Chapter 1
Could Knowledge, Learning, and Innovation Gaps be Spiralling?

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ABSTRACT

The role of human resources managment (HRM) in creating a climate for innovation and learning is presented. The innovation processes innovation chains are shown to be evolutionary. Innovation chain activities include transformation into knowledge-based, then into a learning organisation, and finally, into innovative enterprises. This chapter also shows that during the innovation process, HRM has significant and critical roles in addressing two types of organisational defects, Learning Gaps and Innovation Gaps. The innovation chain may be a spiral chain, suggesting that there could be a cumulative effect on the strength of the gaps due to the spiral nature of the innovation chain.

INTRODUCTION

Rapid changes to business environments have led management to realise that avoiding being obsolete and to sustain competitive advantages, their organisations need to be innovative. While effective management practices can deliver a considerable contribution to the overall innovativeness of the organisation, the introduction of new products or services could lead to a change in the existing processes including changes in the organisational management practices. However, the current economic environments are characterized to some extents by strong globalization, complex operations, deep technological penetration and continuous changes to rules and regulations. Therefore there is a growing need for organizations to improve their competitive advantages further. There is a body of literature that points to the application of knowledge management techniques such as the ability to acquire, integrate, store, share and apply knowledge as being as important key competitive advantage (Zack 1999; Soliman and Youssef 2003; Rebelo and Gomes, 2008; Senge, 2006; and Kalkan 2008).

Knowledge is not a thing or substance, but is highly symbolic in character and is not disjoined from reality (Andriessen and van Den Boom,

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2007:647). A view of knowledge developed by the Persian philosopher, Avicenna (980AD–1037AD), is centred on wisdom. It is important to emphasize that the concept of wisdom is not antithetical to modern rational intellectual endeavour, including knowledge economy policy; indeed, his humanism called for science and reason to be applied to any problem (McKenna and Rooney 2005:307).

Scholars such as Daum (2001) proposed that "scenario planning can significantly reduce strategic risks and boost value in the innovation chain". Lin and Su (2001) refer to the innovation as technology chain, industry chain and technology innovation chain while Bamfield (2004) argue that the *Innovation Chain* is more concerned with the identification of opportunities for business arising from Research and Development projects. The link between innovation and management practices can be traced back to the work of Bolwijn and Kumpe (1990) who suggested that "Organisations that do not innovate run a large risk to become obsolete and to demise in the end".

The three innovation domains defined by Bolwijn and Kumpe (1990) are product innovation, process innovation and organisational innovation. Furthermore, Bolwijn and Kumpe (1990) suggest that organisations should also involve innovative management practices.

Hansen and Birkinshaw (2007) recommend viewing innovation as a value chain comprising three phases: idea generation, conversion, and diffusion. The tasks proposed by Hansen and Birkinshaw (2007) that need to be performed across the three phases in innovative firms include internal, external, and cross-unit collaboration.

The model for the innovation value chain presented by Roper, et al (2008) deals with innovation as an event that introduces new products or processes. Soliman (2011a) defined the innovation chain as a serious of activities that could be pursued over three stages as follows:

1. Transforming the organisation from a conventional information type into a knowledge based organisation;
2. Transforming the organisation from knowledge based organisation into Learning Organisation, and
3. Transforming the organisation from Learning Organisation into Innovative Organisation.

TRANSFORMATION INTO A KNOWLEDGE-BASED ORGANISATION (KBO)

According to Soliman (2011a) transforming an organisation from the general and traditional *information-based* type into *knowledge-based* type requires strategies designed to utilize knowledge that foster learning and ultimately supports innovation. However, these strategies need to engage human resources in order to facilitate the implementation of the appropriate knowledge management programs (Soliman, 2011b). Therefore the transformation into knowledge based organisation is a complex task that needs to be carefully executed so that the transformation does not hinder the organisation's innovative efforts and must fit with the organisation's strategic plans.

The link between information and competitive advantage was highlighted by Gustin *et al.* (1994) who purported that "Computers and information are critical to achieving integration and are increasingly viewed as resources to be used by the firms in gaining competitive advantage in the marketplace". In recent times, Soliman (2013, p. 141) pointed to the critical role of innovation as a driver and an enabler for achieving sustainable competitive advantages and referring to "innovation as a key competitive advantage."

The link between transformation into knowledge-based and organisational performances was highlighted by Clark and Soliman (1997) who argued that transformation into knowledge-based information technology could enhance the