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A REVIEW OF THE THEORETICAL VIEWS OF THE FIRM – THE FOUNDATION OF RESEARCH ON THE IMPACT OF KNOWLEDGE MANAGEMENT AND INTELLECTUAL CAPITAL ON ORGANIZATIONAL PERFORMANCE

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ABSTRACT

In a knowledge-based economy, the competitive environment moves and changes very fast whereas knowledge, as a crucial resource, enables organizations to employ other resources much more efficiently. In order to survive and thrive, a firm must manage the knowledge it has and create more new knowledge in the forms of talent, skills, and competencies. Therefore, knowledge management and intellectual capital play a crucial role in enhancing efficiency, boosting competitiveness, and improving productivity in firms. Knowledge management and intellectual capital have been the focus of research in both academic and business environment because they enable businesses to achieve and sustain a competitive advantage. Research on the impact of knowledge management and intellectual capital on organizational performance has been long based on one or more theoretical views of the firm. The most popular ones among them are the Resource-Based View (RBV) of the firm, the Knowledge-Based View (KBV) of the firm, the Knowledge Chain Theory (KCT), and the Intellectual Capital-Based View (ICBV) of the firm. This paper aims to review these well-known theories to illuminate what they postulate, on which innumerable researchers have successfully conducted various studies of the impact of either knowledge management or intellectual capital on firm performance.

Keywords: KNOWLEDGE MANAGEMENT (KM), INTELLECTUAL CAPITAL (IC), RESOURCE-BASED VIEW (RBV) OF THE FIRM, KNOWLEDGE-BASED VIEW (KBV) OF THE FIRM, INTELLECTUAL CAPITAL-BASED VIEW (IC-BV) OF THE FIRM, KNOWLEDGE CHAIN THEORY (KCT)

INTRODUCTION

In a knowledge-based economy, the competitive environment moves and changes very fast whereas knowledge, as a crucial resource, enables organizations to employ other resources much more efficiently. In order to survive and thrive, a firm must manage the knowledge it has and create more new knowledge in the forms of talent, skills, and competencies. Besides knowledge, information and information technology are the dominating resources. Academic researchers and business leaders have paid significant attention to the role of knowledge in global competitiveness. They all believe that intellectual capital enables firms to maintain competitive advantage and sustain corporate performance. The assets of firms are no longer solely based on tangible assets. It is the intangible assets or intellectual capital that may determine the firm's real value. In extreme cases, some firms only depend on their intangible assets to survive and thrive in the new economic environment. Intellectual capital is now the primary resource for companies to create, gain, and sustain competitive advantage.

Therefore, knowledge management and intellectual capital play a crucial role in enhancing efficiency, boosting competitiveness, and improving productivity in firms. Knowledge management and intellectual capital have been the focus of research in both academic and business environment because they enable businesses to achieve and sustain a competitive advantage. Research on the impact of knowledge management and intellectual capital on organizational performance has been long based on one or more theoretical views of the firm. The most popular ones among them are the Resource-Based View (RBV) of the firm, the Knowledge-Based View (KBV) of the firm, the Knowledge Chain Theory (KCT), and the Intellectual Capital-Based View (ICBV) of the firm.

This paper aims to review these well-known theories to illuminate what they postulate, on which innumerable researchers have successfully conducted various studies of the impact of either knowledge management or intellectual capital on firm performance. This research paper is organized as follows: After the introduction, each of the above-mentioned theories is discussed in its section, and the paper is concluded with the conclusions.

RESOURCE-BASED VIEW OF THE FIRM

There exist various theories that postulate different views of the firm. Although there may be many differences in what these theories state, the central question all of them try to answer is what makes firms different from each other (Al-Musali & Ku Ismail, 2014; Grant, 1996a, 1996b; Huang, 2011; Nelson, 1991; Verona & Ravasi, 2003; Zack et al., 2009). Why does this firm compete against its competitors much better than another one (Andreeva & Kianto, 2012; Slavkovic & Babic, 2013)? How can a firm achieve much better business performance than others in the same industry (Mehri et al., 2013; Mills & Smith, 2011)? One of the theories of the firm most-mentioned in the literature is the resource-based view (RBV).

To the above question, the theory provides an answer that some of organizational resources possessed by a firm – labeled as strategic resources – and how these resources are managed enable it to gain competitive advantage and achieve superior performance (Al-Musali & Ku Ismail, 2014; Andreeva & Kianto, 2012; Barney, 1991; Grant, 1996a, 1996b; Han & Li, 2015; Liao & Wu, 2009; Mehri et al., 2013; Patton, 2007; Verona & Ravasi, 2003; Wernerfelt, 1984; Zack, 1999; Zollo & Winter, 2002). This theory argues that strategic resources help a firm compete better and operate more efficiently because they are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991; Han & Li, 2015).

KNOWLEDGE-BASED VIEW OF THE FIRM

According to Slavkovic and Babic (2013), when the human society transitioned into the knowledge era with a knowledge-based economy, the focus of resource-based perspective has been extended to the knowledge-based view (KBV) of the firm. The new theory considers knowledge as a firm strategic resource (Andreeva & Kianto, 2012; Grant, 1996a, 1996b; Kianto et al., 2014; Kogut & Zander, 1992; McEvily & Chakravarthy, 2002; Miller, 2002; Narasimha, 2001; Spender, 1996; Zack et al., 2009).

In the knowledge-based perspective, firms create, acquire, and distribute knowledge as a strategic asset to gain competitive advantage and achieve superior performance (Andreeva & Kianto, 2012; Grant, 1996a, 1996b; Kianto et al., 2014; Kogut & Zander, 1992; McEvily & Chakravarthy, 2002; Miller, 2002; Narasimha, 2001; Spender, 1996; Zack et al., 2009). It is noticeable that not only does the new viewpoint out knowledge as a strategic resource but also focuses on how this crucial resource is employed and coordinated to create value for firms, i.e., how knowledge is managed or knowledge management (Andreeva & Kianto, 2012).

KNOWLEDGE CHAIN THEORY

RBV and KBV are supported by another separate stream of research. Based on Michael Porter's value chain analysis (Porter, 1985), Holsapple and Singh (2001) developed the knowledge chain theory (KCT) identifying nine KM activities that enable a firm to capitalize on its knowledge resource, gain competitive advantage, and then achieve superior performance. These KM activities are classified into five primary activities and four secondary ones (Holsapple & Joshi, 2004; Holsapple & Singh, 2001). According to Holsapple and Singh, the five primary activities in the knowledge chain model are knowledge acquisition, knowledge selection, knowledge generation, knowledge internalization, and knowledge externalization.

Knowledge Acquisition

Knowledge acquisition refers to the act of acquiring knowledge from the organization's external environment and transforming it into a suitable representation that is ready for subsequent use (Holsapple & Singh, 2001). Examples of knowledge acquisition include acquiring a company rich in intellectual assets, conducting an external survey, sending employees to external training, acquiring patents, hiring new employees (and bringing their knowledge, skills, and talent into the organization) (Holsapple & Singh, 2001). In the case of employees' off-campus training activities, they capture new knowledge from instructors via lectures, discussion, and hands-on practice. Each employee internalizes the newly-learned knowledge (Holsapple & Singh, 2001). After the training, the employees may transfer the new knowledge to their organization via performing presentation to colleagues, using the knowledge to improve existing processes or even creating more new knowledge by making decisions (Holsapple & Singh, 2001).

Knowledge Selection

Knowledge selection indicates the act of selecting knowledge from some internal sources and making it suitable for subsequent use (Holsapple & Singh, 2001). Knowledge selection is similar to knowledge acquisition except for the fact that knowledge selection is involved with existing knowledge resources of an organization, not those in the external environment (Holsapple & Singh, 2001). It is considered as the most important KM activity within an organization (Holsapple & Singh, 2001). All other KM activities must interact with the existing knowledge of the organization via knowledge selection (Holsapple & Singh, 2001). Examples of this activity include assigning qualified employees to work on a brand-new project, choosing an appropriate process to perform some tasks in a company, or extracting needed information from a repository database to provide customer support (Holsapple & Singh, 2001). In the case of selecting employees to join a

team that will develop a new product or service, appropriate employees – and their appropriate knowledge – are identified, chosen, and given responsibilities to shoulder the development work. The example illustrates how vital knowledge selection activity is for corporate operation (Holsapple & Singh, 2001).

Knowledge Generation

Knowledge generation is related to the act of creating knowledge by either discovering or deriving the new intellectual resources from existing knowledge (Holsapple & Singh, 2001). Discovery generates knowledge via imagination, creativity, and synthesis. Based on both existing descriptive knowledge (data, information) and process knowledge (procedures, rules), derivation produces new descriptive and process knowledge via analysis, reasoning, and constructive skills (Holsapple & Singh, 2001). Examples of knowledge generation include recognizing and solving problems, making decisions, brainstorming, forecasting new trends in business or technology, and creating a software algorithm (Holsapple & Singh, 2001). In the knowledge-intensive process of decision making, new knowledge is produced about some course of action that needs to be taken (Holsapple & Singh, 2001). Before the decision is made, the knowledge about what course of action should be taken does not exist. In this case, the new knowledge is typically generated based on existing procedural knowledge, reasoning knowledge, and constructive knowledge (Holsapple & Singh, 2001).

Knowledge Internalization

Knowledge internalization refers to activities that change the state of existing organizational knowledge resources that have been acquired, selected, or generated via distributing and storing (Holsapple & Singh, 2001). Examples of knowledge internalization include knowledge sharing, populating a data warehouse, in-house training, posting an idea on an intranet, changing organizational culture, and making experts' knowledge available via an expert system (Holsapple & Singh, 2001). In the case of modifying organizational culture, this activity involves an organization's principles, values, rules, procedures, and norms (Holsapple & Singh, 2001). For example, if the knowledge that a positive attitude towards risk taking is critical to a company's success becomes a fixture of its culture, this cultural shifting can encourage employees to be more creative and innovative in their work (Holsapple & Singh, 2001), which leads to more success in the firm's business.

Knowledge Externalization

Knowledge externalization is related to activities that employ available knowledge to produce organizational outputs that are released into the external environment (Holsapple & Singh, 2001). Examples of knowledge externalization include manufacturing a new product or service, giving lectures or presentation to employees of other organizations, providing technical support to customers, developing an advertisement, and publishing market research (Holsapple & Singh, 2001). For product manufacturing, some product is produced to target a specific demographic of customers. This activity requires product design knowledge and process knowledge (Holsapple & Singh, 2001). When the product has been manufactured, it is released into the external environment to reach customers (Holsapple & Singh, 2001).

Besides the five primary activities, Holsapple and Singh also discussed at length the four secondary activities of the knowledge chain model that are knowledge leadership, knowledge coordination, knowledge control, and knowledge measurement.

Knowledge Leadership

Knowledge leadership enables conditions that make the implementation of KM initiatives successful through other activities (Holsapple & Singh, 2001). This activity is distinguished by such characteristics of being inspiring, sowing trust and respect, cultivating a creative and innovative culture, and establishing a vision (Holsapple & Singh, 2001). Knowledge leadership is crucial to an enterprise's KM strategy. Otherwise, it cannot effectively leverage intellectual resources to achieve strategic business goals (Holsapple & Singh, 2001).

Knowledge Coordination

Knowledge coordination involves guiding the implementation of KM initiatives in an organization (Holsapple & Singh, 2001). This activity manages the dependencies and interactions among knowledge resources, among KM activities, between intellectual resources and other resources including physical and financial resources, and between knowledge resources and KM activities (Holsapple & Singh, 2001). Examples of knowledge coordination include setting up programs to encourage learning, establishing incentives to cultivate KM behaviors, and assigning appropriate coordinators to promote KM activities across different departments and divisions within an organization (Holsapple & Singh, 2001). With programs that foster organizational learning, for example, at a consulting firm, employees are expected to document what they have learned while doing their jobs. A part of their compensation is based on how often their documentation has been used by other colleagues in their jobs. It is evident that the coordination activity has a significant impact on the employees' KM behavior (Holsapple & Singh, 2001).

Knowledge control

Knowledge control is related to ensuring that needed intellectual resources are available for use adequately – in both quantity and quality – subject to constraints and within the guideline of protection (Holsapple & Singh, 2001). Examples of knowledge control include developing technological capability to safeguard intellectual assets, ensuring sufficient knowledge resources, guaranteeing an adequate quality of data retrieved from a database system, and establishing and enforcing controls over KM activities (Holsapple & Singh, 2001). It is noticeable that having the ability to measure knowledge resources can enhance the capacity to manage intellectual assets, which leads to effective management of knowledge activities (Holsapple & Singh, 2001).

Knowledge measurement

Knowledge measurement involves the valuation of knowledge resources and assessing how effectively these intellectual assets are managed (Holsapple & Singh, 2001). This activity includes performance review, benchmarking, quantitative methods, and qualitative assessment. Knowledge measurement is the basis for evaluating how well other secondary KM activities – knowledge leadership, knowledge coordination, and knowledge control – have been conducted (Holsapple & Singh, 2001). The activity helps to identify and recognize value-adding intangible assets. Most importantly, knowledge measurement is the foundation for assessing the execution of KM

activities and for evaluating the impact of KM implementation on organizational performance (Holsapple & Singh, 2001).

According to KCT, the combination of all these KM activities – both primary and secondary – has a significant impact on firms' operating outcomes (Holsapple & Jones, 2005; Holsapple & Joshi, 2004). The theory also postulates that each of these activities can be carried out individually for the improvement of competitiveness and performance (Holsapple & Jones, 2005; Holsapple & Wu, 2013, 2011). Moreover, these KM activities help firms achieve better performance in four main areas: superior productivity, agility, innovation, and reputation (PAIR) (Holsapple & Wu, 2013, 2011).

CONCLUSIONS

In summary, based on these theories of the view of firms, researchers have successfully examined the impact of either knowledge management or intellectual capital on organizational performance, generally, and on each of its elements such as profitability, productivity, and market value, particularly. Thanks to these theoretical foundations, academic researchers and practitioners in the knowledge management and intellectual capital fields have greatly contributed to the accumulation of empirical evidence of these impacts, which have far-reaching implications in various research fields as well as in different business sectors all over the world.

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