Developing Countries and Electronic Commerce the Case of SMEs

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Abstract: The use of the Internet along with a range of other information and communications technologies (ICT) is transforming how business is done locally and globally. The effects are sometimes dramatic in developed countries. There are even a growing number of examples of the use of ICT for electronic commerce (E-Commerce) in developing countries. The effects to date, though, are small compared to what is expected to occur in the next decades. Forecasters all agree that how business is done will be profoundly affected by ICT; they do not agree on what the exact effects will be. Small and Medium-sized Enterprises (SME’s) in developing countries need to be able to figure out how, when, if and where to use electronic commerce techniques to reap these gains. They face obstacles and constraints specific to the developing countries in which they operate such as higher costs to access the Internet and language barriers. For SMEs in developing countries E-Commerce poses the advantages of reduced information search costs and transactions cost. This research is meant to answer and study the following questions in regard to exceptional cases and for different situations, financial management, rules and regulations and some of problems and special cases:

- Why Prepare SME’s in Developing Countries for E-Commerce
- Putting SME E-Commerce Readiness in Context
- E-Commerce Readiness: What SME’s Need to Know

Key words: Electronic Commerce · Developing Countries · SME’s (Small and Medium-sized Enterprises).

INTRODUCTION

Small and Medium-sized Enterprises (SMEs) have grown in importance in the global economy during the last couple of decades. Both theoretical and practical economic and business development literature acknowledges the key contributions of SMEs to the development of both national and international growth of economy. This fact is not only measured by the number of SMEs which represents nearly 90% of the total establishments across the world, but also their significant role in creating employment opportunities [1]. Information Communication and Technology (ICT), on the other hand, is found to play an important role for any organization [2]. The use of ICT that range from mainframe to personal computers, from word processing to sophisticated application and systems have made considerable inroads into large, medium and even small organizations [3]. Recent research also found positive signs that SMEs can take advantage of electronic commerce (E-Commerce), as a type of ICT, in helping their business to expand [4]. Despite the losses of so many businesses two years ago when the “dot-com bubble” burst- usually thought of as in early 2000-, no serious business analyst disagrees that electronic commerce is steadily transforming how business is done, hence changing the business environment globally. Businesses everywhere need to understand if, when and how to use electronic commerce. Indeed, in some industries, businesses are learning now that this is no longer an option to consider, but a
requirement for survival. The reach of the underlying information and communication technologies (ICT) making E-Commerce commerce possible is also causing unprecedented globalization of business. Businesses in developing countries will soon be affected as significantly as that elsewhere. Policymakers and advocates around the world are working to address this growing “digital divide.” SME’s are critical to the economies of all countries, including developing ones. They cannot be left behind and many are already demonstrating their entrepreneurial strength by grasping opportunities offered by electronic commerce. Anecdotes abound about craftspeople selling their wares on websites, Indian women providing transcription services via the Internet and even rural farmers checking product prices via the Web. It is now time to more systematically offer the opportunities of electronic commerce to SME’s in developing countries, using appropriate technologies and applications, so that the anecdotes no longer tell of the exceptions but illustrate an accelerating trend. This paper provides support to the development professional interested in doing so [5]. The objective of the paper is to provide useful guidance as they create ways to help SME’s prepare for and use electronic commerce - to be “E-Ready.” This is not an “E-Commerce primer.” There are plenty of those available, some even focused on developing countries and the paper includes many useful references to such documents. Instead, it focuses on what SME’s need to learn; how to tailor this to the context in which they operate and the many ways such a readiness initiative can be delivered. The writer of this article is trying to look attentively and clarified the dimensions of selected subject by use of descriptive - analytic research method.

Literature Review: There has been significant study on E-Commerce, but majority of them have focused on developed countries such as the United States, Canada and Western Europe [6], while according to predictions a significant growth will happen in developing countries in the first decade of the twenty first century. Ecommerce arguably has a potential to add a higher value to businesses and consumers in developing countries than in developed countries [7] bowers claims that the most dominant characteristic of computers is their culturally mediating and transforming effect, but that computers are viewed as a destructive form of Western colonization. "Members of other cultures are aware that when they use computers they must adapt themselves to radically different patterns of thought and deep culturally-bound ways of knowing". The adverse impact of the economic slowdown in South East Asia region, Indonesia and the globalization of the world economy underscore the need for SMEs as the backbone of the national economy to become more resilient and competitive [8]. Thorp [9] believes that successful implementation of ICT offers the prospect of substantial competitive advantage for large and SMEs alike. However, SMEs are not ‘little’ large business [10, 11]. In terms of ecommerce implementation, it requires one to give thorough attention and proper understanding towards SMEs characteristics before delineating further issues of technology adoption and strategies. The renowned characteristic of SMEs that are common in most countries is the lack of in-house ICT expertise and financial resources. Furthermore, in relation to ICT usage, previous research conducted by Heikkila et al. [12] found that there are three major differences between SMEs and large organizations:

- SMEs tend to use computers more as tools and less as a communication medium;
- The small number of stakeholders involved in an SME means that there are likely to be fewer problems in terms of organizational politics;
- SMEs have considerably fewer resources available to implement ICT solutions.

Much of the research also shows that the decision for ICT adoption in SMEs are more likely made by the owner [3, 13], which often have little concern towards the importance of ICT strategy and planning within their business [14]. Furthermore, Yap et al. [15] found in their research that the management involvement is crucial to IT success within SMEs. E-commerce can be defined as any economic or business activity through Web storefronts to enable the buying and selling of products and services and to facilitate the transaction of business and activities between and amongst individuals and organizations [16]. In a wider definition, however, e-commerce is not limited to buying and selling products online. Along with customers, an online business will also find its suppliers, accountants, payment services, government agencies and competitors online. These online partners demand changes in the way they do business from production to consumption [17, 18]. Succinctly, e-commerce is a new way of doing business [19, 16, 20]. Numerous studies into the use of e-commerce in SMEs recently have been of an exploratory and qualitative nature [21]. While there is rapid growth and development of dot-com and the ‘new economy’, SMEs in developing countries have been
slower to adopt e-commerce than their developed countries [22]. Moreover, there are several issues that have been raised in recent SME literatures, which include:

- Exploring the advantage and disadvantage of e-commerce in Thai SMEs [22].
- The importance of e-commerce infrastructure in facilitating the e-commerce adoption initiatives for SMEs in developing countries [23, 24].
- The use of e-commerce by manufacturing sector of Italian SMEs [25].
- Adoption attributes that may affect e-commerce use in Brunei SMEs [19].
- Factors influencing e-commerce adoption decisions in small and medium enterprises (SMEs) in Thailand [26].
- The use of e-commerce in Australian SMEs [27].

In addition, the business press and trade journals have also given coverage to many of the issues faced by SMEs in moving into e-commerce [13, 28, 29]. However, there are some issues that have received very little attention in research to date, such as:

- Framework that helps SMEs evaluates the strategic use of e-commerce as well as guiding the adoption process.
- Assessment of e-commerce application and post adoption experiences in different sectors of SMEs.

Impact and Benefit of Strategic Use of E-Commerce in SME: One might question why the presence of E-Commerce has expanded very rapidly in recent years. The answer is simply because of the opportunities and benefits that are evident from the current implementation by many organizations. The concept of strategic use E-Commerce through the utilization of Internet software and services also Endeavour's to link Internet use with opportunities it offers to the firm [30]. It further recognizes that the strategic potential Internet use allows exercising the control over the bounds of relationships and interfaces used in relationships between customers and the business, which are also related to the firm’s strategies. E-Commerce has offered a variety of potential benefits both to SMEs and large business. Numerous studies claim their findings on the benefit and impact of E-Commerce. Those findings are summarized into the following points [31, 16]:

- E-Commerce offers unmatched savings in terms of transaction costs
- The reduction of cost in advertising and promotion
- Speed communication between buyer and seller
- Companies can shorten their traditional supply chains, minimize transport obstacles and reduce delivery costs.
- Physical limitations of time and space are removed.

Despite the attractive benefits that SMEs may obtain from adopting E-Commerce into their business, SMEs possess significant problems in identifying the appropriate application of E-Commerce and its strategy due to the lack of knowledge and planning in ICT. Consequently, it is hardly surprising to witness that most of the SMEs’ owner/managers will finally develop their ICT strategy through a ‘trial and-error’ method.

E-Readiness: APEC defines E-Readiness as the degree to which an economy or community is prepared to participate in the digital economy [32]. A definition by McConnell [33, 34] on E-Readiness is the capacity to participate in the global digital economy. McConnell’s definition of E-Readiness lacks descriptive details, but the basic meaning points to the capacity to participate in digital way of doing business. In the study of Hartman et al. [35], net readiness is measured as a company’s preparedness to exploit the enormous opportunities in the E-Economy landscape. Grant [36] mentioned in his maturity model where a business is “ready” to implement E-Business and ecommerce strategy, with the business plans and expectations clear, with no insurmountable obstacles impeding progress and have identified any needed partners or professional support. Another report by Parker [37] described E-Readiness as “preparedness” to operate in an E-Business and E-Commerce marketplace. The success of the Internet initiatives of a firm or enterprise depends not only on its own effort to digitize its value chain, but also on the readiness of its customers, supplier and 10 trading partners to engage in electronic interactions and transactions [38, 39]. Successful E-Readiness practice requires readiness on the part of all players in the value chain and companies that adopted E-Commerce or E-Business must invest in increasing their trading partners’ readiness. E-Commerce application includes the use of many different types of online facilities to do business: order registration, electronic advertising, electronic billing system, electronic
marketing, online delivery status and tracking and customer services support. E-Business applications also include the use of many different types of online facilities to communicate and coordinate: production planning, JIT management, scheduling, outsourcing and other business operation process.

**E-Readiness Objective**

**E-Infrastructure**: If the objective is on E-Infrastructure then the focus should be on institutions, hardware and software. Here, E-Readiness equals computers and access - computer hardware and network access are required to be e-ready and bridge the digital divide and government and private initiatives should supply them.

**E-Economy**: If the objective is on E-Commerce then the focus should be on ICT Business. Here, E-Readiness equals computers, access and economy - computer hardware and network access are required for E-Readiness, but the market will solve this problem on its own.

**E-Society**: If the objective is on the society then the focus should be complete population. Here, E-Readiness requires basic literacy, poverty, health and other social issues to be addressed first - computers are useful, but nothing will make a society e-ready and bridge the digital divide until basic literacy, poverty and healthcare issues are addressed.

**E-Governance**: If the objective is E-Governance then the focus should be on Government Process Reengineering and faster and transparent means of delivering government services to the citizens. Here, E-Readiness equals computers, access and effective usage of computers - hardware and access are not enough for real E-Readiness, there must be extensive training programs, locally relevant content and a local ICT sector and a Business Process Reengineering along with. The definition of Objective will help define the Stake holders in the process. Table 1 highlights the focal areas of studies done at internationally.

On the basis of the objective and focus of study any of the above models can be adapted or evolved based on local needs [40].

**Components of E-readiness / Choice of Indicators:**

Depending upon the objective for Assessment, a model is chosen and indicators under the same worked out for Assessment. The wide range of indicators can be classified in the following main groups:

- **Network Access**: What are the availability, cost and quality of ICT networks, services and equipment?
- **Networked Learning**: Does the educational system integrate ICTs into its processes to improve learning? Are there technical training programs in the community that can train and prepare an ICT workforce?

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<tr>
<th>Table 1: Study/ Focus</th>
<th>Focus</th>
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<tbody>
<tr>
<td>Study</td>
<td>Focus</td>
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<tr>
<td>1. APEC (Asia Pacific Economic Cooperation)</td>
<td>E-Commerce Readiness</td>
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<td>2. CIDIF (Centre International pour le Development de l’Inforoute en Francis)</td>
<td>Internet Service Market</td>
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<td>3. CSPP (Computer Systems Policy Project)</td>
<td>Existing Infrastructure</td>
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<td>4. EIU (Economist Intelligence Unit)</td>
<td>E-Business Readiness</td>
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<td>5. IDC</td>
<td>Infrastructure</td>
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<td>6. KAM (World Bank, Knowledge Assessment Matrix)</td>
<td>E-Economy</td>
</tr>
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<td>7. MI (McConnell International)</td>
<td>Infrastructure, Digital Economy, Education and government</td>
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<td>8. MN (Metric Net)</td>
<td>E-Economy</td>
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<td>9. MQ (Mosaic Group)</td>
<td>Internet</td>
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<tr>
<td>11. CID (Center for International Development)</td>
<td>Society</td>
</tr>
<tr>
<td>12. CIDCM (University of Maryland)</td>
<td>Qualitative Assessment based on past performance and current Internet pervasiveness</td>
</tr>
<tr>
<td>13. ITU (International Telecommunication Union)</td>
<td>Telecom</td>
</tr>
<tr>
<td>14. Mosaic</td>
<td>Economy Focus</td>
</tr>
<tr>
<td>15. SIDA (Swedish International Development Cooperation Agency)</td>
<td>Mainly SWOT analysis of a Nation</td>
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<td>16. USAID (US Agency for International Development)</td>
<td>Access, Government, People</td>
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• **Networked Society**: To what extent are individuals using information and communication technologies at work and in their personal lives? Are there significant opportunities available for those with ICT skills?

• **Networked Economy**: How are businesses and governments using information and communication technologies to interact with the public and with each other?

• **Network Policy**: To what extent does the policy environment promote or hinder the growth of ICT adoption and use?

The Various Global Studies bring out the Following Indicators for the Assessment:

**APEC’s E-Commerce Readiness Assessment**: Six categories are measured for "readiness for E-Commerce:"

- Basic infrastructure and technology (speed, pricing, access, market competition, industry standards, foreign investment),
- Access to network services (bandwidth, industry diversity, export controls, Credit card regulation),
- Use of the Internet (use in business, government, homes),
- Promotion and facilitation (industry led standards),
- Skills and human resources (ICT education, workforce) and
- Positioning for the digital economy (taxes and tariffs, industry self-regulation, government regulations, consumer trust).

**IDC Information Society Index**: The study is based on four indicators

- Computer infrastructure
- Information Infrastructure
- Internet Infrastructure
- Social Infrastructure

**KAM Knowledge Assessment Matrix**: The study is based on five indicators:

- Performance Indicator
- Economic Incentives and Institutional Regimes
- Education and Human Resources
- Innovative System
- Information Infrastructure

**CSPP’s Readiness Guide for Living in the Networked World**: CSPP’s guide carries measurements into five categories:

- Infrastructure
- Access

**CRM and SMEs in Developing Countries**: Customer relationship management (CRM) with its current use of technology often termed electronic CRM (e-CRM) is widely recognized as inevitable in modern business. However, little or no research has been carried out on e-CRM in developing countries where small to medium
Successful enterprises (SMEs) abound and are the mainstay of such economies. CRM which is an acronym for Customer Relationship Management is an approach for winning, retaining and servicing of customers. It incorporates all the ways businesses try to build and sustain their customers. Within IT, it has to do with the technologies and systems that enable businesses manage sales, marketing and customer service in order to achieve long running customer relationships. CRM is at the core of any customer focused business strategy and it also includes among other things the people, processes and technologies that are associated with marketing, sales and services. Long before the advent of technology, businesses have always recognized that the customer is the soul of every business. Businesses try to have personal relationship with their customers. Before the industrial revolution, the prevalent businesses were small in size. Customers were known personally by the proprietor and staff of these businesses. They remained loyal and returned to the shops or stores to make repeated purchases, while the business staff services the relationship through advice, discounts, credit facilities, etc. All those disappeared with the emergence of large businesses which industrial revolution and the urbanization of the society brought along. Although prices of goods may have been lower, the relationship between the customer and the business merchant became nameless and faceless. (Figure 2: Successful CRM) [41].

Why Focus on Small and Medium Enterprises?: This paper focuses on small and medium enterprises for two key reasons. First, they are important to economic development in developing countries. Per the United Nations Conference on Trade and Development, SME’s account for 60 to 70 percent of all employment in developing countries. [42] Clearly, it is critical for such businesses to be prepared for and take full advantage of any benefits offered by electronic commerce. The second reason to focus on SME’s is that they are in a very good position to adapt to new technology; they may be able to adapt faster than larger companies that can be slowed by bureaucracy and stricter staffing hierarchies. E-Commerce it may offer them comparatively more advantages to find new customers and suppliers especially in markets they have not easily been able to reach before - either internationally or regionally. Markets everywhere are globalizing partially due to the widespread use of the
Internet. Electronic commerce can give SME’s a better chance to compete in their markets and, indeed, in some cases, is or will soon become a competitive necessity for survival. The potential benefits of electronic commerce to “level the playing field” for SME’s -allowing them to compete better- are critical for them to understand and sort out.

Potential Gains from E-Commerce: Businesses all over the world can benefit from electronic commerce techniques. They can use these techniques to:

- Find new customers – and partners and suppliers – domestically and internationally
- Serve current and new customers better, hence offering more value to them
- Improve the efficiency of their business processes
- Offer entirely new services and products – even start entirely new businesses.

Putting SME E-Commerce Readiness in Context: Before designing an approach to increasing E-Commerce readiness in a specific area, it is critical that the development professional consider the context for the initiative along several dimensions. This context setting applies to the way E-Readiness is delivered (e.g. what technology and mode of delivery to use) as well as the content of the training and support provided. Without carefully considering these two dimensions of context, an E-Commerce readiness initiative can fail or fall short of its potential benefits. Below six aspects of context are addressed: AID strategic objectives; on-going, non- USAID initiatives; industry or sector considerations; rural vs. urban settings; infrastructure constraints; and considerations for women-owned SME’s. [43].

E-commerce Readiness: What Smes Need to Know?: This section addresses the topics -- the content -- to cover in any E-Readiness initiative for SME’s in developing countries. For convenience, the topics are presented as if part of a curriculum for a classroom or web-based course. They can of course be addressed in other ways, depending on the delivery method chosen. Chapter V describes several alternative delivery strategies. How the topics are covered will vary by:

☐ The context for the SME’s
☐ The approach chosen to building E-Readiness capacity for SME’s

The content may be grouped in various ways depending on the intensity of the training effort and the level of sophistication (both business-wise and technically) of the SME’s targeted. In many cases, the topics may need to be complemented by some basic or additional technical training. What SME’s need to know can be grouped into the information needed to answer nine categories or questions?

- Why might I want to use E-Commerce? What benefits might I achieve?
- How do I determine if I can use electronic commerce to improve my business?
- In what part(s) of a business’s processes might E-Commerce be incorporated?
- What electronic commerce techniques should I consider and use?
- What elements of my context affect how I can successfully use E-Commerce?
- How can I figure out whether the benefits outweigh the costs?
- What will it take to succeed?
- How can I monitor results to know I am achieving the benefits I expect?
- What is my concrete action plan to achieve the results?

The categories are in a logical order and any approach to E-Readiness probably needs to follow this logic: e.g. beginning with motivation (“why?”), moving through the other topics and including with a way to measure results and how to set an action plan. Some training approaches (and the ones recommended in this paper) will go far beyond setting the action plan and include on-going support for the SME’s who choose to move forward with electronic commerce. Each category is discussed in a section below. We do not attempt to cover the topics in great detail, but to provide guidance to development professional preparing for an E-Readiness initiative for SME’s.

CONCLUSION

Electronic commerce (E-Commerce) adoption case studies in SMEs have been presented in this paper. It shows an analysis of the importance of aligning business strategy with ecommerce adoption in SMEs. The study also underlines several factors and a step-by-step process of adopting E-Commerce through a proposed framework. The results of this study are useful not only for managers
of SMEs but also for government bodies, in developing countries such as Indonesia, that have economic reasons to be concerned about the development of SMEs. The author believes that the results will also provide some insights to ICT consultants – with SME customers – in order to improve their service and customer satisfaction. No doubt E-Readiness assessments are meant to guide development efforts by providing benchmarks for comparison and gauging progress, but there are a lot of areas, which need to be kept in mind while going for such an assessment. They are:

- View assessments that have already been done in the area there are a number of prior reports that exists. Among E-Readiness projects, greater coordination and foresight is needed to avoid duplication.
- Whenever an E-Readiness assessment is carried out it should be ensured that the results are publicly available. The agency or organization that commissions the assessment should ensure that the results are circulated for wide use too often this step has been missed.
- Reflect the views of all stakeholders in the E-Readiness process and throughout implementation.
- Use assessment results effectively to develop an e-strategy that addresses how exactly E-Readiness will be improved and ICT used to benefit the country.
- The actions plans should be so made that they are realistic. The plan should comprise small achievable steps that deliver sustainable, scalable and replicable results. This is the best approach to narrowing the digital divide and ensuring that the valuable resources used to measure E-Readiness are not wasted.

REFERENCES


