

**The Knowledge Management as Strategic Process to Achieve The  
Sustainable Competitive Advantage**

إدارة المعرفة كعملية إستراتيجية لتحقيق الميزة التنافسية المستدامة

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**Abstract**

The aim of this study is to clarified how the company can achieve a sustainable competitive advantage (SCA) based on the knowledge management (KM); KM has been gaining attention in last decades as one of the most important strategic process to achieve SCA for the companies, it's not easy for any company to achieve a competitive advantage and the situation become more difficult to sustain this competitive advantage in world characterized by the rapidity of the changes; this changes that based predominately on the innovation; the most innovation that make the company archive SCA is the innovation based on the tacit knowledge; for that we will explain in this paper the relation between the innovation and the KM as a strategic process to achieve the SCA for any firm.

**Keywords:**

Knowledge, Knowledge Management,  
Sustainable Competitive Advantage.

**ملخص**

تهدف هذه الورقة البحثية لتبين كيفية بناء ميزة تنافسية مستدامة من خلال اعتماد إدارة المعرفة كمدخل إستراتيجي، وذلك من خلال البحث في أدبيات مفهوم الميزة التنافسية المستدامة والبحث في أسباب الوصول إلى تحقيق ميزة تنافسية تتميز بالاستدامة، وذلك حسب العديد الباحثين الأكاديميين في مجال الإدارة والاستراتيجية وعلى رأسهم مايكل بورتر وايجوجورو نوناكا يمكن أن يتحقق من خلال الاعتماد على المعرفة كمصدر لهذه الميزة، غير أن الاعتماد على المعرفة لابد أن يكون في اطار عمليات منهجية منظمة تجعل من المعرفة عنصر من عناصر الإنتاج بالنسبة للمؤسسة، وذلك ليس بالهين؛ بحكم أن عمل المعرفة ليس عمل تقليدي وسهل وإنما يتطلب عمال من نوع عمال المعرفة وبيئة مواتية لاعتماد إدارة المعرفة في المؤسسة.

الكلمات المفتاحية: المعرفة، إدارة المعرفة، الميزة التنافسية المستدامة.

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## 1. INTRODUCTION

With the development of technology and the telecommunication, the business sector become very competitive, and the life of firms become shorter, all this obligate the firms to researcher for different ways to be competitive by making a sustainable competitive advantage, for that the firms try by different way to make sustainable competitive advantage; through the innovation and creativity, or by using unique resources, or by applied new philosophy in the management; like the total quality management, all this and other ways made a competitive advantage but not sustainable, for this the firms try to found something can make her competitive advantage be sustainable, this paper we will explain, How can the companies achieve a sustainable competitive advantage through the knowledge management?

## 2. The Development of Sustainable Competitive Advantage

The theory of SCA has emerged in recent decades as one of the most promising theoretical frameworks in the management field, especially in strategic management. Therefore, the subject of SCA is of great importance in the studies of management scholars. Alderson pointed out that the main aspect of the competition is the rapid adaptation of suppliers to meet changes in customer demands. Alderson returned in 1965 and explained that rivalry is based on providing unique resources for rivals (Low and Praveen, 2010). The notion of SCA emerged in the year 1984, when Day proposed strategies to sustain competitive advantage (CA), while the first appearance of the word SCA is in the research of Harvard Business School professor Michael Porter in 1985 on the strategies through which the organization can gain SCA. These strategies are the low-cost strategy and excellence strategy (Pirayesh and Forouzandeh, 2016). Most of the research focused on explaining the sustainable competitive advantage of the search for "excellence." (Porter, 1985), "Rare resources", and the most important pioneers of this trend; while a third team of researchers looked at what was called "One step forward from competitors", and the most important pioneers of this trend; (Low and Praveen 2010).

From the beginning of 1990, the concept of resource-based view (RBV) and intangible resources became very important in the research on sources of

SCA. These definitions were later analyzed by the scholars (Barney, 1991) to provide a detailed definition and assessment of their use as a source of SCA and subsequently focused on intangible resources as sources of SCA, such as; brand, marketing orientation, organizational learning, creativity, customer value, marketing relationships knowledge workers as a source of SCA (Low and Praveen, 2010).

In this century, there was a revolution in management theory to establish new ideas, such as knowledge management, organizational learning, technology and innovation, information systems management, globalization. But this has not diminished the importance of SCA as one of the most important topics in strategic management according to (Tilson, 2000). Buffett Warren (2001) posed the question: “What is the most essential thing to consider when assessing an institution?” Most of the responses were the competitive advantage of the institution. In the new millennium, the focus of senior management is on creating an initial sustainable competitive advantage for the companies, and its source no longer relies on intangible resources like reputation or brand, but on broader dimensions of business relationships. (Hoffman, 2000), has summed up the development of the notions of SCA until 1999, which were born in the year 1965. From the summary, the progress of SCA contributed by those scholars could be classified into two main notions:

- Differential and cost advantage concepts – (noted on by an earlier group of scholars from 1960 to early 1980s);
- Resource based notion – (noted on by a latter group of scholars from mid 1980s).

The first section concentrated on improving the value as a source of SCA for skills and intangible capital. Originally, there were no obvious discrepancies between the two classes, interrelated with all parts or definitions.

According to Kotze (2000), as a combination that guarantees SCA, the new competition paradigm of this century is focused on time, value and interaction, versatility, expertise and intellectual capital, speed and innovation, as well as organizational culture. Organizational learning is vital in ensuring sustainable competitive advantage. Flamholtz and Wei pointed

out that organizational infrastructure (resource management, operating systems, management systems) and organizational culture are the source of SCA, (Kotelnikov, 2004) has divided the competitive advantage into three sections: First: A fundamental competitive advantage that can be used as a reminder to the organization that it should join international competition; second: A strong competitive advantage that enables the organization to compete in the market or to ensure its position in the market; third, SCA; which helps the institution to boost its competitive position in the market and strengthen it.

### **2.1 The Sources of Sustainable Competitive Advantage**

According to (Porter, 2000), (Tilson, 2000) and (Hoffmann, 2000); We infer that three primary sources of SCA are available:

**Efficiency:** Efficiency is the best use of available resources and is determined by the quantity of inputs used to generate outputs, since the business is a tool for transforming inputs into outputs. The higher the efficiency of the organization, the less inputs required to produce certain outputs. The organization has lower costs if it has higher productivity efficiency with its competitors, allowing it to build a SCA.

**Quality:** As a result of the speed changes and successive developments, the interest of organizations has increased to meet the desires of consumers and to satisfy them, as the price is no longer the engine of consumer behavior, but quality is the first interest and the value sought by the organizations that want to stay in competition to offer high quality products.

**Knowledge:** Ikujiro Nonaka and Ryoko Toyama believe that knowledge is a source that contains all the conditions that qualify as the basis for building SCA. Intellectual assets are an important basis for the continued activity of a company based on knowledge and expertise in a competitive setting. The interest of those organizations based on measurable intellectual assets has increased, as knowledge is a prerequisite in their investment policy. The measurement of the true value of knowledge has become necessary for organizations with special transactions, patents of invention, distinctive trademarks, etc. Via their organizational networks, effective companies invest in what they know, transferring the knowledge for use in the manufacture of products and services or in the creation of systems, functions and processes.

With the advent of the age of knowledge and information as well as the service economy, many scholars and industry analysts have stressed the importance of successful knowledge and management. Drucker (1994) argues that the world is undergoing a significant transition, which he terms the "post-capitalist society," where conventional output input factors will no longer be the basic economic tools, but that information will be the primary resource for both organizations and the economy (Carrión, 2006).

## **2.2 The Motives to Develop Sustainable Competitive Advantage**

The organization through its SCA, can achieve many advantages, so that it is a source of strength for the organization in achieving a high performance and creating value for it, so that without the ability to create value there is no need for the organization to stay in the market, On the organization's good performance by maximizing profits and ensuring high levels of operational efficiency. This will indirectly help the organization to implement strategies to improve its efficiency and competitiveness (Jamaliah, 2016), The development of the organization for its SCA, and its modernization and sustainability, guarantees the organization's survival and profitability. The development of this feature requires a long-term, comprehensive and dynamic vision in mobilizing all resources necessary to achieve the objectives under current challenges. In the following points, the most important factors or motives for the company to improve the SCA can be summarized (Moursi, 1999).

### **The Emergence of New Technology**

In several fields, such as computer product design and internet marketing, technological progress will generate new opportunities and this drives the companies to implement new technologies at the latest stage of its SCA to minimize costs or increase product differentiation (Moursi, 1999).

### **The Change or Emergence of New Consumer Needs**

The company must be aware of the changes in the tastes of customers that may arise. If the customer is not interested in the goods supplied by the company, the organization must be continually aware of changes in the

consumer's desires and must modify the products accordingly. This is the latest marketing orientation, beginning from the market through the analysis and awareness of customers' desires and what they want and do not want to be in the organization's product or service (Moursi, 1999).

### **Change of Input Costs**

As the value of the input increases, a SCA is also influenced by a major shift in input costs; In this scenario, the company tries to find another profit in order to minimize costs and then achieve excellence again (Moursi, 1999).

### **Change in Government Restrictions**

When changes occur in the areas of product specification, environmental protection laws from pollution, for example, and market entry restrictions (Moursi, 1999).

## **2.3 Defense Strategies to Protect SCA**

companies are also subjected to threats and attacks by rivals in the competitive market. Offensive business movements may be exacerbated by new entrants in the sector or by existing companies trying to strengthen their conditions in the market. The main objective of defensive strategies is to reduce the risk of attack, to minimize the effect of any attacks that might occur, as well as to influence rivals to direct their efforts to other rivals. Although defensive strategies do not increase the organization's competitive advantage, they help reinforce the competitive situation, protect its valuable resources and skills from tradition, and encourage any SCA it has. For that there are two main approaches to defense strategies (Arther et al. 2006):

### **Strategy to Close the Market to Competitors**

Procedures that prohibit the challenger from starting any competitive attack are the most common guidance used to protect the organization's current situation, and there are several barriers that can be placed in the path of competitors that appear (Porter 1982).

### **The Strategy of Referring to The Possibility of Revenge and Violent Retaliation**

For unified rivals, the other approach to defensive strategies needs ample clarification that if they strike, strong retaliation or violent retaliation is likely to occur. The aim is to deter competitors who are united to the attack by raising the possibility that the competitive fight will cost more or at least redirect their attention to less detailed threat choices, and it is possible to transmit the message to the challenger via the challenger (Arther et al. 2006),

- Simple and incontestable declaration of the Organization's commitment to preserve its existing market share in the public arena;
- Publicizing plans to use adequate energy to meet needs, as well as announcing the expected growth in industry for all;
- Advertising a new branding scheme or new models of mission in the hope of enticing rivals to delay their business movements;
- Declaration of the Organization's adherence to the strategy of matching other competitors' requirements, rates and equivalents;
- A strong backlash from time to time on the movements of weak competitors to enhance the image of the company as a strong defender of its position and position in the market.

### **3. The Knowledge Management**

The KM is based on the idea that the firm's most important resource in the knowledge of its workers, and the performance of the firm in the new economy will depend; on how effectively its workers can create new knowledge, share knowledge, and use that knowledge to best effect and make special position for the firm compare to the other firm in the sector.

Before the debate deeply the KM as strategic process to achieve a SCA, we will start by the knowledge; Interest in knowledge as the source of a firm's competitive advantage has a long history in several disciplines. For example, in economics, Adam Smith noted in his book "The Wealth of Nations" that workers learned from experience, and the Victorian economist Alfred Marshall highlighted knowledge as a productive resource. The Nobel Prize-winning economist Kenneth Arrow gave this phenomenon further expression in his 1962 article "Learning by Doing", All three men argued that if firms can become better at learning by transferring what workers know, then they

can become more efficient. Developing these learning strategies became an important theme of knowledge management (Ichijo and Nonaka, 2007).

The interesting by the knowledge in the field of management start in 1959 by Peter Drucker; when he speaks about the “knowledge workers” for the first time in his book the Landmarks of Tomorrow. Depend to Peter Drucker; the knowledge workers include those in the information technology fields, system analysts, academic professionals, programmers, technical writers and researchers.

In the beginning of 1990s; management of knowledge became a hot topic by Thomas A. Stewart in 1991 introduced Fortune Magazine readers to knowledge management and intellectual capital. After in 1995 Ikujiro Nonaka and Hirotaka Takeuchi proposed a theory of organizational knowledge creation in their book *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, in one of most important books in the knowledge management literature (Choo and Bontis, 2002), In the same year, Dorothy Leonard-Barton published *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*, in which she described knowledge as the crucial source for competitive advantage of a firm, and presented practical applications of knowledge for gaining and sustaining competitive advantage. In 1998, *Working Knowledge* was published by Tom Davenport and Larry Prusak, in which they shared lessons from knowledge management processes in over fifty organizations and presented practical knowledge management applications in organizational settings. Reports on information management proliferated in scholarly and business publications around the world at the end of the 1990s (Ichijo and Nonaka, 2007).

### **3.1 Types of Knowledge**

The forms of knowledge include tacit knowledge that can not be clearly stated; implicit knowledge that can be accessed using questionnaires (Nonaka & Takeuchi, 1995).

#### **Explicit knowledge**

This type of knowledge that can be captured and written down in databases is explicit knowledge. Instruction manuals, written protocols, best



practices, lessons learned, and study results are examples of explicit knowledge. Explicit knowledge can be categorized as either structured or unstructured. Documents, databases, and spreadsheets are examples of structured knowledge, because the data or information in them is organized in a way for future retrieval. In contrast, e-mails, images, training courses, and audio and video selections are examples of unstructured knowledge because the information they contain is not referenced for retrieval.

### **Tacit knowledge**

The understanding people hold in their heads is implicit knowledge. It is far less concrete than information that is explicit. It is more like a "unspoken understanding" of something, information that in a text or database is more difficult to write down.

### **3.2 The Three Component of Knowledge Management**

One popular and widely used approach is to think of knowledge management in terms of three components, those three components playing the role of the infrastructure for the knowledge management (Carrión, 2006):

#### **People**

Getting a firm's culture (including values and behaviors) right to adapt the knowledge management is typically the most important and in the same time the most difficult challenge. KM is first and foremost a people issue. Firstly, we must see if the people in the firm support ongoing learning and knowledge sharing? Are they motivated and rewarded for creating, sharing and using knowledge? Is there a culture of openness and mutual respect and support? If the people in the firm not ready or they didn't have the right values and the behaviors the firm will find big difficulties to make the knowledge management working inside the firm.

#### **Processes**

We mean about the process in the firm; the way of doing the functions in the firm, Companies also need to make adjustments to the way their internal systems are organized, and often even the organizational structure itself, in order to facilitate information sharing. If an organization is organized in such a way that various parts of it compete for money, then this would most likely be an obstacle to the exchange of knowledge. Looking at the many facets of

the company's 'how things are done around here,' which processes constitute either obstacles or knowledge management enablers? How can these processes be adapted, or what new processes can be incorporated to assist people in information formation, sharing and use?

### **Technology**

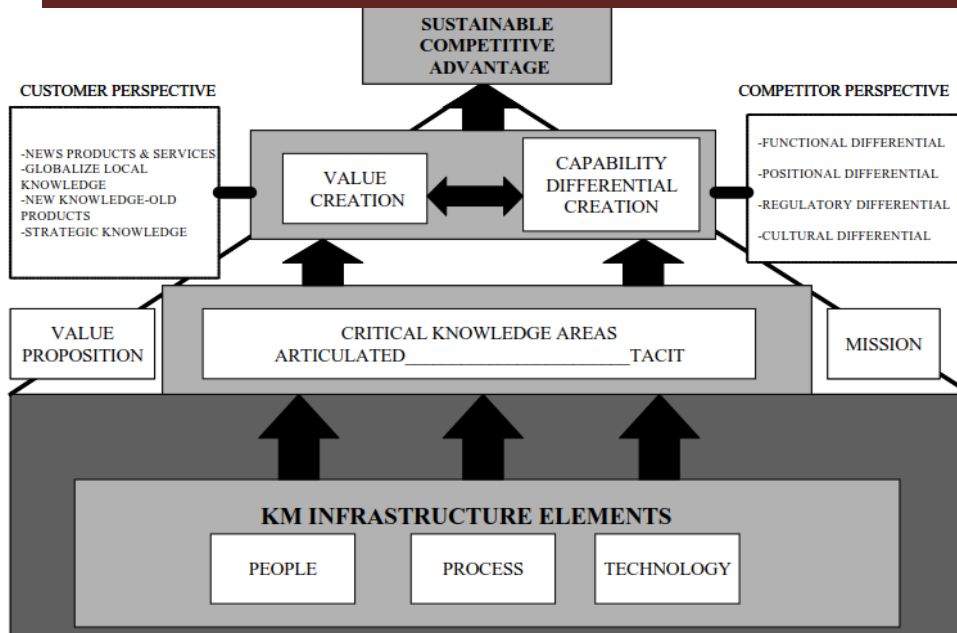
A common misconception is that knowledge management is primarily about intranet technology, connecting individuals via e-mail, gathering databases of information, artificial intelligence and expert systems. Technology is also a key enabler in knowledge management and may help to link individuals and individuals with each other, but it is not the solution. and it is vital that any technology used “fits” the organization’s people and processes – otherwise it will simply not be used.

### **4. The Relation Between Knowledge Management and the Sustainable Competitive Advantage**

Knowledge creation is at the heart of innovation and developing a competitive advantage, we can explain the relation (Buchel, 2006), competitive advantage consists of two dimensions: the value created to the customer and the ability to differentiate (through cost, innovation, or both) from competitors (Carrión, 2006), more the firm based on the Tacit knowledge to achieve competitive advantage more be sustainable and difficult to the competitors to know the source of this advantage.

From the figure 1; we can clearly explain how firm can achieve a SCA through the KM.

**Fig 1:** The Relation Between Knowledge Management and the Sustainable Competitive Advantage



**Source:** Gabriel cepeda-carrion, competitive advantage of knowledge management, encyclopedia of knowledge management, idea group reference, Spain, 2006, p36

The figure number 1 show how the firm can achieve a SCA based on the KM, whatever KM tools and techniques you use, they can't work in isolation, they need to be supported by the right kind of environment. The three key elements of that environment are outlined here, namely; People, Process and Technology, the firm must start by preparing the right environment for those three components, to implement the knowledge management successfully; the firm need to prepare this component one by one.

Between the three components of KM, Firm's people play the most important role because creating, sharing and using knowledge is something that people do. KM processes are the activities or programs you put in place to allow the development, sharing and use of knowledge within the company for the good of the company and to promote it. Processes also refer to general infrastructure and procedures or 'way of doing stuff' processes. In the new technology, value is added when the expense, time and effort taken for people to exchange knowledge and information is reduced.

**Mission:** The starting point for company strategy is a basic understanding of why the company exists; this is usually included in the mission of a company,

including a statement of the intent of the company and an overall objective. (Carrión, 2006).

**Value proposition:** A value proposition informs workers what the company is trying to do with its clients and, by implication, the demands of their job (Carrión, 2006).

**Critical Knowledge Area and Sustainable Competitive Advantage:** From the figure N 1; we can understand that value-creation ways and capability differentials play a mediate role between the critical knowledge area and the sustainable competitive advantage.

Value creation come from costumer perspective, this operation address how the firm can use the knowledge to achieve sustainable competitive advantage. Knowledge is at the origin of most improvements in customer value (Novo, 2001), the firm can use the knowledge to create value for the costumer by; the creation of new product or services that never existed before, or by globalizing a local knowledge to create the demand for this local product, A compelling justification for globalization is that it yields substantial competitive advantages without which companies could no longer survive (Gilbert, 2007), and from the ways to create the value for the costumer is to use new knowledge to develop or to improve an old product (Hamel, 2000).

Capability differentials; if the value creation come from costumer perspective, the capability differentials come from the way of the competitor perspective, it means how the firm use the knowledge to achieve a SCA through differentiation from competitors (competitor perspective).

Based on Coyne (1986), four forms of skill differentials are the sources of SCA:

- functional capabilities;
- cultural capabilities;
- positional capabilities;
- regulatory capabilities.

Functional capabilities and cultural capabilities involve competences and processes such as advertising and manufacturing, positional capabilities and regulatory capabilities refer to assets that the firm owns such as brands and reputation (Carrión, 2006).

## 5. CONCLUSION

After the explanation of different concepts related to the sustainable competitive advantage, and after clarify the major role of the knowledge to achieving the sustainable competitive advantage for the firm, we can understand that the knowledge management can be successful strategy for the firm to achieve unique competitive advantage, for that we can advise the firms to make the knowledge sharing as normal work in the daily activities of the workers, and he must based on the knowledge workers; this kind of workers it's the only way the for the firm to transfer from a firm based on the resource to firm based on the knowledge, in this case the firm can be competitive and innovative.

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