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Human Resource Management and Knowledge Management: A Road Map Toward Improving Organizational Performance

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ABSTRACT

The revolution of information technology is currently breaking organizational hierarchy, boosting communication, and creating a new art of production. Globalization is leading to increased competition, and customer satisfaction is the key word to ensure survival and competitiveness. In this context, knowledge management (KM) has become a must to ensure organizational effectiveness. The knowledge management literature has currently reached the point of acknowledging the importance of people management themes, but has not made the next step of investigating and theorizing these issues in detail. These two fields of human resource management (HRM) and knowledge management are still somehow disconnected. This paper argues that combining human resource management initiatives with those of knowledge management will help improve organizational performance. Drawing on the resource-based view (RBV) of the firm, this paper combines the advances from three different areas of research – intellectual capital, knowledge management, and human resource management – in order to uncover a more holistic perspective on organizational performance.

INTRODUCTION

This paper argues that not enough attention has been paid to human capital and its role in the competitive advantage of business in today's knowledge economy. While much of the early knowledge management literature was heavily focused on technological issues, this has changed, such that the importance of human and social factors has been increasingly recognized. Paradoxically, however, while the importance of these issues has been widely articulated, people management perspectives have yet to be fully developed, and the KM literature has made only partial and limited use of human resource management concepts and frameworks.

Drawing on the resource-based view of the firm, the aim of this paper is to draw a road map toward improving organizational performance by combining HRM and KM initiatives. The paper examines the literature of three perspectives from the strategic management literature – knowledge management, intellectual capital, and human resource management – in an attempt to integrate those three fields to improve organizational performance.

We will first expose the resource-based view of the firm and discuss it from a human resource management perspective. We will then articulate the knowledge management literature with that of human resource management and intellectual capital and discuss how the combination of those three different fields can improve organizational performance. We conclude that knowledge management initiatives converge with the management of people toward developing intellectual capital and boosting a firm's performance.

THE RESOURCE-BASED VIEW

The resource-based view of the firm (Wernerfelt, 1984; Barney, 1991; Amit & Schoemaker, 1993; Peteraf, 1993) examines the manner in which organizational resources are applied and combined, the causes that determine the attainment of a sustainable, competitive advantage, and the nature of rents generated by organizational resources. On the basis of this theory, the firm is viewed as the accumulation of unique resources of a diverse nature (Wernerfelt, 1984). Amit and Schoemaker (1993) define resources as stocks of available factors that are owned or controlled by the firm. These resources consist of know-how that can be traded (e.g., patents and licenses), financial or physical assets (e.g., property, plant, and equipment), human capital, and so on (Grant, 1991). On the other hand, Barney (1991) defines firm resources as all assets, capabilities, organizational processes, firm attributes, information, knowledge, and so on controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.

These numerous possible firm resources can be conveniently classified into three categories: physical capital resources (Williamson, 1975), human capital resources (Becker, 1993), and organizational capital resources (Tomer, 1987). Physical capital resources include the physical technology used in a firm, a firm's plant and equipment, its geographic location, and its access to raw materials. Human capital resources include the training,

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experience, judgment, intelligence, relationships, and insight of individual managers and workers in a firm. Organizational capital resources include a firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment.

Organizational capabilities characterize the dynamic, nonfinite mechanisms that enable the firm to acquire, develop, and deploy its resources to achieve superior performance relative to other firms (Dierickx & Cool, 1989). Capabilities are dependent upon the firm's capacity to generate, exchange, and utilize the information needed to achieve desired organizational outcomes through the firm's human resources (Amit & Schoemaker, 1993).

In order for organizational resources to become a source of sustainable competitive advantage, Barney (1991) argues that these resources must be rare, valuable, without substitutes, and difficult to imitate. These resources can be viewed as bundles of tangible and intangible assets, including a firm's management skills, its organizational processes and routines, and the information and knowledge it controls. Among the firm's resources, intangible resources are more likely to produce a competitive advantage because they are often rare and socially complex, thereby making them difficult to imitate (Itami, 1987; Barney, 1991; Peteraf, 1993; Black & Boal, 1994). Furthermore, intangible resources are difficult to change except over the long term (Teece, Pisano, & Shuen, 1997). Most particularly, human capital has long been argued as a critical resource in most firms (Pfeffer, 1994). Recent research suggests that human capital attributes (including education, experience, and skills) and, in particular, the characteristics of top managers affect firm outcomes (Huselid, 1995; Wright, Smart, & McMahan, 1995; Finkelstein & Hambrick, 1996).

The resource-based view and human resource management

Within the field of human resource management, the RBV has made important contributions in the rapidly growing area of strategic human resource management (Wright, Dunford, & Snell, 2001). In resource-based thinking, HRM can be valued not only for its role in implementing a given competitive scenario, but for its role in generating strategic capability (Barney, 1991), for its potential to create firms which are more intelligent and flexible than their competitors over the long haul, firms which exhibit superior levels of co-ordination and co-operation (Grant, 1991).

The resource-based view suggests that human resource systems can contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific, produce complex social relationships, are embedded in a firm's history and culture, and generate tacit organizational knowledge (Barney, 1991; Wright & McMahan, 1992). Conversely, to the extent that HR systems inhibit the mobilization of new competencies and/or destroy existing competencies, they may contribute to organizational vulnerability and competitive disadvantage. In resource-based terms, HR policies and practices may be valuable because they are socially complex (i.e., competitors may not be able to replicate the diversity and depth of linked processes that sustain them) and historically sensitive (Barney, 1991; Wright, McMahan, & McWilliams, 1994).

KNOWLEDGE MANAGEMENT

Despite the fact that the literature includes numerous typologies for organizational knowledge - scientific and practical (Hayek, 1945), objective and based on experience (Penrose, 1959), procedural (Winter, 1987), incorporated (Zuboff, 1988), migratory and embedded (Badaracco, 1991), and codified (Blacker, 1995) - the most frequently used is the one that distinguishes between tacit and explicit knowledge, proposed by Polanyi (1966) and later utilized by other authors.

Tacit knowledge (Spender, 1996) is acquired through experience. It is personal and, therefore, difficult to formalize, communicate and share with others. It consists of a technical dimension often referred to as know-how and a cognitive dimension that includes schemes, mental models and beliefs, in short a conception of reality (Hussi, 2004). On the other hand, explicit or codified knowledge (Polanyi, 1966) is transmittable through formal, systematic language, and may adopt the form of computer programs, patents, diagrams, or similar attributes (Hedlund, 1994). Explicit knowledge can be conceptualized and stored in information systems (Hussi, 2004). Much of organizational knowledge is tacit (Cook & Yanow, 1993). That is, it is generated through the experience that the daily work consists of. Due to these experiences, employees who make up the organization maintain a "shared meaning network". The essence of knowledge creation is the interaction between tacit and explicit knowledge, rather than

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tacit or explicit knowledge acting separately. It is this dynamic interaction that generates innovations and, furthermore, organizational knowledge (Hussi, 2004).

Knowledge management and human resource management

Although KM is typically defined to be the holistic combination of measures for managing people, processes, and technology, the explicit integration of HRM into KM initiatives is seldom examined. Personnel issues are now arguably regarded as the key factor most likely to affect the outcome of KM initiatives. Therefore investigating and theorizing people management issues represents an important task. Two important pieces of work have engaged with this task by mapping out an agenda of the most important linkages (Scarbrough & Carter, 2000; Storey & Quintas, 2001). The idea is that the success of any KM initiative is likely to be critically dependent on having suitably motivated people taking an active role in the process (Robertson & O'Malley Hammersley, 2000).

The personal nature of knowledge means that the agency of the person who possesses it is required for it to be shared, and that the departure of workers from organizations also results in a loss of knowledge. Further, the typically conflictual nature of organizational life, combined with the fact that knowledge represents an important potential power resource, means that it may not necessarily be straightforward to get people to share their knowledge (Hislop, 2003).

Although some analysts believe that information technology is a key driver for knowledge management, others disagree with this view and believe that knowledge management is about people not technology (Soliman & Spooner, 2000). It is widely accepted that human resource management requires a mix of skills in working with tacit and explicit knowledge. Knowledge in areas such as conflict resolution, employee appraisals, customer satisfaction, business intelligence, and competitor information is a mixture of tacit and explicit, and hence requires skills in handling both (Soliman & Spooner, 2000).

In the course of prevailing trends like globalization, customer orientation, and specialization, most of the companies place emphasis on recruitment, sustainability, and evolution of qualified employees. The companies are aware of the fact that human resources have changed more and more from a cost factor to as success factor. Companies that have realized this fact seek to strategically manage their human management to create value. In order to create, capture, organize, access, and use knowledge, human resources departments play a significant role through assistance in ensuring appropriate management philosophy, sound job designs, suitable recruitment and selection policies, effective training, high motivation and low individual stress, and fair rewards and development opportunities.

According to Soliman, Innes, and Spooner, (1999), additional roles for the human resources departments in driving the knowledge management interventions could be linked to assisting staff that is consistently experiencing difficulties such as lack of progress towards goals, inappropriate leadership, failure to make sound decisions, interpersonal hostility, role confusion or alienation, and high turnover and absenteeism.

Knowledge Management and Intellectual Capital

Conceptualizations of intellectual and human capital and knowledge management are common currency in the strategic HRM literature (Nonaka & Takeuchi, 1995; Edvinnson & Malone, 1997; Marsick & Watkins, 1999). These advocates of the human capital approach assert that many of the assets that individuals bring to the organization are intangible, premised in individual, tacit knowledge rather than the more explicit, explicated, formal, routine, and standardized knowledge. The argument runs along the lines that value is added to organizations by installing such personnel knowledge into knowledge management systems that organizations create and use (Garavan, Morely, Gunnigle, & Collins, 2001).

A stream of research (Edvison & Malone, 1997; Bontis, 1998; Bontis, Chua Chong Keow, & Richardson, 2000; Ordóñez de Pablos, 2002) analyses knowledge stocks in the firm and accept that there are knowledge stocks in different ontological levels: at the individual level, at the group level, and at the firm level. Let's describe these knowledge stocks. First, knowledge stocks at the individual level - human capital - represent the knowledge, skills, capabilities, experience, and commitment of the employees of the firm (Bontis, 1998). Second, most conceptualization of knowledge stocks at the group level - relational capital - consider them as the knowledge embedded in a firm's relations both with current and potential customers, suppliers, shareholders, local and national administrations, environment and other agents. Finally, knowledge stocks at the firm level - structural capital - represent knowledge that has moved from individuals or the relationships among individuals to be embedded in the

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organizational structures, like it is in the case of the organizational culture, policies, routines, or procedures. Bontis et al. (2000) consider that structural capital "includes all the non-human storehouses of knowledge in organizations which include the database, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value" (p. 88).

Summarizing, human capital, relational capital, organizational capital, and technological capital respectively represent strategic knowledge stocks that can contribute to the creation of a long-term competitive advantage (Ordóñez de Pablos, 2003). Since our main focus is on HRM and KM, we will discuss how the firm's human capital can be a source of competitive advantage; the relational and organizational capital are not within the scope of this paper.

A firm's human capital is believed to be an important source of sustained competitive advantage (Barney, 1991). This is especially so for those firms operating in complex and dynamic competitive environments where the capability to rapidly acquire and assimilate new market and technological capabilities is the key to enduring advantage over competitors. Human capital is defined as the individual's knowledge, experiences, capabilities, skills, creativity and innovativeness (Edvinsson & Malone, 1997). These elements are connected to each other and collectively contribute to success in work (Ranki, 1999). Sveiby (1997), who uses the concept "employee competence", defines it as a capacity to act in different situations to create both tangible and intangible assets. Hudson (1993) defines human capital on an individual level as the combination of these four factors: your genetic inheritance, your education, your experience, and your attitudes about life and business. Human capital is important, because it is a source of innovation and strategic renewal. Human capital is also a primary component of the intellectual capital construct (Edvinsson & Malone, 1997; Stewart 1997; Sveiby, 1997; Bontis & Fitz-Enz, 2002).

The fact that a company cannot own its human capital distinguishes this dimension of intellectual capital from the other company resources (Edvinsson & Malone, 1997). Uncertainty about an employee's commitment to the organization reduces the organization's willingness to make these investments, especially if, as in many branches, the required skills are non-specific and transferable (Albert & Bradley, 1997). Yet, a competent personnel is the key in a company's endeavor to realize and develop its business ideas (Sveiby, 1990; Hansson, 2001).

How can a firm develop its human capital? We believe that this can be done through the proper design and implementation of HR practices and systems embedded in the firm's KM initiatives.

HUMAN RESOURCE MANAGEMENT AND KNOWLEDGE MANAGEMENT: A ROAD MAP TOWARD IMPROVING ORGANIZATIONAL PERFORMANCE

Many organizations are operating today in a complex and dynamic environment that is urging them to rethink and redefine their business strategies and the source of their competitive advantage. In today's economy, performance is evaluated in terms of creativity, innovation, quality, and flexibility. In this context, understanding the potential of an organization's resources and optimizing the output of such resources provides an opportunity for the human resource management function to become a key source for creating a competitive advantage and adding value to the organization. Thus, the role of people is being redefined, and many organizations are realizing that people are a valuable asset, and that human resource managers have a strategic role to play to create and implement human resource policies, systems, and practices that will develop the firm's "Human Capital" and boost its performance.

Organizations perform well and create value when they implement strategies that respond to market opportunities by exploiting their internal resources and capabilities (Penrose, 1959). Therefore, managers need to understand what are the key resources and drivers of performance and value in their organizations. Traditionally, those resources were physical, such as land and machines, or financial capital. More recently, the concept of intellectual capital has been identified as a key resource and driver of organizational performance and value creation (Itami, 1987; Nahapiet & Goshal, 1998; Teece, 2000).

The bottom line of value creation processes is organizations' combined capacity to deploy their more or less unique resources and their intangible and tangible assets. Sustained successful performance of an enterprise depends on it continuing ability to produce and deliver customer-valued outcomes in a competitively superior manner. The firm's ability to create and deliver competitively superior value to its customers, in turn, depends on the

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collaborative efforts of its highly motivated, skilled, capable, creative, and knowledgeable people. Such people constitute the firm's appreciated "Human Capital" (Rastogi, 2003).

A basic premise of the human capital theory is that firms do not own it; individuals do. Firms may have access to valuable human capital, but either through the poor design of work or the mismanagement of people, may not adequately deploy it to achieve strategic impact (Wright et al., 2001). Thus, for the human capital to create value, we need a good management of people – that is, a set of well-developed HR practices and a favorable learning environment to encourage people to deploy their skills, and thus, create value. Value can only be created if the members of the human capital pool individually and collectively choose to engage in behavior that benefits the firm. Human resource management practices and systems can play a major role in channeling employees' skills and behaviors toward improving organizational performance.

According to Becker and Huselid (2000), human resource management's contribution to value creation is a firm's strategy based on people as a source of competitive advantage, and a firm's culture to share those values. The key to success is to ensure that the firm can attract and maintain knowledge workers through appropriate human resource management practices. According to Becker, Huselid, and Ulrich (2001), employees create value when they help implement a firm's strategy. If they are not able to do so, their talent has no value. Therefore, HR professionals should understand the required competencies that can help implement a firm's strategy. Then, they should develop a set of HR systems and practices that help develop those competencies.

Can HR practices create value to the firm? Wright et al. (1994) made a clear distinction between the firm's human resources (i.e., the human capital pool) and HR practices (those HR tools used to manage the human capital pool). In applying the concepts of value, rareness, inimitability, and substitutability, they argued the HR practices could not form the basis for sustainable competitive advantage since any individual HR practice could be easily copied by competitors. Rather, they proposed that the human capital pool (a highly skilled and highly motivated workforce) had greater potential to constitute a source of sustainable competitive advantage. These authors noted that to constitute a source of competitive advantage, the human capital pool must have both high levels of skill and willingness (i.e., motivation) to exhibit productive behavior. Thus, to create value, HR practices are not enough; they need to be seconded by knowledge management practices that will ensure the development of employees' skills and competencies.

Although time and competition tend to erode the strategic position of human capital, firms may be able to counteract these natural forces (Lepak & Snell, 1999). The resource-based view of the firm points out that firms can avoid the decay of their knowledge stocks at individual level (human capital) by striving to make knowledge, skills, and capabilities more valuable and/or unique. As Lepak and Snell (1999) state "to make the deployment and value of human capital more specific, managers logically may try to enhance the uniqueness of human capital by customizing or adjusting skills ... managers may use HR investments to increase the uniqueness of human capital so they might strive to make human capital more valuable" (pp. 43-44). One way to get these specific knowledge stocks at the individual level (human capital) is through an internal HRM system (Ordóñez de Pablos, 2003). One can accomplish this through investing in constant training and development of employees to perform work processes and procedures that are specific to the firm. In fact, central to the concept of organizational learning is the process of developing and disseminating tacit knowledge (i.e., firm-specific knowledge) throughout the firm (Senge, 1990).

We believe that value is created from the combination of the firm's stock of knowledge (human, social, and organizational capital embedded in both people and systems) and the flow of this knowledge though creation, transfer, and integration in a way that is valuable, rare, inimitable, and organized. As individuals learn (i.e., increase their human capital), they create knowledge that potentially forms a foundation for organizational-level learning and knowledge accumulation. Human capital theorists have typically argued that organizations can increase their human capital by internally developing the knowledge and skills of their current employees and/or by attracting individuals with high knowledge and skill levels from the external labor market. That is, organizations can try to make and/or buy human capital (Youndt & Snell, 2004).

Firm-specific human capital is valuable because it potentially enhances the productive capacity of human resources (Becker, 1993), it is not widely available in the external labor market (Dierickx & Cool, 1989), and it cannot be readily substituted by other resources without having to incur heavy replacement costs (Barney, 1991). The challenge of HR is to develop systems of HR practices that create a synergistic effect, rather than develop a set of independent best practices of HR (Wright & Snell, 1991; Lado & Wilson, 1994; Becker & Gerhart, 1996). This

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requires a changing mindset from the traditional sub-functional (selection, training, appraisal, compensation, etc.) view of HR to one where all of these independent sub-functions are viewed as interrelated components of a highly interdependent system, and difficult, if not impossible, for competitors to identify and copy.

CONCLUSION

In conclusion, the RBV has significantly and independently influenced the fields of strategy and SHRM. More importantly, however, it has provided a theoretical bridge between these two fields. By turning attention toward the internal resources, capabilities, and competencies of the firm such as knowledge, learning, and dynamic capabilities (Hoskisson, Hitt, Wan, & Yiu 1999), it has brought strategy researchers to inescapably face a number of issues with regard to the management of people (Barney, 1996).

The most important contribution of this paper is that it combines advances from three different areas of research: intellectual capital, knowledge management, and human resource management in an attempt to uncover a more holistic perspective on organizational performance. To impact organizational performance, HR initiatives alone are not enough. Rather, they require to be integrated within broader knowledge management initiatives to allow the company to develop its human capital and create value. From a resource-based perspective, this would allow the development of the firm's human capital, a resource that would be rare, valuable, difficult to substitute and imitate, and thus could be considered a source of competitive advantage.

Although academic and business strategists have acknowledged that HRM plays a role in developing and managing strategic resources and core competencies, theoretical development and empirical research have been slow to follow (Youndt & Snell, 2004). By integrating HRM with KM initiatives, we hope to better frame how HR systems drive organizational performance.

We conclude that HR activities do not directly increase organizational-level performance; rather, they help increase employee's knowledge and skills (i.e., human capital), facilitate group interaction and knowledge sharing (i.e., social capital), and enable organizations to store knowledge in systems, routines, processes, and cultures (i.e., organizational capital), which, in turn, drive organizational performance.

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