not complete their payment and check out

Language is one of the cultural barriers that hinder the adoption of e-commerce by most of companies want to promote their products and sell online, the sellers need to convert the language of e-commerce applications in order to attract buyer and provide more trust to their buying-decision. The less educated buyers could not be able read and understand the materials and descriptions about products written in English or other international languages, therefore the less educated buyers showing weak intention to buy online.

Most internet users in Malaysia have weak knowledge about e-commerce and most of them have no experience at all to buy online, this is a negative sign that should trigger government educational institutes to focus on teaching Malaysian people the basic principles of e-commerce and how to buy online safely.

The lack of awareness about e-commerce by most of Malaysian shoppers impose high pressure on SMEs to change their marketing strategies and let them struggle to stay up to date with new development in e-commerce applications

The study evaluated the major barriers that hinder the adoption of e-commerce in Malaysia and found the following results:

7.1 Cultural barriers:

- lack of experience and weak familiarity with e-commerce applications
- Lack of Knowledge of E-Commerce - Due to a lack of knowledge of e commerce technologies, there is an internal resistance to change, and scepticism of the benefits of e-commerce among SMEs.... although there are signs that this is changing.
- Low levels of understanding e-commerce application installed with English language
- Internet users are not willing to study and educate themselves about e-commerce technology
- Low perceptions to the benefits of buying products online, Malaysian shoppers continued to buy goods from physical stores and use cash payments in their transactions for because of low perception to the advantages of e-commerce.

7.2 Security barriers:

- Lack of confidence and trust in various electronic transactions with international marketplace was identified as the main security barrier to the e-commerce. SMEs avoid doing business with international suppliers and buyers, due to different reasons based on weak confidence in the security of international financial transactions; the lack of confidence is mainly because of weak knowledge about the new technologies.
- Poor experience and knowledge about the different ways of payments utilized in most of e-commerce website, the study found that the security issues associated with unsecure payment ways was the major cause for small number of online buyers in Malaysia comparing to by users to developing countries in Europe and USA.
- Many of the owners and top management in SMEs in Malaysia do not have sufficient technical experience to use e-commerce and need for professional training courses, for this reason it is difficult to convince the managers in Malaysian companies to adopt the new technology and depend on it for their local and international trade.

7.3 Government Barriers

- Lack of government regulation to conducting online trade and buying doing business online through electronic ways raises many legal problems, which include the needs to legalize electronic contracts by the government and regulate a specific law and regulations to solve financial disputes between buyers and sellers as in the normal lawsuit cases ;
- The absence of legal jurisdiction of e-commerce transactions would produce a high reluctance by interested buyers to use electronic commerce as another way for conducting their business and deals
- The Malaysian government did not have full copyright protection for digital content as well as intellectual property rights; the privacy issues increase rapidly in recent years; this matter arise many legal disputes and make international electronic sellers stop their plans to open new business in Malaysia and conduct e-commerce successfully.

7.4 Telecom Infrastructure barriers

- In some areas in Malaysia there was a weak information Infrastructure and big difficulties to access the internet, or access with high cost and low quality, however buyer in rural areas will not know about the new technology and the number of new buyers will decrease in Malaysia
- The challenge of cost is another issue facing SMEs in Malaysia. Some SMEs complains that the implementing of e-commerce applications and replace their old systems for doing business is costly and represents a strong barriers to adopt e-commerce. Many CEOs do not wish to risk their business by changing to a new technology at high cost.
- Most of SMEs have limited funds, and a shortage of experts in information technology, and without suitable infrastructure capable to setup the new electronic solution to their business.

VIII. CONCLUSIONS

Ecommerce can bring great advantages to the developing countries including Malaysia if certain barriers are removed and provided that the governments of developing countries establish special regulation to manage the different aspect of e-commerce activities including future disputes. Removing the different barriers on implementation of e-commerce will pave the way for swift adoption in Malaysia.

This study showed that the cultural barriers play an essential role in speed up or slow down the adoption process, many cultural factors affect the adoption of e-commerce like knowledge and background of consumers and consumer awareness about the technology of e-commerce facilities, and consumer experience also affect the buying decision-making from online store.

When a country provide a prosper environment for implementing a new technology like e-commerce, a special payment terms and conditions regulated and protected by the government must be established.

The study have found several barriers and the right solutions to remove these barriers with the aid of the Malaysian government, like encouraging SMEs to expand their business with e-commerce and improve the telecom infrastructure of the country.

The study showed that despite the highly perceived advantages and expectation of e-commerce in Malaysia, the current level of adoption of e-commerce technology by SMEs in Malaysia is low comparing with other developing countries.

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