

Sustainable Competitive Advantage through Knowledge Management

Rafi Ahmad Khan

Abstract—In the 21st century, companies must compete in a complex and challenging environment that is being transformed by many factors like globalization and technological development. The only source of competitive advantage in such an environment will be the knowledge that business organizations hold and their ability to learn faster than the competitors. With knowledge taking on increased importance, it makes sense that there is an opportunity to create competitive advantage by effectively managing its capture, storage and use. Knowledge Management (KM) is a strategic initiative that facilitates the harvesting and exploiting the knowledge of an organization. An effective KM system creates competitive advantage by bringing suitable knowledge to the point of action during the moment of need. This paper attempts to assess the role of increasingly prominent area of KM. First, it explores the definitions and understanding of knowledge, KM and its potential to be a source of competitive advantage for an organization

Index Terms—Data, Information, Knowledge, Knowledge Management (KM), Competitive Advantage

I. INTRODUCTION

In today's highly competitive environment, the goal of each organization is to defeat competition and win new customers. In the 21st century business landscape which is full with dynamism and uncertainty due to various factors ranging from globalization, increasingly fast development and diffusion of technology, organizations are competing in a complex and challenging environment [1]. Consequently, the basis of organizational competitiveness has shifted from an emphasis on physical resources to knowledge and therefore, managing knowledge has become the key factor for gaining and sustaining competitive advantage and superior performance [2][3][4]. To survive in this dynamic and uncertain business environment, one of the strategic initiatives that assist organizations is knowledge management (KM). KM is a process that supports organizations to identify, select, organize, disseminate, and transfer important information/knowledge so as to develop and exploit their knowledge-based resources, thus permitting them to be proactive and flexible to market dynamism. Some of the factors that induce organizations to use KM are:

- The ability to survive and succeed emanates only from an organization's ability to create, capture, process new knowledge and maintain the old knowledge in the face of uncertainty and dynamism of markets.

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- Now the traditional organizations are in the transition to become knowledge intensive as the knowledge is fast replacing financial capital and other resources as the most valuable asset. Knowledge helps in improvement in the quality of product and service offerings by accelerating product/service life cycles to the market.
- Unstable markets necessitates that organizations redesign their products and services in tune with the market requirements. KM supports organizations in maximizing their growth potential by utilizing the intellectual capital to offer products and services as per the market requirements.
- KM supports in effective decision making by providing knowledge about past decisions, initiatives, success and failures.
- It extends best practices to suppliers and customers, use of relationship audits to target possible alliances, search for knowledge related opportunities in products and services.
- Delivers competitive intelligence by gathering awareness of markets, environment and competitors.

II. KNOWLEDGE AND KNOWLEDGE MANAGEMENT

In 1959, Drucker coined the term "knowledge worker" and later claimed that, in the "knowledge society", the basic economic resource is no longer capital, natural resources or labour but is, and will be, knowledge [5]

To get a clear understanding of knowledge, it is important to distinguish it from the concept of data and information. The misconception that the two terms are interchangeable can be disastrous and has already resulted in wasting of billions of dollars in information technology projects that have yielded marginal results. [6]. Data are a set of raw-numbers, facts or statistics about events, whereas information is processed data put in the form of text, graphics, words or other symbolic forms. Information becomes knowledge once it is processed and put into context by individuals [7][8][2][9].

In the information technology perspective knowledge is very distinct from data and information. Whereas data are facts, measurements and statistics, information is organized or processed data that is timely and accurate [10][11]. It refers to stored information and/or models used by a person or machine to interpret, predict and appropriately respond to the outside world [12]. Knowledge is information that is contextual, relevant and actionable[13]. Having knowledge implies that it can be exercised to solve a problem. While data, information and knowledge may all be viewed as assets of an organization, knowledge provides higher level of meaning

about data and information [14].

Angus et.al describe knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new-experiences and information. It originates and is applied in the minds of knowers [15]. Davenport and Prusak argue that unlike data or information, knowledge leads to decisions and actions which increase an entity's capacity for effective action [7].

Knowledge in an enterprise emanates from many different sources including information systems, reports, Internet, corporate databases, customers, suppliers or government agencies. Knowledge of the employees is an absolute source of information and it results from their experience and intuition [14]. Hence there is a need to capture both types of knowledge. Polanyi first conceptualized the difference between an organizations explicit and implicit knowledge [16]. Explicit knowledge deals with more objective, rational, and technical knowledge (e.g., data, policies, procedures, software and documents). It is leaky knowledge as it can be readily documented [17]. Tacit knowledge is usually in the domain of subjective, cognitive and experiential learning; it is highly personal and difficult to formalize [9] and is also called as embedded knowledge [18] because it typically involves expertise, know-how, skill set, trade secrets, understanding and learning, hence difficult to document. An organization loses the knowledge when the people leave it as they take their knowledge with them. Therefore, it has become important for organizations to retain the valuable knowledge that can so simply and rapidly leave an organization.

KM transforms data and/or information into actionable knowledge in a format that when it is made available can be utilized effectively and efficiently throughout an organization [15][19][20][21]. It gets the right knowledge to the right people at the right time and helping people share and put information into action in ways that strives to improve organizational performance [22]. KM is a collection of processes that govern the creation, dissemination and utilization of knowledge to fulfil organizational objectives [23]. Wiig defines KM as the management of corporate knowledge and intellectual assets that can improve a range of organizational performance characteristics and add value by enabling an enterprise to act more intelligently [24]. Beckman maintains that KM is a formalization of and access to, experience, knowledge and expertise that create new capabilities to enable superior performance, encourage innovation and enhance customer value [25]. However, most working definitions in the literature point to fundamentally the common idea that KM is the management of collective knowledge in order to help organizations take action, compete more effectively and achieve their goals [20][2].

III. COMPETITIVE ADVANTAGE THROUGH KM

Knowledge is seen at the center of global economic transformation [26] for delivering competitive advantage to an organization [27]. Increasingly knowledge is seen as outstripping traditional resources such as land, labor and financial capital and is considered as the key source of comparative or competitive knowledge [4][28].

Competitive advantage is normally defined as the ability to

earn returns on investment persistently above the average for the industry [29]. McFayden and Canella suggest that knowledge may be the only or one of the most important sources of competitive advantage available to an organization in the 21st century [30]. Grant suggested that knowledge is the significant competitive asset that a firm possesses [4].

Deed and Hill contends that firms who are effective in acquiring knowledge will be able to create and sustain a competitive advantage in the knowledge-based economy. While others will have difficulty maintaining their competitive position [31].

There is a general consensus that knowledge is basis for competitive advantage and superior operational effectiveness in organizations [32]. Competitive advantage may come, among other organizational activities, by supporting best practices, faster learning, sustained innovation, reduced cycle times and value addition to resources which an organization possess but are not readily available to competitors.

In today's globalized economy, sustainable competitive advantage is no longer rooted in physical assets and financial capital, but in effective channeling of intellectual capital [33]. According to Brackett, capital, human resource, and data resources are the most common and primary competitive resources available to most organizations; however, these competencies can be anything from product development to employee dedication [34]. Day and Wensley listed two sources that support creating competitive advantage: superior skills and superior resources [35]. Hamel and Prahalad recommend that organizations combine these two sources to create core competencies. They define the core competencies as the activities in which firms excel over their competitors and are impossible for the competitors to copy [36]. KM can play a key role in all these aspects.

For organizational knowledge to offer sustainable competitive advantage, it should have a KM system with infrastructure elements required to support the acquisition, management, and transfer of tacit and explicit organizational knowledge. The literature on KM highlights the importance of a sharing culture to support and foster a KM focus [37][20]. There was common agreement that KM will symbolize the largest competitive advantage for organizations in the new millennium [5][38][39][40][41].

Since knowledge and its application are the means by which creativity can be promoted [42], innovation facilitated and competencies pulled in such a way as to advance overall organizational performance [43][44], therefore, it has become crucial for firms to capture and exploit corporate knowledge as they endeavor to adjust to changes in the global markets. Whether learning from past successes or failures, identifying opportunities to increase customer profitability, or simply facilitating teams to become more productive, KM remains core area of organizational strategy. A white paper published by the Economist Intelligence Unit reported the following findings that confirm relation of KM to competitive advantage [45]:

- "Consolidating information and providing consistent performance indicators are regarded as the most important steps firms can take to improve the speed and quality of decision-making,"

- “Firms are looking for IT tools that allow employees to prioritize information, and to extract valuable insights from an ocean of data. For most managers, having information that they can quickly interpret and analyze is much more important than, for example, having information on the move. There is also growing demand for smarter management information systems, with tools like digital dashboards enabling executives to track their firms’ key performance indicators on an almost real-time basis,”
- “Companies have demonstrated how customer analytics can support initiatives to increase customer loyalty and expand markets share, much to the embarrassment of their competitors,”
- “Understanding who knows what, and how people use different types of information as part of their work, is just as important a part of good KM as having the latest business intelligence technology”.

KM helps in gaining competitive advantage in the following ways:-

- KM can increase productivity of an organization by applying effective organizational KM as it will facilitate those with the desired knowledge to apply or rapidly share it, hence can reduce traditional uneconomical method of meetings and increase productivity employees and create a value advantage.
- KM can used in an organization for knowledge creation, refining and dissemination within an organization which eventually results in more and better knowledge than the competitors, hence delivers competitive advantage.
- Rewarding the employees who create new knowledge and/or share knowledge within the organization can ensure that all employees are trying to share their valuable knowledge.
- It’s the KM tools that help the organization in identifying the unaccomplished goals. Having a proactive approach to deal with such situations is ultimately going to deliver an organization a competitive advantage.
- KM also allows in identifying the niche markets and the requirements of those niche markets is going to prove one of the key attributes of organizational success.

IV. KM IN PRACTICE

Almost all organizations have started using the KM to remain competitive in market. Wall Mart, the world’s largest retail corporation, views the KM not only as a way of increasing profitability and financial growth but also as method of gaining and sustaining competitive advantage in the uncertain and dynamic market. It has made huge investment in developing a strong KM system and because of effective KM system, Wall Mart has emerged as the world’s leading organization. Beginning from the simple tools of KM like on the discussion forums, professional training, mentoring programs, job discussions, corporate libraries to the advanced technologies like knowledge repositories,

expert systems, business intelligence, scorecards and dashboards, it uses all tools n techniques of KM to have a competitive advantage in the market. KM helped the Wall Mart in curtailing the operational costs and creating value for its stakeholders. KM system is functional in almost all divisions of Wall Mart and the employees are greatly satisfied with this system. KM system of Wall Mart chooses the best employees and they are accordingly rewarded for their performance. The effective KM system has resulted in higher efficiency in service delivery and customer care and consequently more customer satisfaction. Hence, an effective KM system is one of the leading driver for Wall Mart for its great success. The other examples that proved that effective KM can help achieve organization goals and help in remaining competitive in market.[46]

V. CONCLUSION

Competitive advantage is at the core of a firm’s performance in today’s challenging and rapidly changing environment. To secure the competitive advantage, firms should be able to continuously acquire, create and disseminate knowledge across various levels of the organization. Knowledge is central to strategy formulation and Implementation, KM has become a key strategic task facing managers for achieving success in today’s complex and dynamic environments [47]. The shifting winds of change in today’s business environment, where the Market place is increasingly competitive and the rate of innovation is rising, have made Enterprises realize that knowledge is their key asset. It is pointed out that the most valuable assets of the 21st century enterprise is its knowledge and knowledge workers [48]. It is argued that knowledge is displacing natural resources, capital and labor as the basic Economic resource in the new economy. Knowledge mostly the tacit knowledge is hard to imitate so effectively managing such type of knowledge in an organization is definitely going to lead the organization to a place which for others will be difficult to achieve. KM helps us in identifying unaccomplished goals and by having a proactive approach to address such issues is going to place an organization above all in the turbulent competitive business environment. So, every Organization should start thinking of a sound KM strategy, because in a knowledge-driven economy it’s the only source of achieving success over others.

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