E-Governance for Small and Medium Enterprises

Varuna Godara[1]* and Rakesh Agrawal[1]

ABSTRACT

Computing, Information Technology and Web-based Technology have become an integral part of the modern day society. They have brought about a revolution in the way different human endeavours are undertaken. Who had imagined that millions of tiny businesses owned and managed by individuals for earning their day to day living (such as small shop keepers, hawkers, small vendors, collies, helpers, small transport operators, household servants amongst many others who are an integral part of every society in the world) would be using mobile phones, tiny devices for communication, playing music, watching videos, internet, record keeping, banking and making business transactions using internet and web based systems? It appears that the pervasive computing has entered the psyche of people and absence of those tiny devices will leave them almost helpless and may even render them ineffective. Is this the right trend? Has technology determinism become a reality, much to the discomfort of those free-minded people who believe that human beings create technologies and hence can control the way their own life can be influenced by them? Is e-governance an issue only for government organisations and other large entities who are driven by set rules and regulations or is this going to find a place in these tiny, small and medium enterprises (for convenience referred to as SMES) also? If the later come out to be true, how it might affect the nature of theses enterprisers and will they be subject to the influence of technology determinism in the same way as almost all other large organisations are? This paper examines some of these questions and also provides a framework of continual innovation that can lead e-governance to succeed in identifying key innovative strategies for the SMEs and providing more than expected services in a cost effective and efficient way to the stakeholders.

Keywords: E-governance, E-commerce, E-business, E-marketing, E-finance, E-operations, Business intelligence, Competitive advantage, Databases, Information, knowledge management, SMEs. Pervasive computing, Technology Determinism.

1. Introduction

E-governance has traditionally been discussed in the context of governments and large bureaucracies. The main reason for that is that world-wide-web and information technology have brought with themselves a revolution of change in socio-political and economic interdependencies of different countries. The effective network structures are forcing alliances and people from different countries to work together. One of the

[1] School of Management/Parramatta Campus, University of Wester Sydney, Penrith South DC, NSW, 1797, Australia
* *Corresponding Author:* (Email: v.godara@uws.edu.au Telephone: +61 401929523)

major roles of government now is to facilitate these individuals and business entities to live, communicate and work together. Hence the term e-governance was evolved that uses web technologies, computer-mediated communications, IT tools for decision making and knowledge management to play not just a bridging role but a decisive role in managing the huge changes in the attitudes of people towards e-commuting and e-communication. It has brought a fundamental change in the way the government works. E-governance supports and simplifies governance for the e-community comprised of citizens, numerous social and political organizations, private companies, government lawmakers and regulators on network (Tapscott & Agnew, 1999). The objectives of e-government range from those for internally focussed processes (operations) to the ones for externally oriented services. The former relates to facilitating speedy, transparent, accountable, economic, efficient and effective processes for performing government activities. The externally oriented objectives of e-governance include fulfilling the public needs and satisfying the expectations of the people by simplifying and standardizing the procedure for interaction through various online services (Singh & Parashar, 2005). Continual innovation is an essential component of e-governance to succeed in identifying key innovative strategies and providing more than expected services in a cost effective and efficient way to the stakeholders. E-governance can achieve this capacity by understanding the nature of stakeholders, national and international environment through the new high-tech tools.

Question is whether e-governance concepts and philosophies apply to managing and administering SMEs. SMEs are the public owned and public driven organisations serving the essential needs of the community. Stakeholders of the SMEs are public themselves. Individuals (along with their immediate families) who own and run these businesses run them for themselves, run them for others in the community and run them for each other. We academicians cannot find better example of interdependence of businesses and indeed all the human endeavours than those that are found in the small and tiny businesses operated by individuals and their families in small to large and remote to most populated towns. With the globalisation, which is affecting almost every body, local environment is influenced by national and international environment. It can easily be said that all those principles enumerated in the previous paragraph regarding e-governance very much apply to SMEs and authors of this paper are of the view that e-governance of SMEs is almost inevitable. The impact of the technology determinism on SMEs will be as profound as it appears to be on the organised sectors of the economy.

In this paper, the authors have examined issues related to e-governance of SMEs and the role of innovation in delivering the benefits of e-governance to all the stakeholders of the SMEs.

The paper is organised as follows

- Conceptual understanding of e-governance
- The role of innovation in e-governance
- Characteristics of the SMEs
- Issues related to the governance of the SMEs
- An innovation driven model of e-governance for SMEs
- Implications and benefits of the innovation driven model of e-governance for SMEs
- Conclusion

2. Conceptual understanding of e-governance

E-governance involves using e-business technologies in all the government processes and services to improve efficiency and effectiveness. Mark (2003), associate deputy director for IT and E-Government, OMB, says “e-government includes three dimensions: first, use of the internet for on-line filing of forms and taxes; second, a government organization that uses the internet to connect employers, suppliers, and customers; third, the use of digital technologies to transform government operations in order to improve effectiveness, efficiency, and service delivery”. E-governance is a form of e-business in governance and

refers to the processes and structures pertinent to the delivery of electronic services to the public, citizens and businesses, collaborating with business partners and conducting electronic transactions within an organisational entity (Backus, 2001). E-governance involves the use of information and communication technologies (ICTs) to transact the business of government. E-governance promises a full service available 24 hours a day and seven days a week, greater accessibility, the capability to obtain government services without visiting government offices, and reduced service cost. It also contributes to the functioning of democracy by online provision of government information which would otherwise be difficult to obtain or unavailable, and through online debates and plebiscites (Teicher et al., 2002).

3. The role of innovation in e-governance

As per EzGov (2000), "E-governance is a way for governments to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic institutions and process". Ferguson (2000) says, "Electronic governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to the citizens and new ways of organizing and delivering information and services". It can be surmised that e-governance require innovation in almost every aspect of governance right from managerial styles, communication, administrative processes, technology usage to dissemination of information, etc.

Van de Ven (1986) said," Innovation is a new idea". Or is it an adoption of idea or behaviour new to the organisation? Damanpour and Evan (1984) say, "The innovation is a process that includes the generation, development and implementation of new ideas or behaviours". It is conceived as a means of changing an organisation, either as a response to changes in the external environment or as a pre-emptive action to influence the environment (Damanpour 1996). There has been a dramatic change in the environment in terms of the way companies do business, individuals work and communicate. We are living in a surge economy dominated by information technology and are moving towards digital society in which information will be the basic resource for survival of organizations and individuals. In digital society almost all the workers will be knowledge workers who will gather, store, analyse and disseminate information. All the organizations will be learning organizations that accumulate and analyse knowledge and learn from the knowledge warehouses. Therefore, following the principles of learning organisation e-governance needs to invest in innovative processes that can fulfil needs of these learning organisations and knowledge workers (Godara, 2005).

A new synergistic approach towards innovation needs to be developed from multi sources and multi disciplines working together–E-business technologies, Marketing, Computer Science, Statistics, Mathematics, Knowledge Management and Information Systems. This approach is required to organise statistical processes speedily and store safely data so that it can be further used for research and development in innovation. Knowledge management with the help of IT can play an important role in innovation. In simple words knowledge management is a process through which organisations generate value from their research based or transaction based intellectual assets. According to Stewart (1997), "Knowledge has become the pre-eminent economic resource-more important than raw materials; more important, often than money. Considered as an economic output, information and knowledge are more important than automobiles, oil, steel, or any of the products of the industrial age". Knowledge management is "a set of practices that includes identifying and mapping intellectual assets within organizations, generating new knowledge for competitive advantage, making vast amounts of corporate information accessible, sharing best practices, and applying management strategies and technology that support all of the above." (http://www.capv.com/index.htm). Therefore we can say that knowledge management is an important tool in managing the innovative ideas from the sources of innovation.

4. Characteristics and significance of the SMEs

SMESs are generically characterised by independent ownership, owner- financed and managed and having small market share. Specific features (Schaper and Volery, 2007) of SMEs are as follows:

- Owned by just one or two individuals
- Financing provided by the owner
- Limited market share
- Limited Life span
- Sometimes run on a part-time basis
- A low level of net profit
- Limited product or service offering
- Often home-based
- Geographically limited to one or two locations
- Often a family-based business
- Located only in the private sector

SMEs are the most critical part of every national economy. Their contribution ranges from making contributions to day-to-day needs of people in all walks of life through the supply of domestic home products, health, local travel, home-based industries, agriculture-based production, mass-scale manufacturing, cottage industry, high-tech service industries, through to making significant contributions to almost all sectors of the economy. Some reports on APEC estimate that SMEs comprise of 95% of all firms, contributing between 30 to 60% of the GDP, contributing to 30% of all exports, and employing around 60% of the workforce. This story is no different in the American, European and other economies of the world.

5. Issues related to the governance of the SMEs

SMEs are different from large businesses in many respects. SMEs employ more female and family workers working fewer hours with almost all time commitment. The owner-managers have fewer qualifications. They are not able to use much of government assistance and are less likely to make use of professional services for improving their operations and profitability. They do not make use of external financing and have limited physical or financial resources. They are less likely to grow bigger and more likely to fail. SMEs management perspective differs significantly from large businesses in that the former take a conservative view of the market. Their risk propensity is low. They are more internally focused. Their degree of sophistication is low. They normally plan for shorter time frames. Their contact and communication with the outside world is very much limited. SMEs are, therefore, the perfect candidates for e-governance, which offer immense opportunities to overcome most of the deficiencies in the effective management of the SMEs through innovative, cost effective and user-friendly knowledge based systems and most of all requiring much smaller capital outlay, well within the reach of most of the SMEs.

6. Development of model of e-governance for SMEs

Dr Godara (Godara, 2006) developed an interesting model for sources of innovation in e-governance and it is considered appropriate for the effective contribution of e-governance on SMEs (Figure 1).

Awareness in Society

Customers, marketers, suppliers, management, staff and competitors all are important sources of innovation in organisations (Stark 2005). Sveiby (2001) says that people use their capacity-to-act in order to create value by transferring information and converting it into knowledge. This value grows with the number of transfers and conversions. More the awareness among people more will be the number of transfers and conversions and therefore more would be the growth of value. A skilled work force is critical to company's abilities to innovate. Training and education strategies are essential in the development of a skilled work

force. Similarly awareness is critical for citizens and stakeholders to be proactive and participate in the process of e-governance by providing information and idea sharing and accumulation of knowledge. Education is helpful in making citizens more aware of rights and duties.

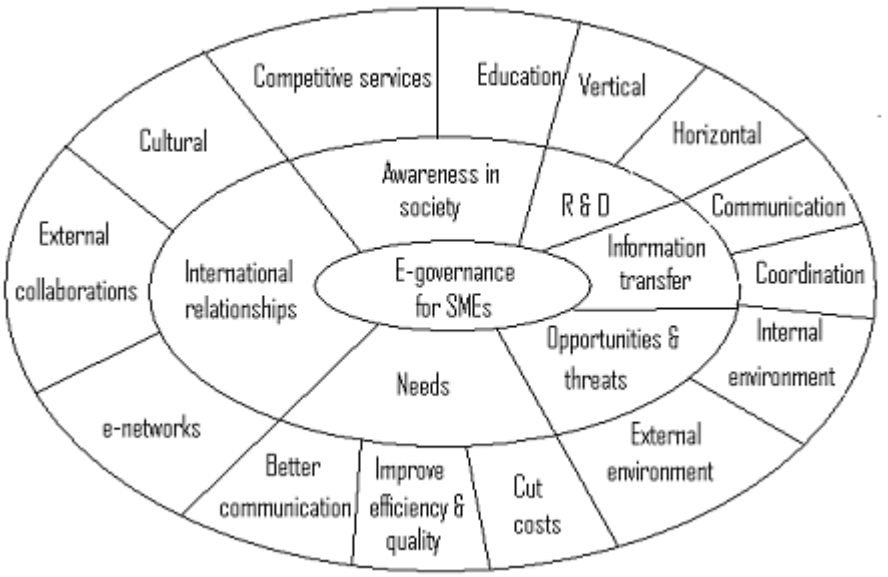

Figure 1: A conceptual model of e-governance for SMEs (adopted from V Godara's paper on Sources of Innovation for e-governance)

Research and development

Innovation is something new or improvement done by an organization to create significant value either directly for customers or organization itself (Carnegie and Bultlin, 1993). Also a significant impact of vertical R&D is important for innovative behaviour (Harrabi 1999). Also horizontal R&D can lead to reduction of wasteful duplication in R&D and create synergies between national and international organizations. According to "Innovation on housing industry" R& D support is an important element in the range of activities needed to foster innovation in housing. In the context of e-governance we can say R&D can be important source of synergies in innovation processes that can reduce costs and add value to the services they offer to their citizens and stake holders.

Information transfer

Sveiby (2001) says that people use their capacity-to-act in order to create value by transferring information and converting it into knowledge. Effective information transfer is critical to promote the adoption of the new products, processes, services and equipment that are continually been introduced in the industry. The most effective approach is to use multiple techniques, but they should include word-of-mouth publicity, seminars and trade shows (innovation on housing industry). Innovative organizations must form linkages to others, upstream and downstream, lateral and horizontal. Advanced technology cannot be developed and implemented in isolation. Communication and co-ordination requirements are often stupendous, and in practice the price system alone cannot achieve the necessary co-ordination (Teece, 1986). We are in the phase of change and are moving towards digital economy when common people will manage their affairs with high-tech tools. Proactive flow of information and information sharing among different government and non-government organizations and national and international organizations can lead to awareness and result in new ideas for government to accommodate change in its own system to facilitate this change and provide

infrastructure for digital economy. Therefore information transfer can be another source of e-governance in the SMEs.

Opportunities and Threats

According to Drucker (1994) some of the sources of innovation are "changes in perception, mood and meaning, changes in industry structure or market structure, demographic changes, new knowledge, both scientific and non-scientific, the unexpected success or failure". These changes in environment and within organization bring opportunities and threat for the organization and force it to change processes or products and services in an innovative way. Same are the consequences for the SMEs that face change within and in environment. Opportunities and threats from these changing situations can lead to innovation in processes, services and infrastructural facilities that they are offering.

Need for Innovation

From marketing perspective (Szeto, 2000), innovation relies on the need and expectation changes of markets, which are then incorporated in the process of product development and emerge as marketable new products. One of the important sources of innovation identified by Drucker (1994) is process need. Innovation is the process of taking new ideas effectively and profitably through satisfied customers (DTI, 1996). The ideas that they give are about their needs or how to satisfy their needs. In the context of e-governance it is the need of citizens, government organizations and various stakeholders including SMEs that lead to innovation. Need can be for cutting costs, better communication, improving quality and efficiency, improving competitiveness, enhancing quality of life or ensuring continuity of the businesses.

International relationships, cooperation and dependence

In the current environment, SMEs need to develop stronger international relationships for which cooperation and sense of interdependence are important criteria. With different cooperative network types, innovation capacity will be improved that would have significant impact on new product development. For successful innovation business organizations need to form horizontal and vertical linkages. Advanced technologies cannot be created and implemented in isolation (Teece, 1986). According to Szeto (2000), the inter-organisational cooperative network facilitates the improvement of innovation capacity that comprises the resource and knowledge factors for cooperative networks. These days, e-collaborations, e-alliances and joint-ventures between government and non-government organizations of different countries for different reasons make the relationships of participating countries and economic inter-dependence more critical. The success or failure of the cooperation depends also on the support provided by government and this support has to be innovative. Therefore these International relationships, cooperation and dependence are another source of innovation in this model.

7. Implications and benefits of the innovation driven model of e-governance for SMEs

e-Governance approach will enable SMEs to gain knowledge of various opportunities and facilities available, target the most appropriate ones that meets their needs, acquire them in a cost effective way and finally manage them for furthering their businesses. SMEs need to come out of their shells into the open. Their orientation will shift from inwardly looking to outwardly looking organisations. Using e-governance practices, capacity of the owner-managers will enhance several folds to enable business development and growth. E-governance models will assist them to evaluate potential opportunities and their easy accessibility. E-governance, it is expected, would cause a cultural shift in the management of SMEs and in turn would make greater contributions to the economy. It would be imperative that the impact of new technologies on the shape and profile of the SMEs would also be profound and deterministic.

8. Concluding Remarks

With Globalization interdependence of nations and organizations has grown. The role of SMEs is becoming

all the more significant and ever growing. Economies are surging world wide, where various risks like rapid growth, unpredictable challenges, and extreme competition raise the stakes, affecting both the large organisations as well as smaller organisations. Technology is influencing not just the processes but also the shape and profile of almost everything that human beings are pursuing. In this environment, e-governance needs to be innovative, open, adaptable and flexible. In this paper a conceptual model of the impact of e-governance on SMEs has been discussed and various linkages and relationships amongst factors and sub-factors of the model have been identified. It has been concluded that e-governance will immensely benefit SMEs and that technology determinism will have greater impact on the shape and profile of the SMEs.

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About the Authors

V. Godara is a faculty in the Dept. of Business Systems in the School of Management at the University of Western Sydney, Australia. Her research, academic and consulting interests are in E-Business Management, E-business systems, e-governance, pervasive computing, innovation and computer-related waste management. Dr Godara holds B.SC. in Computer Science, M.B.A., M.C.A. and PhD qualifications.

R.K. Agrawal is a faculty in the Department of Business Systems in the School of Management at the University of Western Sydney, Australia. His research, academic and consulting interests are in Operations, Technology and Project Management, Entrepreneurship Development and Business Continuity Planning. Dr Agrawal holds B. Sc in Mechanical Engineering, PG in Industrial Engg., Grad Dip in Education and PhD qualifications.