

The Role of Intellectual Capital in Creating and Adding Value to Organizational Performance: A Conceptual Analysis

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Abstract: The rapid growth of knowledge economy in the last two decades has changed management styles. Organization's knowledge strategy should be driven from business strategy to ensure development of knowledge culture. Such a culture ensures knowledge activities, namely acquiring, sharing, creating, transforming and its utilization. The knowledge environment will encourage and promote innovative processes. The feedback from external environment and experience from previous projects will help in research and development. The amalgamation of new and known knowledge will help devise ways and means of transformation for effective and efficient performance. A conceptual model is developed to study the moderating role of intellectual capital competencies in knowledge strategy-organizational performance relationship. The research study's how intellectual capital competencies moderate the knowledge strategy--organizational performance relationship. The novelty of this research is studying relationship of Knowledge Strategy-Organizational performance through moderating role of process innovation, research and development integration of past projects and market intelligence. It will educate and create awareness in managers for nurturing organizational intellectual capital and managing their daily affairs effectively. It will guide in devising better strategies, processes and methods to manage intellectual capital. This will help create value through innovations and improved performance.

Keywords: Knowledge strategy, intellectual capital, value creation, process innovation, research and development, market intelligence, performance

1. Introduction

Wealth cannot be created until profits are generated from innovations. Innovations that create wealth are the expected outcome of managing knowledge. Value creation through innovation describes the process through which intellectual capital resources are recognized, groomed and utilized. In the rapidly changing environment, management must update and utilize knowledge (internal and external) effectively to stay competitive. Knowledge is the base of intellectual capital (IC) and consequently of organizational capabilities (Amiri, Jandghi, Alvani, Hosnavi and Ramazan, 2010).

Wiig, (1997) 'the purpose of knowledge management is to maximize the enterprise's knowledge-related effectiveness and returns from its knowledge assets and renew them constantly. Knowledge management is 'hands on' to understand, focus on and manage systematic, explicit and deliberate knowledge building, renewal and application i.e. to manage effective knowledge processes.' Organizations through processes, training, learning and a sharing culture convert these capabilities into core competencies. These competencies can be nurtured into critical success factors to achieve competitive advantage and contribute towards wealth enhancement of organization (Prahled and Hamel, 1990). All organizations contain three important resources namely; tangible, intangible and financial, and even though intellectual capital (IC) is intangible but it is an excellent source of generating wealth (Edvinsson and Sullivan, 1996).

Drucker (1993) has reasons that IC is a significant resource, and not just another resource along with the traditional factors. The importance of traditional factors has given way to knowledge intensive ones and they have gained preference in quest of achieving competitive advantage (Firer and Williams, 2003; Gallego and Rodriguez, 2005; Boedker et al., 2005; Ticha, 2008). Chen and Lin (2004) write "the value-added created by human capital has prevailed over that created by tangible assets, such as machines" (p. 116). Lev (2001) has concluded that tangible and financial factors are no more main drivers of growing service sector, but have become mere commodities. This conclusion is later affirmed by research (Lev and Daum, 2004) that composition of assets has changed. Wealth has evolved into outcome of knowledge and has become the most crucial factor of production (Stewart, 1997). These arguments are valid to a certain degree but this research agrees with Lev, (2001) and Upton, (2001) that the concept of IC is not new and it has been around since the first relationship developed between customer and supplier, than it was named goodwill.

Knowledge predicts Drucker, (1995) to emerge as a crucial economic resource and an important source of competitive advantage. Knowledge management has attracted attention of researchers and there are two research streams on it namely, a) Resource-based stream and b) Process-based stream (Yang, 2011). The resource based stream focuses primarily on increasing the knowledge stock and the reuse of those knowledge repositories (Barney, 1991; Kamara et al., 2002). In this stream knowledge is viewed as the probable creation (Teece, 1998). It deals with the developing structure of techniques, tools, methods, and values through which firms can 'acquire, develop, measure, distribute' and provide a rent on their IC (Snowden, 1999). The process-based focuses on processes, organizational structure, strategy and people are key elements in management of knowledge (Teece, 2000). This research stream defines KM as a 'transformation process going from tacit knowledge into explicit knowledge in order to facilitate flows of organizational knowledge' (Lubit, 2001; Schulz and Jobe, 2001). In this stream, organization, strategy, and people have become central issues in knowledge management.

This research views knowledge management from perspective of process-based stream on organizational level. Failure to drive knowledge strategy from business strategy is obstacle to effective implementation of knowledge management (Minonne and Turner, 2009, 2010). Therefore to survive in knowledge economy firms need to clearly identify their knowledge strategy. The inclusion of Knowledge Strategy in the research model is a novelty.

It is investigating the existing management skills sets to determine their fit with the skills required for the management of IC. How they are contributing to the respective firms? How the firms are managing their IC? This research will be looking at what firms are doing in the way of managing IC - and take a number of different firms of approximately the same size to identify whether the firms are managing their IC, if so, how, if not why. It examines the relationship of IC components through their constructs, Process innovation, Research and Degree integration of Knowledge from past Projects, Market intelligence and business performance through strategic alignment of knowledge strategy.

The novelty of this research is studying the relationship of knowledge strategy - organizational performance through moderating role of process innovation, research and development integration of past projects and market intelligence.

2. Literature Review

The expression "Structure follows strategy" (Chandler, 1990) is believed to be various forms of IC flow to and in connection with the strategy. Each strategy presents some unique challenges likely to affect the management of IC. Different strategies are preferred by organizations to manage organizational knowledge. The choice of strategy depends upon their capability and priority. In the context of knowledge management, strategy refers to the intention and environment of organization to create knowledge (Nonaka & Takeuchi, 1995). Knowledge management strategy focuses on the acquisition, application, and communication of mission specific professional expertise that is largely tacit in nature to organizational participants and contents in a manner that is focused (King, 2001).

Managing IC

The management of the IC is about recognizing that they offer new opportunity for the organization to create value for them (Stewart, 1997). The success of a business strategy is closely linked to the level of IC connected. It is important that management of IC is designed to provide a framework for maximizing the leverage of intangible assets (chatzkel, 2000). Organizations employ people for a certain period (Stewart, 1997). It is through the process of renewal, and transformation of knowledge assets, that the organization defines its future and the ability to create value through its intellectual assets.

The three recognized types of IC are:

- i) Human capital (HC)

It consists of all attributes related to human of the organization, i.e, his exposure, experience, and skills, his innovative and creative capabilities. It contains all intangible information and knowledge in the human mind of the organization (Bontis et al, 2002; Stewart, 1997). It is critical base of organization's innovative and strategic sustainability (Bontis, 2002; Bontis et al., 2000). A superior human capital is connected with organization's superior output and improved compensation or earning (Wilson and Larson, 2002). Therefore HR managers must strive to recruit and groom the best possible team in order to achieve competitive advantage for their organization (Bontis et al., 2002). The effectiveness

of knowledge strategy implementation relies on the facilitation of innovation and value creation by organizational employees. This can be achieved only through a process innovation (Santosus and Surmacz, 2002).

ii) Structural capital (SC)

It includes organization's learning and sharing that is utilized in its daily practices. This is organization's knowledge storage after an employee leaves (Ross and Ross, 1997). It is the sustaining infrastructure for an organization's human capital. All the different physical storage facilities in the organization, namely, its culture, processes, database, operating procedures, and its intellectual assets, they not only create value but also add to the financial worth of the organization (Ordo'n'ez, 2004; Bontis et al., 2000).

iii) Relational capital (RC)

It consists of organization's relations with its external stakeholders and how they perceive organization's product and or services (Grass Nick and low, 2004; Fletcher et al, 2003; Bontis, 1998). This is very important for any organization because it creates perception and value in the minds of stakeholder through organization's HC and SC (Ordo'n'ez, 2004).

Process Innovation refers to the extent an organization develops and performs its activities through imaginative means. The strategy of an organization depends upon creative flexibility of the human mind. The knowledge environment highly values creativity and innovative competence and rewards it accordingly. Employees should be encouraged to share ideas and information freely and bring out their creative abilities and innovate. Process innovation interacts with knowledge strategy and knowledge management methods to achieve fundamental and continues development. Kamara et al., (2002) affirm that successful organizations are creative and innovative to capacity when they implement knowledge strategy. Innovation transforms competencies to bring products, process and service improvements that help organization to achieve competitive advantage (Danneels, 2002).

R&D integration with previous projects is an organization's capability to improve on its past project experiences incorporating their results in R & D. In an ever-changing economic environment, organizations need to decide how effectively they can use their intellectual capital to not only create value but achieve competitive advantage too (Armbrecht et. al, 2001). The integration of knowledge obtained through R&D is based upon tacit knowledge flow. The main focus of the integration process must be on successfully utilizing innovative ideas for value creation. An organization mainly creates internal knowledge through R&D. The quicker an organization creates knowledge, the more potential it has to add value to its growth.

An organization expands its creative potential through integration of knowledge via R&D. According to (Armbrecht et. al, 2001) facilitating flow of knowledge and its creation is an activity with high returns; this improves an organization's bottom-line. The integration of past projects knowledge in R&D provides a strong support to knowledge management, which significantly reduces the cycle time of new product development, improved processes and service (Shermann et. al, 2000; Danneels, 2002)

Market Intelligence refers to the degree to which information is available about the external environment of an industry. Market intelligence gathers information about consumers, competitors and market. This information is processed into knowledge to achieve a better fit of strategy for the organization. It is described as one of three forms of competitive intelligence (Deschamps and Nayak, 1995). It is critical for understanding consumer needs, preferences, market opportunities and treats. Organizations needs to effectively use market information and integrate it with knowledge creation process, to achieve a strong market intelligence solution. Jaworski and Kohli, (1993) identify market intelligence generation and its dissemination as two important factors in achieving improved performance. It helps in implementation of knowledge strategy in achieving higher performance. The information from market environment plays important role in success of new product, and staying ahead of competition (Adams et. al, 1998; Wren et. al, 2000).

The above three types of intellectual capital are interdependent. The collective utility, interactivity, aligning of three types of IC and balancing knowledge flow between them ensures best possible value creation for an organization's product or service (Kong, 2007). There is a need for companies to continually review what to leave with the aim of better things to do has been done, the operations are no longer relevant, and replace them with new ones (Rastogi,

2003). Commitment is involved in the management of IC. This begins with an understanding of the purpose and direction of the organization and the knowledge that IC as a strategic asset is linked with organization's performance (Mitchell, 2010). Knowledge is proven to be valuable to individual and sharing it in organization is a symbol of unity and trust (Brown and Woodland, 1999). The knowledge sharing process can be fostered in organizations through incentives. The best way of effective creation and sharing of knowledge is through establishment of a knowledge culture within the organization.

3. Competence and Capability

Strategy of the organization is a determinant of the capabilities and competencies, which showed such progress that by the end of 1980's and early 1990's, several authors (Teece et al., 1999; Chandler, 1990; Prahalad and Hamel, 1990) presented proposals on organizational ability to adapt to a rapidly changing environment. Bhatti, Khan, Hussain, Ahmed, & Rehman (2011); Hayashi, (2004) the essential manner for organizations to become competitive is through creating, updating and effectively using knowledge. In order to achieve success organizations need to gather and blend specific knowledge from different sources to overcome its technical and operational hurdles. Without bringing in updated knowledge and blending it with existing knowledge organizations cannot achieve success (Henderson and Cockburn, 1994). Updating of knowledge represents shifting from external to internal base. While integrating internal knowledge shows internal transfer. It was found that organizations with higher knowledge shifting mechanisms within the organizational departments and with external sources produced better performance (Henderson and Cockburn, 1994).

Such acquisition, integration and availability of expertise, influences the outcome of organization's success (Leonard-Barton, 1992; Teece et al., 1997). It is important that employees with different capabilities share their expertise with one another and enable them to work towards common organizational goals from varying perspectives. This will create synergy among employee performance by sharing through individual expertise by interacting and sharing feedback (Leonard-Barton, 1995). This interaction among employees will create transformed knowledge and through effective sharing organizations will achieve their pre-determined goals. An environment should be provided in organization for a complete and comfortable transfer of knowledge among individuals. Organization will benefit from this individual exchange of knowledge, when it will be used in developing capabilities reducing internal barriers to share and learn. These capabilities will develop into processes and structure for smooth flow and utilization of knowledge in an organization.

4. Conceptual Model (An IC Management Model 'MIC')

A study conducted on IC by Organization of Economic Cooperation and Development, (2008) identified several benefits of IC which contribute to any organization that include, hiring retaining, increasing, motivation of employees, developing customer loyalty, nurturing competitiveness and utilizing resources efficiently and effectively for a better outcome. Keeping in view the results of this aforementioned study, managers need to carefully highlight the intangible resources that are important and required for value creation and sustaining competitive advantage for their organization. Managers can also gain knowledge of intangible resources by learning from experiences of others organizations.

Strategy identifies the activities to be undertaken to achieve the corporate vision (Teece, 1998; Thompson, 2001). The models of Carnerio, (2000), Harrison and Sullivan, (2000), Klaila and Hall, (2000), Firestone and McElory (2003), and Wenger, (2004), all include strategy. To achieve organization's vision and to provide input for the development of its strategy, the components of IC to be managed, are human capital, structural capital, and relational capital. Innovations that create wealth are the expected outcomes of IC management. Therefore, through the management of IC, an environment should be developed that encourages free flow of knowledge through sharing and transformation, and allow innovations to emerge (Bhatt, 2002; Kantar, 1996; OECD, 1996; Priess, 1999).

Prokopeak, (2008) claims that, "more and more businesses are realizing the role that the knowledge residing in their IC plays in creating economic power and value." Edvinsson and Sullivan, (1996) state that, "today successful knowledge organizations recognize that IC is a major source of value and leverage". To compete effectively in a market place that is becoming increasingly competitive it is essential to have in place a program of continuous improvement of employee competencies. An organization's structure impacts on how effectively it will operate. How systems and processes are managed determines its efficiency and effectiveness.

From the IC perspective, the process of mapping knowledge (Davidson and Voss, 2002; Heng, 2001; Stewart, 1997) is essential for finding knowledge of potential value for the organization. Knowledge is critical to the operational activities of an organization. Discussion reveals that there is considerable reliance on the skills and competencies of employees that link to the successful operation of the business unit. Managing the process of facilitating knowledge sharing is important for both performance improvement and for encouraging knowledge creation. Knowledge creation emerges from the sharing of knowledge, and in turn can lead to ideas and innovation. IC determines the capability of the organization and it is crucial for the managers making decisions to have access to all available knowledge, and to take a holistic view of organization’s IC (Rastogi, 2003; Hussi, 2004).

The empirical studies investigating perceptions of management regarding contribution and importance of IC are not enough (Steenkamp and Kashyap, 2010). There is need to research this in a different environment of a growing service industry to find out whether management is aware of the importance and contribution IC makes to business. In the era of knowledge, organizations need to clearly state their knowledge strategy. The need to identify knowledge strategy is needed for success of knowledge management in organizations as suggested by (Turner and Minonne, 2010 and Minonne and Turner, 2009). It has not received as much attention and importance as required in this changing period (Yang, 2010, Alammery and Fung, 2008). In the research model knowledge strategy is added to fill the research gap and clearly state knowledge objectives of the organization.

From an extensive study of recent academic literature, based upon their recommendations and findings, a conceptual model is developed by this study. This model is an attempt to bring together an approach for effective management of IC. The effective management of IC will help create and add value hence impacting organizational performance. Failure to drive knowledge strategy from business strategy is obstacle to effective implementation of knowledge management (Minonne and Turner, 2009, 2010). Therefore to survive in knowledge economy organizations need to clearly identify their knowledge strategy. Knowledge strategy has received little attention in academic research (Alammery and Fung, 2008); its inclusion in the research model is a novelty. Mitchell, (2010) suggest studying the existing management skills sets to determine their fit with the skills required for the management of IC. Shih et al., (2010) and Bhatti (2011) recommend research on variables like scale of organization, its revenue and capital and their influence on IC. The study also suggests research on relationship between IC and organizations performance.

Based upon research gaps identified from above mentioned studies, this study theoretically contributes by conceptualizing a model, which highlights the knowledge strategy role in effective management of organizational intellectual capital. The model highlights the intellectual capital antecedents namely, process innovation, R&D integration from past projects and market intelligence in light of knowledge strategy. The second contribution is studying intellectual capital antecedents and organizational performance relationship.

This research model (figure no 1) will study the management of IC through identification of knowledge strategy and how that affects organization’s performance. The identification of skills and their mutual fit will help managers and researchers to devise better management tools and techniques to improve internal environment, processes, training methods and relations with external stakeholders. The IC management model illustrates a holistic perspective. It starts with the organization’s vision, identifies the need for a corporate strategy and links strategy to the management of IC. Within the IC management framework are the areas, human structural and relational capital. These areas require to be managed effectively. They provide a comprehensive view of the IC available and develop directions of the corporate strategy that will lead to the vision of wealth generation.

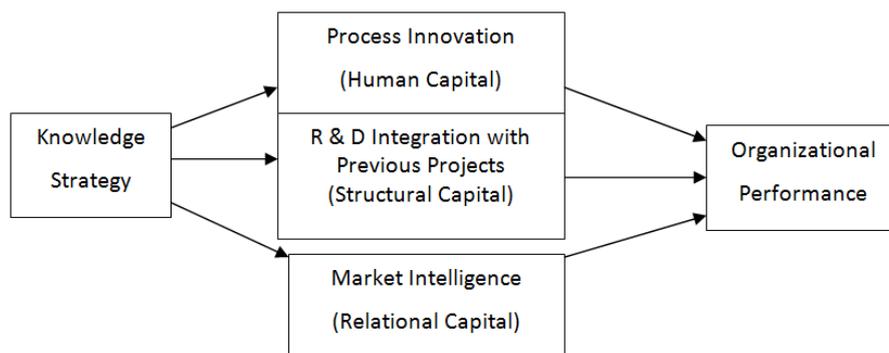


Figure 1: An IC Management Model

5. Discussion

In order to sustain long-term success, organizations must regularly update and use the knowledge they acquire and increase their innovative capacity (Liedtka, 1999). The process of learning effectively in organizations through sharing among individuals and transformation of environmental knowledge helps not only in better understanding of environment knowledge but its precise usage as well (Jones et al., 2003). The individual exposure, experience, know-how will influence how the new learned or shared knowledge is transformed. This process ensures after interpretation if the acquired knowledge is of any use and value to the organization (Seng et al., 2002; Davenport and Prusak, 2000).

Therefore, after knowledge is shared and learned, the utility and usage of transformed knowledge may be different. The absorption capacity of an individual must be considered (Loermans, 2002; Hwang, 2003). Sharing of knowledge allows individual to learn through the organization's processes. As organization gives its employees opportunity to share individual experiences and learn from others, this process will promote learning within organization. The individual's beliefs, his absorptive capacity will ensure the utility and value of gained knowledge after transformation (Davenport and Prusak, 2000; Seng et al., 2002).

Knowledge Effectiveness

The process of knowing consists of three factors, namely, sharing, learning and thinking. These three factors are mutually dependent. The effective process allows individuals to ponder over what is shared with them and learn from it. This would help increase their capabilities (Petrash, 1996; Gupta and Govindarajan, 2000). Through this process new transformed knowledge is created which is not essentially organization's knowledge. This knowledge may lose its worth or importance if it is not updated or utilized properly, on the other hand its proper use can increase learning outcome (Yang, 2007). The effective knowledge sharing and learning in organization helps improve performance, by creating innovation and boosting its competitiveness. This improves the profitability of the organization through effective operations.

Value Creation through IC

Value creation describes the process through which IC resources are recognized, groomed and utilized. Its how these resources contribute in changing the organization from being an ordinary business to becoming a top manufacturer of products in its field (Peppard and Rylander, 2001). The effective utilization of those resources enables an organization to grow to an industrial leader status. Experience and success in professional life teaches a lot. This teaches managers how business success is reached, through methodology they have saved in their minds. The conceptualized model of this research can guide them, in situations when they have to react immediately and take action; they do so based on their experience. Every individual has varying and different experience, exposure and uses his knowledge and competency accordingly (Peppard and Rylander, 2001). The purpose of value creation process is to uncover the manager's mental model. Through the organizational learning process a model is developed which can facilitate in meeting organization's strategic objectives. By developing such a model, the management describe how they intent to create value. They will identify, which resources to use, why to use them, how to use them and a mutual understanding about their relevance with one another (Peppard and Rylander, 2001). The knowledge transformation that takes place through this value creation process will help reach the desired objectives.

This research will educate and create awareness in managers for nurturing organization's intellectual capital and effectively managing their daily affairs. They will be able to devise better strategies, processes and methods to manage intellectual capital. The future researchers can empirically test the conceptualized model and study the relationship of IC with organizational performance. How the organizations are managing their IC. How they are contributing to the respective organizations. The financial and Non-financial performance of organizations can be studied for a better understanding of the concept.

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