

## Knowledge Management practices for competitiveness Moroccan SMEs

Les pratiques du Knowledge Management au profit de la compétitivité des PME Marocaines.

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## Résumé

Dans un contexte caractérisé par une concurrence acharnée à l'échelle nationale et internationale, le Knowledge management est devenu ces dernières années un élément crucial pour améliorer la compétitivité des entreprises spécialement les PME.

De nombreuses de théories ont été avancées dans le cadre du Knowledge management, mais Peu d'études ont mis le point sur le rôle de ce dernier dans l'amélioration de la compétitivité de l'entreprise. Ainsi, afin d'être performante et compétitive, chaque entreprise doit l'intégrer dans son processus de production afin d'augmenter sa productivité, améliorer la qualité de ses produits ou de ses services et assurer sa survie. Nous avons opté pour un raisonnement hypothético-déductif dans le but de tester le cadre théorique avec les hypothèses formulées. Ainsi, nous avons administré un questionnaire auprès de 100 PME industrielles marocaines. L'objectif principal de ce présent travail consiste à analyser le rôle du Knowledge management dans l'entreprise (spécifiquement les PME) ainsi que la nécessité de ce processus pour assurer la compétitivité et la survie de cette dernière. Les résultats de cet article confirment que Knowledge management a un impact significatif sur la compétitivité des PME au Maroc.

**Mots clés: Knowledge management, performance, compétitivité, PME**

## Abstract

In a context characterised by determined national and international competition, knowledge management has become a crucial element in improving business competitiveness in recent years.

Many theories have been put forward in the context of knowledge management, but few studies have focused on its role in improving a company's competitiveness. Therefore, in order to be efficient and competitive, every company must integrate knowledge management into its production process in order to increase productivity and improve the quality of its products and services. In particular, to ensure its survival. We have opted for hypothetico-deductive reasoning in order to test the theoretical framework with the hypotheses formulated. In the same vein, we administered a questionnaire to 100 Moroccan industrial SMEs. The main objective of this work is to analyse the role of knowledge management in SMEs and the need for this process to ensure their competitiveness and survival. The results of this article confirm that Knowledge management has a significant impact on the competitiveness of SMEs in Morocco.

**Keywords: Knowledge management, performance, competitiveness, SMES**

## Introduction

In recent years, the world has experienced constant transformations at the social, economic and political levels. One of the economic changes that have marked this period is linked to the increased role that knowledge is taking on within organizations. Knowledge has therefore become the cornerstone of any economy.<sup>1</sup>(Cooke and Leydesdorff 2006). So we are faced with economic growth based on knowledge, information and ideas. Adding to this are social and technological changes, such as the rise of information and communication technologies, globalization, which have led to the establishment of new models and working methods, that is to say the emergence of new professions and activities including human resources with new and different capacities and skills. In particular the advent of artificial intelligence (AI) which has banned many traditional or so-called manual jobs, including those of managers and professional workers, thus leading to the elimination of boundaries between man and machine and the transformation of workers' professional skills.<sup>2</sup>(OECD 2023).

In an economic context marked by perplexity and instability, knowledge enjoys great importance and is manifested by the use and propagation of knowledge with the aim of improving the competitiveness and creativity of organizations and countries.

In the same vein, knowledge is considered an economic good (Foray, 2009) and its management is among the major concerns of any organization. Indeed, this concept appears as a strategic element for the organization, given its irrevocable, incomparable and unique character allowing to have a competitive advantage (Teece, 2000). In the same vein, the studies of P. Drucker (1969) approved that the management of an organization is closely linked to the management and the customary use of knowledge in any activity and decision.

Knowledge management is a catalyst for the development of organizations, because it allows them to identify fruitful knowledge and exploit it in a structured manner, with the aim of taking advantage of best practices in experiences and expertise built within the organization. The concept of Knowledge management is defined as a discipline that allows the identification of knowledge<sup>3</sup>. According to its various operations qualified as knowledge management, this

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<sup>1</sup>COOKE and LEYDESDORFF (2006): "Regional Development in the Knowledge-Based Economy: The Construction of Advantage", page: 5-15.

<sup>2</sup> OCDE (2023): "OCDE Skills Agenda 2023: Skills for a resilient green and digital transition

<sup>3</sup>P. Drucker (1969): "The age of discontinuity, part one"

notion ensures the efficiency of strategic decisions and choices that diverge towards maintaining competitive advantage and guaranteeing the survival of the organization. The purpose is therefore linked to the choice of valid and reliable knowledge to be integrated into the organization's strategy.

Knowledge management is an advantage for any organization because it ensures the accumulation and updating of new knowledge as well as the use of employees' knowledge.

Any economy faces many challenges related to the digital revolution, including competition, organizational structure discordant with the national and international economic situation, culture lacking in innovation and creativity within organizations, which requires the valorization of intellectual capital and the adoption of a strategy that allows the improvement of the activity of organizations.

These elements lead us to a study based on the following research problem: "How can Knowledge Management practices improve competitive advantage of SMEs?"

To answer this problem, we must answer these two questions:

- Does Knowledge Management Influence the Performance of SMEs?
- Is there a relationship between knowledge and competitiveness?

In parallel with the above-mentioned problem, we propose the central hypothesis, which is presented as follows:

**HC:** Knowledge Management would be a strategic lever, which ensures the transformation of knowledge and the improvement of competitiveness.

In order to verify and confirm the central hypothesis, it is proposed to divide the central hypothesis of the research into sub-hypotheses, which are formulated as follows:

**H1:** Knowledge Management would ensure knowledge sharing and increase organizational learning.

**H2:** Knowledge Management would improve customer relations and the quality of products and services.

**H3:** Knowledge Management would ensure competitive advantage for the company.

To do this, we first present a literature review concerning Knowledge management and its practices, as well as its impact on the competitiveness of SMEs; then we focus on the research methodology adopted in our study; and finally, we present the analysis of the validity and reliability of the Results from our study concerning the impact of Knowledge management on the competitiveness of Moroccan industrial SMEs.

## 1. Literature review: “Knowledge management practices and competitiveness of industrial companies in Morocco”

### 1.1. The Knowledge management

To ensure their competitiveness, companies are now interested in leveraging knowledge and are increasingly looking at knowledge management systems.<sup>4</sup>(Harvey 2011; Barbaroux 2012). Along the same lines, knowledge is considered a competitive advantage since it allows the company to improve the work of its individuals and to take advantage of unique and judicious skills (Durand 2000). It turns out that there is no general definition of Knowledge management; it is defined according to distinct approaches. Furthermore, the work analyzing knowledge management or Knowledge management remains limited. We put forward below the synthesis of the work on the definition of Knowledge management.

#### Definitions of Knowledge management

Definition	Author
Knowledge Management requires the existence of an environment that encompasses development and integration, designed specifically for use in a function that requires the support of expert systems.	(Chorafas, 1987)
Knowledge Management is defined as a mapping of knowledge and information resources, enabling users to access knowledge.	(Maglitta, 1995)
Knowledge Management is the process of creating, detecting and using knowledge to improve organizational performance.	(Bassi, 1997)
Knowledge Management is an approach that aims to create value by relying more specifically on knowledge, experience and judgment within the organization as well as outside.	(Ruggles, 1997)
Knowledge Management is the process of creating, validating, distributing and executing knowledge.	(Albert, 1998)
Knowledge Management allows access to experience, to new Knowledge and expertise that ultimately aim to create new capabilities, prioritizing innovation and performance.	(Beckman, 1999)

<sup>4</sup>LOUATIF and HIKKEROVAL (2020): “Knowledge management, organizational structures and competitiveness in Tunisian SMEs”, volume 4, pages 179 to 196

Knowledge Management is the combination of information management, experience, and reflection.	(Davenport et al. 1999)
Knowledge Management is based on a strategy of motivating staff, developing their knowledge, improving their abilities to interpret data and information to achieve organizational goals.	(Beijerse, 1999)
Through Knowledge Management, individual learning becomes organizational learning.	(Stonehous & Pem Berton, 1999)
Knowledge Management is a process that aims at collecting, organizing, classifying and disseminating information and making it useful within an organization.	(Bhatt, 2001)
Knowledge Management is the set of procedures and technologies used to implement and continuously update linked databases.	(DePablos, 2002)
Knowledge Management is the way in which an organization identifies, creates, detects, acquires, shares knowledge.	(Rumizen, 2002)
Knowledge Management is the process of identifying a company's collective expertise and placing it in the areas that require it to succeed.	(O'Sullivan, 2007)

2. **Source:** *Anand*, A., dan Singh, MD (2011)

In addition, Knowledge management is also based on several criteria, in particular, a good sharing culture, flexible technological tools allowing the updating of knowledge.<sup>5</sup>. Therefore, we see that the definition of the notion of Knowledge management differs according to practices. Therefore, we can put forward the following definition: "Knowledge management refers to all the processes that aim to organize the knowledge of workers within an organization, with the aim of acquiring it, identifying it, storing it and sharing it for organizational learning."

<sup>5</sup>Anand, A., Singh, MD (2011). Understanding Knowledge Management: a literature review. International Journal of Engineering Science and Technology 3.

### **1.1.1 Knowledge Management methods**

**There are many Knowledge Management methods, including:**

#### **1.1.1.1 The baton passing <sup>6</sup>**

It is a method through which an employee who changes or leaves his position, transmits his key knowledge that will be essential and useful so that his successor can be efficient in a very short time. It is therefore a question of recovering and determining only the essential knowledge and putting it at the service of the new arrival within the organization.

#### **1.1.1.2 Communities of practice**

"Practice groups" or "communities of practice". This is a group of people who organize themselves and contact each other regularly in order to share their knowledge, their expertise, and their best practices in a specific field.

#### **1.1.1.3 The yellow pages**

It facilitates to any employee the quick knowledge of each person within an organization. They also allow identifying the specific knowledge, skills and expertise of any worker.

### **1.1.2. Knowledge Management Tools**

#### **1.1.2.1. Electronic document management (EDM)**

"Electronic Document Management System" provides access to document funds and thus allows the creation, modification and search of documents or their content, the management of the document workflow and its distribution, version management and archiving. Today, EDM also manages image, sound and video files.

#### **1.1.2.2. Data warehouses**

They are tools considered "passive" because they contain a fixed image, at a given moment, of the company's production systems. They allow a very detailed analysis of the information stored there. They are composed of different elements: a database used for consultation, a data dictionary to help the user clean the data, and finally, information presentation tools.

After presenting the methods and tools of Knowledge Management, we will approach the theories of Knowledge management, which focus on knowledge as a competitive advantage, and the processes of its management.

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<sup>6</sup>WALLEZ.N (2010) "Knowledge management: sharing knowledge... and experience".

### **1.1.3. Knowledge management theories**

#### **1.1.3.1. Resource Theory**

For (Schiuma & Carlucci 2018) any rare, original and difficult to transfer resource is considered a competitive advantage for the organization<sup>7</sup>. Generally speaking, these resources consist of tangible and intangible assets. "Tangible assets can be a strategic asset if they are rare and unique assets."<sup>8</sup>(Brilman & Hérard 2006). For intangible assets, we can mention the brand image of the organization, the experiences of its resources and their knowledge.

In the same vein, (Brilman & Hérard 2006) show that organizational capacities depend on the combination of people and knowledge.

#### **1.1.3.2. Knowledge Based View Theory**

The Knowledge Based View theory complements the resource-based theory. It considers that the competitive advantage of the organization depends on the effective management of knowledge.<sup>9</sup>(Kogut & Zander 1993). At this level, we are talking about the intellectual abilities, the knowledge of employees and their ability to acquire new knowledge. According to (DeNisi et al. 2003), this theory is essentially based on the ability of employees to learn other knowledge in order to constitute a competitive advantage, so an organization that mobilizes the practices of Knowledge management (Curado 2006) manages to identify strategic knowledge to create a competitive advantage.

## **2. Methodology**

The primary goal of research is to build knowledge. Epistemology can be defined as a science or a branch of philosophy, its purpose is the study of theories of knowledge (Avenier and Gavard-Perret 2012). Generally, this science is based on different paradigms that can be classified according to different logics and the reasoning of various authors.

Referring to the three types of epistemological reasoning, namely positivist, interpretivist and constructivist, we have opted for positivism. Indeed, the positivist current is based on the examination of social reality; it focuses on finding the truth by verifying the existence of a

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<sup>7</sup>SCHIUMA & CARLUCCI (2018): "The power of the arts in business", Journal of business, volume 85, pages 342-347.

<sup>8</sup>BRILMAN & HERARD (2006): "best management practices", 6th updated and expanded edition.

<sup>9</sup>KOGUT & ZANDER (2003): "Knowledge of the firm and the evolutionary theory of the multinational corporation"; journal of international business studies 34(6): 516-529.



relationship or a causal link between the facts. This verification is presented by empirical means (Henning, Van Rensburg and Smit, 2004, p.17).

In fact, positivism is distinguished by two principles: reality has its own essence and reality is dominated by universal laws. This is why positivist researchers opt for the scientific method as a means of conceiving knowledge.

Our objective is to verify the existence of a relationship or a cause and effect link between Knowledge management practices and the competitiveness of Moroccan industrial SMEs.

The deductive reasoning that we used is based on the hypothetico-deductive approach. A field study through a questionnaire was conducted with 100 industrial SMEs in the Rabat-Salé-Kénitra region. To test our research hypotheses, we used the  $\chi^2$  independence test (Chi-square). The chi-square test of independence is a statistical method used to determine whether the selected variables, namely Knowledge management practices and the competitiveness of industrial SMEs.

Furthermore, we note that Competitiveness means the ability of a company, a sector or a country to face competition (Bialès et al., 1999, p. 105-106) and that competitive advantage allows the company to differentiate itself from its competitors and to make profits. It therefore depends on the company's ability to create value for its customers. On the other hand, Knowledge management refers to all the processes that organize knowledge within an organization and allow it to profit from it.

### **3. Results of the empirical Studies**

This part is dedicated to verifying the relationship between Knowledge management and the competitive advantage of small and medium-sized enterprises (SMEs). For this, we conducted an empirical study based on a survey that was conducted on a sample of 100 industrial SMEs in the Rabat-Salé-Kénitra region.

#### **3.1. Knowledge sharing and increasing organizational learning**

To analyze the relationship between knowledge sharing and increased organizational learning, we used the Chi-square test of independence. In fact, we conducted a survey of 100 SMEs to find out whether knowledge sharing can influence organizational learning in SMEs. The results are summarized in the table below:

### The knowledge sharing and the influence organizational learning in SMEs

PC/Evol AO	Company size			Total
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)	
Yes	60	10	5	75
No	4	6	15	25
Total	64	16	20	100

Source: Author

The expected staffing table is as follows:

#### The expected staffing table

PC/Evol AO	Company size		
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)
Yes	48	12	15
No	16	4	5

Source: Author

We have calculated subsequently the Chi-square distance for each modality. For medium-sized companies that approved that knowledge sharing has an impact on organizational learning, the distance is:  $\chi^2 = \frac{(60-48)^2}{48} = 3$ . The Chi-square table for each subcategory is as follows:

#### The Chi-square table for each subcategory

PC/Evol AO	Company size		
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)
Yes	3	0.33	6.66
No	9	1	20

Source: Author

The Chi-square distance is the sum of the different elements in the table above:

$$\text{Distance from } \chi^2 = 3 + 0,33 + 6,66 + 9 + 1 + 20 = \mathbf{39,99}$$

Here  $39.99 > 5.99$ , so we reject  $H_0$ : the two variables are not independent. Therefore, we can deduce that there is a dependency relationship between knowledge sharing and the improvement of organizational learning.

### **Interpretation**

Depending on the size of the companies, it should be noted that:

- 60 medium-sized companies say knowledge sharing impacts organizational learning;
- 10 small businesses say that knowledge sharing has an impact on organizational learning, while 6 confirm the opposite;
- Only 5 micro-enterprises confirm that there is a relationship between knowledge sharing and organizational learning

Furthermore, we can add that small and micro-enterprises are less interested in knowledge management unlike medium-sized enterprises.

### **3.2. The impact of Knowledge management on the quality of products and services**

To analyze the relationship between Knowledge Management and product and service quality, we used the Chi-square test of independence. In fact, we conducted a survey of 100 SMEs to find out whether Knowledge Management can influence the quality of products and services.

The results are summarized in the table below:

### **3. The impact of Knowledge management on the quality of products and services**

KM/ Quality	Company size			Total
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)	
Yes	56	8	0	66
No	14	12	10	34
Total	70	20	10	100

**Source: Author**

The expected staffing table is as follows:

### The expected staffing table

PC/Evol AO	Company size		
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)
Yes	46.2	13.2	9.99
No	23.8	6.8	2.72

Source: Author

We have calculated subsequently the Chi-square distance for each modality. For medium-sized companies that approved that KM has an impact on the quality of products and services, the distance is  $\chi^2 = \frac{(56-46,2)^2}{46,2} = 2,07$ . The Chi-square table for each subcategory is as follows:

### The Chi-square table for each subcategory

PC/Evol AO	Company size		
	Averages companies (between 50 and 249 employees)	Small Business (between 10 and 49 employees)	Micro- enterprises (less than 10 employees)
Yes	2.07	2.04	9.99
No	4.03	4.20	19.48

Source: Author

The Chi-square distance is the sum of the different elements in the table above:

Distance from  $\chi^2 = 2,07 + 4,03 + 2,04 + 4,20 + 9,99 + 19,48 = 41,81$

Here  $41.81 > 5.99$ , so we reject  $H_0$ : the two variables are not independent. Therefore, we can see that the quality of products and services depends on Knowledge Management practices.

### Interpretation

Depending on the size of the companies, it should be noted that:

- 56 medium-sized companies say that Knowledge Management has an impact on the quality of products and services;

- 12 small companies state that Knowledge Management does not influence the quality of products and services, while 8 confirm the opposite;
- No micro-enterprises confirm the existence of a relationship between Knowledge Management and the quality of products and services.

According to the results of empirical studies concerning the impact of Knowledge Management on the organization of learning within the company as well as the improvement of the quality of products and services, it can be deduced that Knowledge Management allows the company to improve its competitiveness but also its performance.

## **Conclusion**

In conclusion, the study proved that knowledge management practices have a positive and significant effect on competitive advantage and improve organizational performance. Indeed, knowledge management occupies an important place within organizational structures, in order to maintain a competitive position. Furthermore, globalization and technological developments have led companies to integrate knowledge management into their strategies.

Moreover, knowledge is considered as a strategic resource that creates value, offering organizations the continuous improvement of their competitiveness and performance.

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