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Knowledge Management Enabler Factors and Competitive Advantage: An Empirical Study in Pharmaceutical Industry in Andhra Pradesh, India

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Abstract:

Knowledge management has emerged as a strategic philosophy assisting firms to develop strategic capabilities to deal with the enhanced dynamism and uncertainty of the business environment. Through the systematic acquisition, creation, sharing, and use of knowledge, organisations develop, renew, and exploit their knowledge-based resources, thereby allowing them to be proactive and adaptable to external changes and attain competitive success. In this paper an attempt is made to study the effect of KM enablers on competitive advantage of the firm. To achieve these objects data is collected with the help of administration of structural questionnaire to senior managers in working in selected pharmaceutical companies in Andhra Pradesh using random sampling method and the collected data is analysed with the help of SPSS. From this study it is found that km enablers and process has significant impact on competitive advantage of the firm.

Keywords: *Competitive Success, Competitive Advantage, Knowledge-Based Resources, KM Enablers, Knowledge Management.*

1. Introduction

Knowledge management (KM) is the process of capturing, developing, sharing, and effectively using organizational knowledge (Davenport & Thomas, 1994). It refers to a multi-disciplined approach to achieving organizational objectives by making the best use of knowledge (2013). Knowledge Management is an established discipline since 1991, Knowledge Management includes courses taught in the fields of business administration, information systems, management, and library and information sciences (Nonaka & Ikujiro, The knowledge creating company, 1991; Nonaka, Ikujiro, Von Krogh, & Georg, 2009). More recently, other fields have started contributing to KM research; these include information and media, computer science, public health, and public policy (Bellinger & Gene, 2013). Many large companies and non-profit organizations have resources dedicated to internal KM efforts, often as a part of their business strategy, information technology, or human resource management departments. Several consulting companies provide strategy and advice regarding KM to these organizations (Addicot, et al., 2006). Knowledge management efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization (Gupta, Jatinder, Sharma, & Sushil, 2004). KM efforts overlap with organizational learning and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge (Maier, 2007).

1.1. Knowledge Management May be Viewed in Terms of:

- People – how do you increase the ability of an individual in the organization to influence others with their knowledge?
- Processes – Its approach varies from organization to organization. There is no limit on the number of processes.
- Technology – It needs to be chosen only after all the requirements of a knowledge management initiative have been established.
- Culture – The biggest enabler of successful knowledge-driven organizations is the establishment of a knowledge-focused culture
- Structure – the business processes and organizational structures that facilitate knowledge sharing

2. Literature Review

This research seeks to develop theoretical links and empirically examine the association between KM capability and CA. Therefore, the review of the literature in this section is provided.

The KM capability of a firm is combined with the presence of KM infrastructure (enablers) and KM processes (Gold, Malhotra, & Segars, 2001). Gold, Malhotra and Segars (2001) are among the first scholars in the field of KM to provide a comprehensive model of KM capability dimensions from the perspective of organisational capabilities. According to this model, the KM capability of a firm includes two key components: KM infrastructure and KM process capabilities. In particular, KM infrastructure capability consists of technology, structure, and culture, which form “a definitional basis for the theoretical framework of social capital”, while KM process capability is comprised of acquisition, conversion, application and protection processes which form “an operational perspective for the framework of knowledge combination and exchange that underlies the theory of knowledge integration” (Gold, Malhotra, & Segars, 2001).

Following this model, Manovas (2004) investigates the relationship between KM capability and knowledge transfer success, Smith (2006) explores the contribution of KM capability linked to the business strategy for organisational effectiveness, while Hsu (2006) examines the links between intellectual capital, KM process capability, organisational effectiveness, and CA. With modified dimensions of KM infrastructure capabilities, including leadership, culture, KM strategy, and technology fit, Khalifa and Liu (2003), instead of treating these elements independently without a consideration of their interrelationships, attempt to overcome this limitation, to some extent, by explaining an indirect effect of information technology on KM effectiveness through KM process capabilities.

Another significant model is derived from Lee and Choi (2003) and developed by Migdadi (2005). This model emphasises both technical and social perspectives of KM infrastructure or enablers and their impacts on organisational performance through the knowledge creation process and organisational creativity. KM enablers in this research include organisational structure (centralisation and formalisation), organisational culture (collaboration, trust, and learning), people (T-shaped skills), and information technology (IT support). Knowledge creation process adopts Nonaka’s (1994) SECI model which explores knowledge creation through the four knowledge conversion modes between tacit and explicit knowledge. The SECI modes consist of socialisation (the process of converting new tacit knowledge through shared experiences), externalisation (the process of transferring tacit knowledge into explicit concepts through the use of different metaphors, analogues, concepts, hypotheses and models), combination (the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge through social processes), and internalisation (the process of embodying explicit knowledge into tacit knowledge through actions and practice) (Lee & Choi, 2003; Migdadi, 2005; Nonaka, Toyama, & Nagata, 2000).

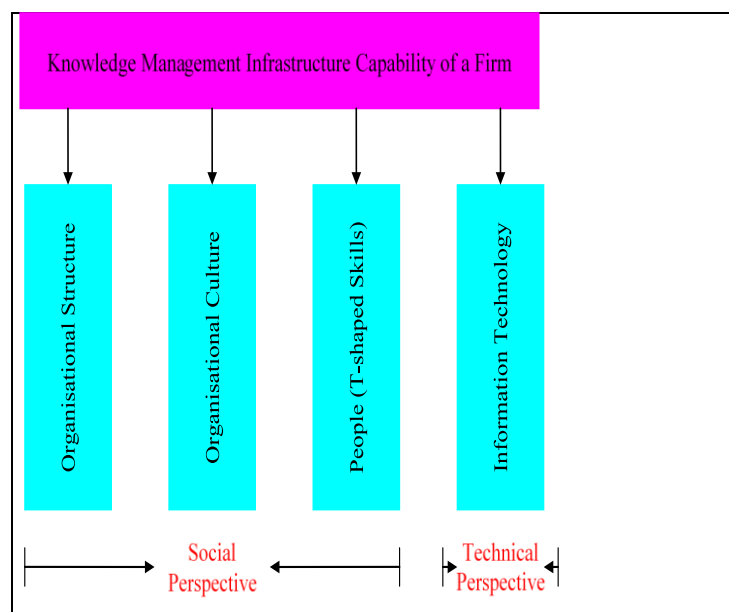


Figure 1: KM Infrastructure Capability incorporated into the research model

3. Need and Importance of the Study

In the old economy, firms had a choice between three generic strategies in their attempts to develop a competitive advantage namely cost leadership, market differentiation, and niche orientation (Porter, 1985). In the new economy which is characterised by properties such as globalisation, intangibility, and inter-connectivity, business organisations are required to face new challenges (Coyle, 1999; Kelly, 1998).

In particular, the globalisation of business activity coupled with the increasingly rapid development and diffusion of technology gradually led to an erosion of traditional sources of Competitive Advantage (Jacome, Lisboa, & Yasin, 2002), requiring firms to clearly understand the changing nature of competition and adopt complementary and/or supplementary strategic approaches (Jackson, Hitt, & DeNisi, 2003). One popular approach used to understand competitive dynamics is the resource-based view of the firm. According to this view, only those resources that are valuable, rare, hard to imitate, and cannot be substituted provide a

sustainable competitive advantage (Barney, 1991; Ferdinand, 1999; Hamel & Prahalad, 1994; Michalisin, Smith, & Kline, 1997; Porter, 1996; Teece, Pisano, & Shuen, 1997), leading to higher performance of the firm (Peteraf, 1993).

Jackson, Hitt & DeNisi (2003) argue that in any competitive landscape, intangible resources are likely to produce a CA, among which human capital is usually the most important because it is the most difficult to imitate. Moreover, in today's dynamic environment with its rapid and unpredictable changes, tangible assets have become easily accessible, imitable, and substitutable. As such, the foundations of organisational competitiveness have been shifting to an emphasis on knowledge (Riahi & Belkaoui, 2003). According to Walters, Halliday and Glaser (2002), knowledge is considered to be the only strategic asset which increases with use rather than diminishing. The competitive edge of individuals, enterprises, and even nations has increasingly become dependent on their ability to apply knowledge and leverage it in a continuous way (Dimitriades, 2005). In accordance with the knowledge-based view of the firm (Grant, 1996), managing knowledge-based resources has become the key for sustaining a CA and superior performance (Grant, 1996; Grover & Davenport, 2001; Jackson, Hitt, & DeNisi, 2003; Sharkie, 2003; Teece, Pisano, & Shuen, 1997).

In other words, knowledge management has emerged as a strategic philosophy assisting firms to develop strategic capabilities to deal with the enhanced dynamism and uncertainty of the business environment. Through the systematic acquisition, creation, sharing, and use of knowledge, organisations develop, renew, and exploit their knowledge-based resources, thereby allowing them to be proactive and adaptable to external changes and attain competitive success.

4. Research Method and Design

4.1. Objectives of the Study

- To study the key dimensions of the KM capability of a selected firms
- To study the interrelationships among different components of KM capabilities and their impacts on a firm's Competitive Advantage.

4.2. Research Hypothesis

- H1: Technical KM infrastructure capability has a positive impact on CA.
- H2: Social KM infrastructure capability has a positive impact on CA.
- H3: KM process capability has a positive impact on CA.

4.3. Nature of The Research: The research mainly descriptive in nature

4.4. The Research Design Process

The research design process for this study followed a three-stage approach, including: (1) questionnaire design, (2) a pilot survey, and (3) the main survey. The first step involved the operationalization of measures, which was achieved using the literature review to measure the constructs and design the draft questionnaire for pre-testing. In step two, 200 draft questionnaires were directly distributed to senior managers working in selected pharmaceutical companies in Andhra Pradesh. The 148 responses returned with complete data were assessed, using factor analysis and reliability testing, to refine and finalise the questionnaire administered to the main survey. For the last step, final questionnaires were posted to 362 senior managers working in selected pharmaceutical companies in Andhra Pradesh.

4.5. Sample Frame

In this study, the sampling frame was based on the list of all pharmaceutical enterprises located in Andhra Pradesh

4.6. Sampling Technique

Simple random sampling technique is used for collecting information from the selected respondents.

4.7. Method of Data Collection

In this research data is collected from the sample respondents with the help of administration of structural questionnaire.

4.8. Tools of Data Analysis

The collected data is analysed with the help of SPSS (20 version). In this research both descriptive and inferential statistics were used.

5. Analysis and Implication

Factors	Number of items	Cronbach Alpha (α)
KM process	15	0.67
Technical KM infrastructure	12	0.85
Social KM infrastructure	6	0.65
Competitive advantage	8	0.76

Table 1: Result of Reliability Analysis

Cronbach's alpha ranges between zero (0) and one (1); the higher the value, the more reliable the scale. However, researchers argue that there are no hard and fast rules for assessing the magnitude of reliability coefficients. For example, Nannally (1978) and DeVellis (2003) recommend a minimum level of 0.7 as an acceptable standard for demonstrating internal consistency. Although Van de Venn and Ferry (1980) indicate that acceptable values may be as low as 0.4 for broadly-defined constructs, many researchers considered this value as too low. For example, researchers like Flynn *et al.* (1994), and Malhotra and Grover (1998) state that a value of 0.6 is often used as a minimum boundary.

In this study, the coefficient alpha analysis is performed on each scale which is measuring the KM process is (0.67), Technical KM infrastructure (0.85), Social KM infrastructure (0.65) and for competitive advantage is (0.76).

Factor	Pearson Correlation (r)	Sig. (2-tailed)
Competitive Advantage	0.976**	0.000

Table 2: Correlation between KM Process Capability and Competitive Advantage

** Correlation is significant at the 0.01 level (2-tailed).

All knowledge management process aspects have a significant effect on the competitive advantage. As indicated in Table 2, the knowledge management process has strongly related with competitive advantage ($r=0.976$) which is significant at 0.01 level. , hypotheses H3 were proven valid.

Factor	Pearson Correlation (r)	Sig. (2-tailed)
Competitive Advantage	0.856**	0.003

Table 3: Correlation between Technical KM infrastructure capability and Competitive Advantage

** Correlation is significant at the 0.01 level (2-tailed).

From the table 3 it is inferred that there is strong relationship between Technical KM infrastructure capability and competitive advantage ($r=0.856$) which is significant at 0.01 level. From this result is H2 is proved

Factor	Pearson Correlation (r)	Sig. (2-tailed)
Competitive Advantage	0.814**	0.008

Table 4: Correlation between Social KM infrastructure capability and Competitive Advantage

** Correlation is significant at the 0.01 level (2-tailed).

There is a strong and positive influence of social KM infrastructure and competitive advantage ($r=0.814$) which is significant at 0.01 level. Hence, the hypothesis H2 is accepted.

6. Conclusion

In the New Economy characterised by properties such as globalisation, intangibility and interconnectivity, business organisations are required to face new challenges, especially the changing nature of competition coupled with the enhanced dynamism and complexity of the environment in which they operate. One of the current strategic philosophies assisting firms to develop strategic capabilities dealing with uncertainty is knowledge management (KM). Through the systematic acquisition, creation, sharing, and use of knowledge, organisations develop, renew and exploit their knowledge-based resources, thereby allowing them to be proactive and adaptable to external changes and attain competitive success.

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