

# **A MICRO LEVEL APPLICATION OF KNOWLEDGE BASED ECONOMY: CASE OF SRI LANKAN ENTREPRENEURS**

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## **1. INTRODUCTION**

Entrepreneurship leads to better performance. All the entrepreneurs extend a considerable contribution directly or indirectly to the economic development (Faculty of Management Studies and Commerce University of Sri Jayewardenepura, 2013). Entrepreneurship is therefore connected with the creation of new business ventures, the introduction of new innovative ideas and technologies, and the readiness to take the risks (Mazzarol, 2004). 'Knowledge Economy (KE) is an economy that based on knowledge and ideas, in which the key factor of prosperity and economic growth is the superior knowledge capitalization' (Tocan, 2012). Sustainable competitive advantage can be offered through the driving forces of economic growth, productivity growth and resources. There is no any universally accepted definition for knowledge economy. The World Bank (1996) introduced knowledge economy framework which includes four pillars and contributes to the economic growth and development. As a developing country Sri Lanka needs sustainable entrepreneurs who can boost the Sri Lankan economy. Even if one becomes entrepreneur either by education or by inheritance, it is important to know how to survive in a turbulent business environment. The main purpose of this study is to analyse awareness of entrepreneurs about KE when managing entrepreneurial ventures. This study has used a more differentiated approach than earlier studies which have mainly focused on the knowledge based economy assessment for a country. Therefore this study aims to understand the entrepreneurs' perception towards KE to make their entrepreneurial ventures a success.

## **2. LITERATURE REVIEW**

KBE uses knowledge in the production process as an input to generate knowledge intensive goods and services. In a KBE a firm's growth significantly depends on three factors such as knowledge accumulation, technical change and the innovative activities (Seddighi, 2012). According to the framework introduced by Seddighi (2012), there is a significant relationship between firm's core competence and firm's research and development activities. It is believed

that existence of core competence creates the research and development activities to develop core competencies over the time. That is firm's research and development activities depend on the level of understanding about core competence in a firm. When contrast with the Singapore KE, Sri Lanka should make stronger its R & D and grow innovations in its universities. Sri Lanka should create an innovative culture with a high protection of property rights. More focus should be given on university and private sector R & D activities (The World Bank, 2008). With the purpose of attracting creative talents, Singapore has created both supportive and encouraging environment to innovation and enterprises. The project called "One North" which launched in 2001 is becoming world class R & D hub for the scientists and entrepreneurs who are working in the biochemical science, ICT and media (The World Bank, 2008). World Bank stated that Sri Lanka should create a research environment similar to Singapore on a smaller scale by encouraging researchers to interact each other. When compared with China Sri Lanka does not have many challenges in developing domestic innovation system due to favorable political regime. 'Sri Lanka is having one of the most liberal economies in South Asia' (The World Bank, 2008). What Sri Lanka needs to get from China is that having a closed economy for a longer period will make difficulties to overcome when transforming country in to a KE. New firms creation helps to a country's economic growth and diversification. As discussed by Mayer (2013 cited by Thornton, 1999) new firms creation can be identified in two main ways. First one is the Supply Side Perspective which is based on the individual entrepreneurs who influenced by the family background, motivation and skills. Second perspective is known as Demand side for entrepreneurship based on the opportunities available in the economy, resources and market situations. Based on the case studies conducted in Hewlett Packard (HP) and Micron Technology firms operated in United States concluded that entrepreneurial firm formation is influenced by the types of products, production process and the corporate culture in an organization (Mayer, 2013).

### **3. OBJECTIVE**

This is mainly to carry out micro level analysis to identify link between the business environment and the four micro level performances. This study aims to explore how far micro level KE factors affect to the entrepreneurial ventures. Problem statement of this study can be identified as "What is the perception of entrepreneurs in Sri Lanka on the application of KE at micro level in the business world?"

#### 4. METHODS

This study is an exploratory study in the form of a case study. Data strategy was qualitative based on interview based data. Data analysis has adopted descriptive narrative presentation of interview data. The model was developed to be assessed based on four micro level factors introduced by the OECD which has few differences compared with the World Bank framework. Regulatory pillar which explains under World Bank framework is not available in OECD model. Instead of that firms creativeness and entrepreneurship is incorporated to the model. All other three pillars, Human resource, ICT, and innovation, are examined in both models using different variables. These Four micro level factors which are essential to successful KBE at business level were measured using entrepreneurial ventures.

Selected business ventures' situation is assessed through four micro level factors that are crucial to successful KBE. Institutional type of case studies was carried out to analyse the micro level performance of entrepreneurial ventures as measured by the following four pillars. They are 1) Enhancing human capital and realizing its potential, 2) Seizing the benefits of information and communications technology (ICT), 3) Exploiting and diffusing science and technology and 4) Fostering firm creation and entrepreneurship. The data is mainly obtained from a survey based interviews through a detailed questionnaire. Both quantitative and qualitative variables are examined. As secondary sources, annual reports of the selected companies, financial records, published materials, and various types of documents were considered.

For the purpose of collecting empirical data, structured survey based interviews were conducted for the selected two entrepreneurs. Purposive sampling technique is used to select the case participants. However entrepreneurs who engage in manufacturing sector are selected. Both entrepreneurs have won national entrepreneurship award given by the Federation of Chamber of Commerce and Industry of Sri Lanka (FCCISL) in recent years. It is the institute who provide best Sri Lankan entrepreneur award annually. Thus detailed questionnaire was used covering all Human capital, ICT, innovation and entrepreneurship aspects of the organizations. Further general view points of the entrepreneurs towards the knowledge economy was examined through semi structured interviews. Conversational recording was taken with the permission of the respondents due to the ethical issues that has to be addressed. To conduct these case studies, two victorious entrepreneurs who run business ventures very successfully were selected randomly. The two entrepreneurs selected were Nature's Beauty Creation Limited and Raigam Pvt Ltd.

## **5. FINDINGS AND DISCUSSION**

It was revealed that entrepreneurs in both companies follow good human resource management practices, sound ICT facilities, well established R & D centers and good creative and entrepreneurial environment in the company. Education level matters significantly, when establishing KE framework at micro level. However, even though top management in the NBC and Raigam were not well aware about the concept of KE, they have implemented relevant four factors to a certain extent within the companies. It is understood that without having such an environment, companies will not be able to survive in today's competitive world. Both companies admitted that they should have sound ICT facilities to increase the efficiency in operations. However NBC is not an IT based company; therefore it does not want to specialize in ICT facilities. On the other hand Raigam admitted that having geographically dispersed sales staff, it is very important to have good communication system such as PDA technology when managing the sales around the country. Although they have different ideologies in the ICT field, they have same philosophy in the R & D sector. Both entrepreneurs agreed that without having innovations time to time company will not be survived. In order to create new products it is vital to have its own research and development centre. Knowledge creation and dissemination is the main idea in KE. That reflects entrepreneurs always try to create new knowledge; that is new product based on their experiments. This should be matched with the market requirement. If not created new knowledge will not be accepted by the people and it will become a failure product. Therefore, importance of science and technology stream is well understood by both entrepreneurs. Considerable amount is spent annually for the R & D activities to find new knowledge. Entrepreneurs believe that, skilled human resource is needed to improve the efficiency in operations. Especially in the new product development process, major contribution is coming from the top management who has post graduate qualifications. In NBC, science based degree is a quality requirement to enter into the top management. Because company believes that, medicinal plant based production requires high level of quality assurance.

## **6. CONCLUSION**

In this case study analysis, it reveals that both firms are well concerned about R & D activities in order to create new knowledge. Companies spend reasonable amount of their revenue for the R & D activities annually. They believe that, profitability can be improved through the introduction of new products rather cutting their expenses. Therefore, in order to carry out experiments in the laboratory both companies are having good researches. Especially in the

NBC, as a herbal cosmetic manufacturing company, they highly concentrate the outcomes of R&D activities. Raigam, as a fast food manufacturing company always tries to create new food items which have both required amount of nutrition and the quality. As per the qualitative analysis, it can be concluded that, management of NBC and Raigam is implementing KE pillars at a certain level within the firms. However, NBC should be more concentrated on the improvements in ICT facilities and should be given more freedom to the employees to suggest new products. That is mainly because; application of ICT facilities in NBC is poor compared to the Raigam in the fields such as monitoring sales people. Both firms have creative entrepreneurial culture which always encourages innovations and new idea. Continuous R & D activities will help to create new products and processes which can be useful to increase the profitability of the firm. Raigam is always doing market research in order to understand the changes in the economy and NBC is more towards to the research on medicinal plants in order to create new herbal cosmetics to attract customers. When considering the entrepreneurs' perception towards KBE, even though management does not have theoretical knowledge about KE, they practice the same ideology when managing company's operations. Thus, it is suggested that understanding about KE pillars in more depth will contribute to improve their entrepreneurial ventures. Creation of knowledge is not solely valuable if it is not disseminated throughout the population. Therefore, finding should spread to the economy by protecting its credibility within the firm. However as stated by Samantha, existing administration system of intellectual property is not efficient. Entrepreneurs do not likely to obtain patent rights for their innovations due to the lack of transparency and the protectionism in the administration system. This might be a criticism to enhance the creativity and the entrepreneurship in Sri Lanka.

## REFERENCES

- Armstrong, P., & Tomes, A. (2000). Entrepreneurship in Science: Case Studies from Liquid Crystal Application. *Critical Studies in Innovation*, 133-147 (18).
- Ather, S.M., & Nimalathasam, B. (2010). Encouraging Entrepreneurship and Its impact on Economic Development in the Emerging Economy: An over view. In B.Nimalathasan, *Entrepreneurship : Perspectives and Strategies*. Devi Publication.
- Ballot, G., & Taymaz, E. (1997). The dynamics of RMS in a micro-to-macro model: The role of training, learning and innovation. *Journal of Evolutionary Economics*, 7, 435-457.
- Central Bank of Sri Lanka. (2013). *Annual Report*. Colombo, Sri Lanka.

- Faculty of Management Studies and Commerce University of Sri Jayewardenepura. (2013). *Selected case studies of National Entrepreneurs in Sri Lanka*. International Conference on Business Management (ICBM).
- Hewapathirana, I. (2014). Bridging, bonding and linking global entrepreneurs: the case of Sri Lanka. *Human Resource Development International*, 17 (2), 164-182.
- Kanellos, N.S. (2013). Exploring the characteristics of Knowledge-Based Entrepreneurship in Greek high-technology sectors.
- Kaya, N. (2006). The impact of human resource management practices and corporate entrepreneurship on firm performance: evidence from Turkish firms. *The International Journal of Human Resource Management*, 2074-2090.
- Lan, L., Eliza Ching, Y.T., & Ling Zhao, J. (2009). An Empirical Study of Corporate Entrepreneurship in Hospitality Companies. *International Journal of Hospitality & Tourism Administration*, 10 (3).
- Leydesdorff, L. (2006). While a Storm is Raging on the Open Sea. Regional Development in a Knowledge-based Economy. *Journal of Technology Transfer*, 31, 189-203.
- Lundstrom, A., & Zhou, C. (2011). Promoting innovation based on social sciences and technologies: the prospect of a social innovation park. *The European Journal of Social Science Research*, 24, 133-149.
- Mayer, H. (2013). Firm Building and Entrepreneurship in Second-Tier High- Tech Regions. *European Planning Studies*, 9 (21), 37-41.
- Mazzarol, T. (2004). Strategic Management of Small Firms:A Proposed Framework for Entrepreneurial Ventures.
- Mcquaid, R.W. (2002). Entrepreneurship and ICT Industries: Support from Regional and Local Policies. *Regional Studies*, 36 (8), 909-919.
- Managing Director, Natur's Beauty Creations Limited. *KE Perception of the Entrepreneurure*. Interviewd on 15.09.2015 by D.J. Peris. Horana, Sri Lanka.
- Managing Director, Raigam Group of Companies. *KE Perception of the Entrepreneurure*. Interviewd on 21.09.2015 by D.J. Peris. Horana, Sri Lanka.
- Organisation for Economic Co-Operation and Development (2007). *Micro-Policies for Growth and Productivity*, Paris
- Organisation for Economic Co-Operation and Development. (1996). *The Knowledge Based-Economy*, Paris.
- Perera, M., Amaratunge, S., & Amarasinghe, H. (2013). An analysis of Knowledge Economy in Sri Lanka : A Regional Perspective.

- Seddighi, H. (2012). A Model of a Firm's Innovation and Growth in a Knowledge Based Economy. *Journal of Knowledge Economy*.
- Suetens, S. (2002). R&D Subsidies and Production Effects of R&D Personnel: Evidence from the Flemish Region. *The International Journal of Human Resource Management*, 11.
- Tang, G., Wei, L.Q., E.S., & Y.C. (2014). How effective human resource management promotes corporate entrepreneurship: evidence from China. *The International Journal of Human Resource Management*, 16.
- The Department of National Planning. (2010). *Sri Lanka The Emerging Wonder of Asia*. Ministry of Finance and Planning, Colombo.
- The kingdom of Raigam. (n.d.). *The kingdom of Raigam*. Retrieved from <http://www.raigam.lk> [Accessed 02 July 2015]
- The World Bank (2008). *Building the Sri Lankan Knowledge Economy*. World Bank Public Information Center, Colombo.
- Tocan, M.C. (2012). Knowledge Based Economy Assessment. *Journal of Knowledge management, Economics and Information Technology*. 5.
- Westeren, K.I. (2008). On the Knowledge Economy. *The Journal of Regional Analysis and Policy*. 15
- World Bank. (n.d.). *World Bank*. Retrieved from <http://www.worldbank.org/en/country/srilanka/overview>. [Accessed 02 December 2015].