

SMES IN DEVELOPED AND DEVELOPING COUNTRIES TREADING SIMILAR PATHS TOWARDS ETRANSFORMATION

Mahesha Kapurubandara

Sri Lanka Institute of Information Technology, Colombo, Sri Lanka

Ana Hol, Athula Ginige

School of Computing and Mathematics, University of Western Sydney, Sydney, Australia

Keywords: SMEs, Developing Countries, Developed Countries, eTransformation, Sri Lanka, Australia.

Abstract: The global economy has become increasingly reliant on Information and Communication Technology (ICT) tools and systems to process and exchange information. The Small and Medium Enterprises (SMEs) are yet to reap these benefits as obtaining such opportunities rests on their ability to integrate ICT into business tasks and processes. They need to transform their companies by implementing appropriate ICT in order to compete within a busy digital economy. The aim of this study was to see how SMEs from developed and developing countries follow their eTransformation journey and also to identify the differences and similarities businesses encounter in that process. Our research confirms that the eTransformation takes place as an incremental process for both groups and that the eTransformation pattern is similar in both worlds. However, we notice that in Australia, a developed country, SMEs are more aware of eTransformation and are demanded by customers and digital economy to change, where as in Sri Lanka eTransformation is still in its early stages of development.

1 INTRODUCTION

Over the last few decades the world economy has undergone numerous changes and has been impacted by rapid advances in technology. The knowledge demand on how to access markets and business partners or suppliers worldwide with the aim to remain competitive strongly depends on the company's ability to eTransform, the process through which businesses identify, select and implement required technology (Hol & Ginige, 2009).

According to Ginige and colleagues (2001) the process of eTransformation is seen as a staged and incremental. There are a number of models of eTransformation, however there are two that explain the process in detail. One of the early models is the eTransformation Road Map model (Ginige et al, 2001). This model has been widely used to explain eTransformation process within developed countries (Lawson et al 2007; Hol and Ginige, 2008, 2009). The eTransformation Road Map has been extended

further into eSME model by the researchers within the developing countries (Kapurubandara, 2009b). Both models stress that in order to eTransform successfully SMEs are required to complete eTransformation steps incrementally.

SMEs play a major role in many economies, globally, irrespective of the fact whether they are in developed or developing countries. They contribute significantly to the economies of many countries of the developed world (Rao, 2003). In Australia, the SMEs are not only considered major employers (70% of Australian employment), but they are also viewed as being major drivers of innovation, and as such, key players in making an economy competitive in the global marketplace (Temperley, 2004).

In Sri Lanka 75% of the labour force is employed in the SME sector (including the agricultural sector) (ILO, 2006). These numbers suggest that SMEs contribute substantially to employment and income generation.

SMEs in developing countries face an abundance of external constraints due to the differences in infrastructure, social, cultural and regulatory factors and internal constraints inherent to SMEs by nature (Kapurubandara et.al, 2007).

This effect is also visible within developed SMEs in Australia. In developed countries, SMEs seem to be aware of the technology but still hesitant, lacking time and resources to fully embrace it (Lawson et. al. 2007).

This study aims to identify similarities and differences of SMEs eTransformation within developed and developing worlds. The comparative investigation was carried using two selected groups of 3 SMEs each, one from developing and the other from the developed world.

2 METHODOLOGY

To identify how SMEs within developing and developed countries, in this case Sri Lanka's Colombo District and Australia's Sydney metropolitan region are selecting, implementing and using technology to speed up and complete their business tasks and processes quicker and swifter we chose an exploratory study.

The subjects of our study were 3 SMEs from a developing country – Sri Lanka's – Colombo region and another 3 from a developed country – Australia's Sydney region. The sample for Sri Lanka was chosen from a list maintained by the Export Development Board of Sri Lanka a representative of SMEs from various industry sectors, within Colombo. The sample for Australia was chosen from a list of previously studied sample of 30 companies belonging to a range of industry sectors selected from Corporate Development Office.

To conduct the study CEOs or Directing Managers of SMEs were interviewed to get first hand information about the business tasks and processes, their use of ICT, and their perceptions for adopting it.

Each interview lasted nearly one hour. Interviews were recorded, subsequently transcribed and subjected to qualitative content analysis. This involved categorisation of responses into certain themes, some of which were inherent in the interview questions, and some of which emerged

through the interviewees' responses to questions posed.

3 ANALYSIS AND DISCUSSION

Data collected during the interviews was analysed and categorised. Sri Lankan based companies ranged in size from 6 to 12 employees. SMEs used fax, phone and generally performed record keeping manually. Two out of three companies had stand alone computers while one had a network and ADSL.

In general, computers are not fully utilised in a cost beneficial manner, but more as a storage medium. SMEs are lacking in resources, know how, awareness of the optimum usage of ICT. They face more burning problems and are concerned with day to day survival; hence ICT implementation has taken less priority.

Selected Australian based SMEs ranged in size from 3 to 54 employees. They all had networks, were continuously contacted to the Internet and all used productivity tools. All records were kept in the electronic form however they lacked searching, managing and mass customisation tools. SMEs in Australia all use productivity tools and specialized industry software however are lacking systems such as CRM (Customer Relationship Management), tracking systems, document management systems and interactive online systems.

In addition, to better understand process of eTransformation we mapped all six SMEs on then eSME Roadmap (Kapurubandara, 2009b). Data is presented in Table 1.

Table 1: Internal and External Processes on eSME.

External Processes	SME (SL)	SME (AU)	Internal Processes	SME (SL)	SME (AU)
<i>Stage 1</i> No Website	S1, S2, S3		Manual	S1	
<i>Stage 2</i> Basic Website			Effective Individual	S2, S3	
<i>Stage 3</i> Interactive Website		A1, A2, A3	Effective Team		A1, A2, A3
<i>Stage 4</i> E-Commerce Site			Effective Enterprise		

Table 2: Similarities and differences between the two groups of SMEs.

SMEs (SL)	SMEs (AU)
Web Not an essential tool for marketing. Word of mouth is used for marketing	Websites are present, however main jobs come via word of mouth.
email is used occasionally but not the preferred medium of communication	e-mails are used regularly. Companies are trying to establish Document Management systems for easy file storing and accessing.
Lack skills, resource, knowledge of effective use of ICT.	Lack of skills, knowledge and ICT resources is still present, however most SMEs have realised this and are trying to make changes. They are aware of eTransformation.
eTransformation is given less priority.	eTransformation is seen as important, but essential only when companies realise that old methods do not work any more.
Manual processes are preferred. However computers are used as storage medium	Manual processes are still popular, and filing is done in both paper copies and electronically.
Customers have not adopted ICT. Lack of pressure from the customers.	Customers are demanding change as they search for cheaper and better products.
Not much attention is given for quality. SMEs need to be educated	Quality of the product as well as timely delivery are becoming a priority.
SMEs are aware of the importance of customers. Lack funds for implementation of CRM. Awareness need to be created in systems such as CRM.	Companies are identifying that the customers are their crucial asset. CRMs are becoming popular.

Furthermore, it also became evident that SMEs can be in different levels of maturity with respect to their internal and external processes which is in common with the other stages of growth models (McKay, Prananto, & Marshall, 2000).

Our investigation indicates that Sri Lankan SMEs broadly fit into stage 1 and stage 2 on the internal process arm of the eSME roadmap. SME S2 and S3 fall into two different sub stages within the stage "Effective Individual". In Sri Lanka, e-mail and Internet are considered costly affairs (SLBDC, 2002). Where the SMEs are saddled with many other pressing concerns, adoption of eTransformation given a lower priority which is not surprising given the expenditure involved (Lawson, Alcock, Cooper, & Burgess, 2003; Lawson et. al. 2005).

On the other hand, Australian SMEs have reached Interactive website (Stage 3 on the external processes) and effective team (they are between stage 2 and 3 of the Internal Processes) which indicates that they have advanced further on the eSME Roadmap.

It can be concluded that SMEs lack awareness of eTransformation and are struggling with costs associated with hardware/software purchase which led to only partial adoption. Previous studies confirm that lack of awareness can significantly impede technology adoption (Bode, & Burn, 2001).

Table 2 summarises similarities and differences between SMEs from developed and developing countries.

This exploratory study has shown that while the two groups of SMEs agree that adoption is essential in today's business they are hindered from adoption. This is predominant with the Sri Lankan SMEs, but still present within Australian SMEs too. When compared to the Australian SMEs, Sri Lankan SMEs lack in awareness, resources, knowledge and skills required for a successful eTransformation while Australian SMEs are aware of eTransformation but still do not have required skills to fully implement it. This could be attributed to the fact that eTransformation was introduced in Australia much earlier than Sri Lanka and that businesses within Australia have a slight advantage of early adopters. Furthermore, it appears that some of the companies have been forced to implement ICT as they have realised that their existing processes were not functioning any longer, which may happen within Sri Lanka as well in the years to come (Lawson et. al. 2005).

When analysing the process of eTransformation however, it seems that both groups follow a similar pattern in their eTransformation journey irrespective of the fact whether they are from a developing or a developed country. It looks that their journeys have started at different times and also that their rate of progression is different. Australian companies are ahead, however they have been faced in the past with very similar challenges with which Sri Lankan companies are faced with today. We can also see that eTransformation journey is staged and incremental. In addition, a more detailed eSME

Roadmap depicts this journey in minute steps and identifies stages SMEs are required to undertake for both developed and developing countries.

3 CONCLUSIONS

In summary it can be seen that within both developing – Sri Lanka and developed – Australia countries SMEs today are required to undertake the process of eTransformation. By analysing eTransforming SMEs it can be concluded that SMEs are required to undertake an incremental, staged journey in order to eTransform. However due to many inherent constraints, the SMEs in developed countries are forced to take minute steps in discovering eTransformation and basic ICT tools. On the other hand, the SMEs in developed countries now have an understanding of what eTransformation is and are on the road to discovery of what eTransformation and ICT system integration can offer to them. Due to the governmental regulations and country's development and access to the technology Australian SMEs have undertaken the eTransformation journey before Sri Lankan SMEs; however the journey Sri Lankan SMEs are undertaking today is very similar to the journey Australian SMEs have been undertaking earlier. Furthermore, pressures of the digital worlds, government and customer demands have also contributed to swifter eTransformation within developed countries. It is expected that in the years to come Sri Lankan SMEs will be undertaking a similar journey Australian SMEs are undertaking today.

REFERENCES

- Bode, S., & Burn, J. M. (2001). Website design consultants, Australian SMEs and electronic commerce success factors. *International Journal of Business Studies*, 9(1), 73-85
- Ginige, A., S. Murugesan, (2001). "A road map for successfully transforming SMEs into e-businesses." *Cutter IT Journal* 14(5): 43.
- Hol, A. and Ginige, A. (2009) eTransformation Journey for SMEs, *ICE-B International Conference on eBusiness*
- ILO. (2006). Improving the local business environment through dialogue; a story from Sri Lanka.
- Kapurubandara, M., (2009a). A Framework to e-Transform SMEs in Developing countries, *The Electronic Journal of Information Systems in Developing Countries* (EJISDC), Vol 39, ISSN: 1681-4835, www.ejisdc.org
- Kapurubandara, M. (2009b). eTransformation of SMEs. A Framework for Developing Countries. Germany, Vdm Group Inc ISBN: 978-3-639-21971-5;
- Kapurubandara, M., & Lawson, R. (2007). SMEs in Developing Countries face challenges in adopting e-commerce technologies. Paper presented at the *IEEE DEST Conference Series 2007*, Cairns, Australia, February 2007, ISBN: 1-4244-0470-3, pp 141-146 46, Digital Object Identifier: 10.1109/DEST.2007.
- Lawson, R., C. Alcock, et al. (2003). "Factors affecting adoption of electronic commerce technologies by SMEs." *Journal of Small Business and Enterprise Development* 10(2): 265-276.
- Lawson, R., Arunatileka, S., Ginige, A. and Hol, A. (2005), "A Pilot Project on eCollaboration in the Australian Toolmaking Industry", in *Proceedings of the 18th Bled eConference eIntegration in Action International Conference, Bled, Slovenia*, June 6 - 8, 2005.
- Lawson, R., Hol, A. and Hall, T. (2007) Challenges of eCollaboration among SMEs, *Proceedings of the 20th Bled eConference, eMergence: Merging and Emerging Technologies, Process and Institutions*, 4-6 June, 2007 Bled, Slovenia
- McKay, J., Prananto, A., & Marshall, P. (2000). E-business maturity: the SOG-e model. Paper presented at the *Australian Conference on Information System (ACIS)*, Brisbane, Australia.
- Rao, S. S., Metts, G., & Monge, C. A. M. (2003). Electronic commerce development in small and medium sized enterprises: A stage model and its implications. *Business Process Management Journal*, 9(1), 11-32.
- Temperley, N. C., Galloway, J., & Liston, J. (2004). SMEs in Australia's High - Technology Sector: Challenges and Opportunities CSIRO/AEEMA. Retrieved 22 July 2006 from <http://www.aeema.asn.au>