The International Journal of Business Management and Technology, Volume 2 Issue 2 March 2018
ISSN: 2581-3889

Research Article Open Access

Knowledge management and its importance in improving the performance of small and medium-size enterprises

Zina Benoussad
Institute of economic sciences, Management, and commercial sciences, University of Ain Temouchent, Ain Temouchent, 46000 Algeria
Laboratory of Markets, Employment, Legislation and Similarities in the Maghreb Countries

Abstract

The present research paper aims at elucidating the importance of using Knowledge Management as a modern management tool in small and medium-size enterprises operating in western Algeria and its role in improving their performance.

An attempt is made in this research to give a *theoretical definition* of knowledge management, define its requirements and functions, explain performance and its components, and elucidate the importance of Knowledge Management in institutions. In addition, a brief overview is given about small and medium-sized enterprises and their *characteristics in Algeria*.

Moreover, the study was conducted on a sample of small and medium-size enterprises in western Algeria, using questionnaires which were distributed to 40 managers of these institutions. These questionnaires were collected and analyzed by means of the *Statistical Package* for the Social Sciences (*SPSS* – manufactured by IBM Corporation).

A set of conclusions could be drawn at the end of the research:

- Small and medium-size enterprises in western Algeria use Knowledge Management as a modern management approach.
- There is a statistically significant correlation between Knowledge Management and Performance in the institutions under study.
- There is a statistically significant impact of Knowledge Management on the overall performance of the institutions under study.

Keywords: Algeria, Knowledge management, Performance, Small and medium enterprises

I. INTRODUCTION

Recent trends and developments have led to more intense competition among individuals, organizations and even countries; they have engendered the emergence of a number of new approaches, systems and concepts in order to address these changes and to withstand and resist competition. The most recent and prominent of these concepts is Knowledge Management (KM) which consists of putting the acquired knowledge and skills in the hands of employees at the right time and in the appropriate form and ease-of-use in order to achieve higher levels of accomplishment.

Knowledge management (KM) has become the key strategic asset and the best way for organizations to achieve the best performance if it is polarized and used efficiently. Small and medium-size enterprises are most closely linked to this approach. This type of institutions has succeeded in imposing its role in the economic life. Small and medium-size enterprises *(SMEs) proved* to be hugely effective in the economic system because they have contributed to building an integrated industry in developed countries. These institutions have also become a leading player in the economic development, through the creation of new jobs; this has raised the interest of all countries in Knowledge Management.

Presently, the sector of small and medium-sized enterprises (SMEs) represents between 90 and 99% of the total number of companies in many countries. The reason for this is that SMEs are different from the other institutions; they have a simple organizational structure, a limited capital, some flexibility and speed of adaptation to external changes, etc. However, in this new environment, in which the uncertainty management process has taken place and competition has become more intense, these institutions must adapt to the new changes and adopt the best and most modern

management strategies that rely on information, technology and knowledge management in order to achieve the best possible performance and thus to struggle against both domestic and foreign competition.

I.1 Research problematic

Algeria, like the rest of the world, has strived in recent years to change its economic trends from oriented economy to market economy, by taking several measures that would help to get out of the crisis and remedy the repeated mistakes and failures of its large public-sector institutions. Algeria has encouraged the development of small and medium-size enterprises (SMEs) as a means of achieving the economic development, particularly because these institutions suit well the economic and social characteristics of Algeria.

Despite the remarkable increase in the number of this type of enterprises in Algeria since 2001 (Date of issuance of the law on the promotion of small and medium-sized enterprises in Algeria), one must acknowledge that the practical reality proves that this growth is not commensurate with the objectives sought by the various government programs which were established to facilitate and stimulate this type of institutions. In addition, the number of companies going bankrupt is continuously on the rise; this is certainly attributed to the large number of problems the SME sector is facing. The most prominent of these is the lack of awareness of workers and managers of these institutions for the need to modernize the methods of management and keep up with the recent developments in contemporary business organizations.

Based on the above, we can ask the following question:

How can Knowledge Management be used to serve as a modern approach to management and as an effective way to improve the overall performance in small and medium-size enterprises in Algeria?

In order to find an appropriate answer to this problem, *a particular focus is placed* on small and medium-size enterprises in the western region of Algeria, particularly in the Provinces (Wilayas) of Ain-Temouchent, Oran, Mascara, Sidi Bel-Abbes, Saida, and Tlemcen.

A questionnaire was distributed to managers only, without resorting to employees, since Knowledge Management should begin with the director of the enterprise.
Importance and objectives of the study

The present study is fundamental; it aims to:

- Highlight the meaning and importance of Knowledge Management in contemporary business organizations;
- Clarify the meaning of performance and define the ways to improve it in contemporary institutions;

- Identify the characteristics of Algerian small and medium-size enterprises;

- Get closer to small and medium enterprises (SMEs) in western Algeria and become informed about the prevailing management methods.

I.2 The objectives of the study: The objectives of the study are

- Enrich scientific research with the important and sensitive subject of Knowledge Management in small and medium enterprises;
- Demonstrate the relationship between Knowledge Management (KM) and Innovation performance (IP) in this type of institution;
- Confirm the positive impact of Knowledge Management (KM) on the overall performance (OP) in SMEs;
- Attempt to sensitize the managers of *small and medium-sized businesses* (SMBs), which are under study, about the importance of this modern way of management in order to achieve the continuity and survival of their institutions in the *light* of globalization and i*ntense competition*.

I.3 Hypotheses of the study

Based on the above, the following hypotheses may be suggested:

First key Hypothesis: Small and medium-size enterprises in western Algeria use Knowledge Management with its five components, namely knowledge recognition, knowledge creation, knowledge storage, knowledge application, and knowledge transfer and dissemination as a modern management approach.

Second key hypothesis: There is a statistically significant relationship between Knowledge Management and its five components, namely knowledge recognition, knowledge creation, knowledge storage, knowledge application, and knowledge transfer and dissemination. It is important to know that the global performance in SMEs in western Algeria has as a significance level of 0.05.

- Tird key hypothesis: There is a statistically significant impact of Knowledge Management processes on general performance in SMEs in western Algeria with a significance level of 0.05.

I.4 Previous studies

The study of Houari Maaradj and Dalal Stouh, entitled "Assessing the manager's attitudes towards the application of Knowledge Management in Algerian institutions". This study aimed at identifying the capacity and readiness of Algerian public institutions to implement the Knowledge Management system. In order to reach this goal, 48 questionnaires were randomly distributed to a group of directors, assistant directors, and department heads in public institutions. The results of the study were as follows:

- There is a positive trend among managers in Algerian institutions towards the application of Knowledge Management and its components;

- The level of execution of core knowledge management processes in public institutions does not help to implement knowledge management and its components;

- The level of readiness of human resources, in terms of preparation and rehabilitation, in these institutions helps to some extent in the application of knowledge management and its components;

- The level of *Information and Communications* Technology (ICT) infrastructure does not facilitate to implement knowledge management and its components;

- Algeria has not fully embraced the shift towards the digital economy yet; its public institutions still lack some of the basic components of the technology infrastructure on which knowledge management and its applications are founded.

The study of Khachali, under the title: "Knowledge management and its impact on organizational performance - A field study in Jordanian industrial companies". This study aimed at identifying the impact of knowledge management on the organizational performance of the Jordanian industrial companies. The study was conducted on a sample of 264 workers, selected from 37 industrial companies. The needed information was collected through a questionnaire, which was specifically designed for that purpose. The study provided the following important results:

- A statistically significant relationship exists between the components of knowledge management, i.e. knowledge acquisition, knowledge transfer, and knowledge response.

- There is a significant effect of knowledge management components on comparative performance;

- There is a significant effect of knowledge of response on comparative performance; however, the components of knowledge acquisition and knowledge transfer do not have a significant effect on internal performance.

The study of Zack and al., entitled: "Knowledge Management and Organizational Performance: An Exploratory Analysis". The objective of this study was to highlight the impact of using Knowledge Management on the outcomes of organizational performance within commercial organizations. The researcher designed a questionnaire to collect the needed information for his study; it was then distributed to 1500 managers who studied or received training in a leading North American Business School. *The study reached the following essential results*:

- There is a direct relationship between knowledge management and organizational performance;

- There is a direct and significant relationship between financial performance and organizational performance;

- There is no direct relationship between the financial performance and knowledge management practices;

- There are other factors that affect financial performance; these are the relationship of the company with customers, product development, and operational excellence.

I.5 Comments on previous studies

Our current study, which addresses Algerian institutions, provided findings that are fully consistent with those reported in the first study (Houari Maaradj and Dalal Stouh). The present study resulted in similar results; it found out that although Algerian institutions focus of some components of knowledge management only, like using modern technology and stimulating workers' motivation, ..., they still lack some basic elements of technology infrastructure that are required for an efficient management of knowledge and its applications, in addition to poor communication and teamwork, which generally lead to weak and inadequate implementation of Knowledge Management.

Our study is different from the previous one; ours focuses on a particular type of institutions, namely small and medium-size businesses, which today have become one of the most important means of achieving economic development in most economies throughout the world. Therefore, it is urgent for these institutions to catch up with modern organizations and adopt Knowledge Management as a novel management approach.

Our research is consistent with Khashali's study as well as with that of Zack et al. regarding the relationship between knowledge management and performance; this study arrived at the same conclusion, which is that knowledge management has a positive impact on performance in institutions.

The current work differs from that of Khashali as it deals with all five Knowledge Management components, namely knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge transfer and dissemination. Moreover, the results of the conducted test showed that all these components have an impact on the overall performance within the institutions under study. Similarly, Al-Khashali found out that there is a significant influence of knowledge of response on comparative performance, while knowledge possession and knowledge dissemination do not have any significant impact on internal performance.

The current study differs from that of Zack and al. because the latter focuses on commercial institutions and businesses, while the first one centers on productive companies where the performance level can be easily and accurately measured, through productivity, product quality, level of creativity, as well as customer satisfaction. In addition, researchers reached the conclusion that performance is not influenced only by Knowledge Management, but also by other factors such as the company's relationship with customers, product development, and operational excellence. It is worth mentioning that the present study did not address other factors affecting performance within the institutions under study.

II. THE THEORETICAL FRAMEWORK OF THE STUDY

An attempt is made, through this axis, to address the different theoretical concepts of Knowledge Management and performance, and the relationship between them.

First: Knowledge Management

II.1 What is Knowledge Management?

The definitions of Knowledge Management do not differ much among authors and researchers. In 1999, *Peter Drucker* succinctly defined Knowledge Management as "The coordination and exploitation of organizational knowledge resources for cost-effectiveness and competitiveness." [1].

David *Skyrme* is considered as one of the most prominent contributors to the concept of knowledge management; he states that : " Knowledge Management is the clear, explicit and frank management of vital knowledge and all related processes of creating, organizing, disseminating, using and exploiting knowledge to achieve the objectives of the organization" [2].

Based on the above mentioned definitions, we may admit the following definition of knowledge management as: "A set of initiatives, techniques, processes and strategies that allow getting the appropriate knowledge at the right time

from the right people in order to organize, manage, store, disseminate, share and use that knowledge within each one of its departments in order to improve performance and create productivity, and consequently to achieve competitive advantage".

II.2 Importance of Knowledge Management

The importance of knowledge management can be evidenced through the experiences of many companies in developed countries that have spent huge amounts of money to implement these experiences. As a result, many of these companies reaped great benefits. Therefore, one can state that Knowledge Management plays a fundamental role in organizations. These benefits may therefore be summarized by saying that Knowledge Management is:

- A great opportunity for organizations to reduce costs and raise their internal assets in order to generate new revenue [3].

- A means to motivate and encourage the creative capacities of the organization's human resources to produce better knowledge and allow for the early detection of unexpected problems;

- A positive evolution in the new economic environment, which forces the enterprise to be highly competitive and successful. This may be possible through perspicacity, creativity, adaptability, and acquisition of huge amounts of information in a very short time.

- A way to work on the principle that 'Prevention is better than cure'. It encourages innovation management but not reaction management; it also has the capacity to deal with acute and emergency crises, as well as to unleash the intellectual potential and the technical capacities of the personnel within the institution, at all levels. It also contributes to increase the operational efficiency, improve productivity and provide better solutions to problems as well.

- A knowledge base on which awareness about the needs and aspirations of customers is founded. It works to reach and attract new customers and maintain loyal clients. It also strengthens the relationship between colleagues (professional knowledge), employees and administration (human knowledge).

II.3. Knowledge Management processes

Although researchers generally differ on the basic phases of Knowledge Management (KM), no doubt that these processes operate in a sequential, complementary and integrated manner. Knowledge management processes may be divided into three basic stages:

- Diagnosis, acquisition and creation of knowledge.

- Storage and dissemination of knowledge.

- Application of knowledge and follow-up.

II.4 Definition of performance

Institutional performance is the common denominator of all the efforts that are exerted by the administration and employees within the institutions. A large number of researches and studies have been conducted on the topic of performance which has become an important and fundamental concept within every organization. Unfortunately, no unified and comprehensive definition of performance has been agreed upon so far due to its ever-changing characteristics. Performance is sometimes defined as the ability of the organization to allocate resources and use them optimally; it is sometimes associated with the workers' productivity and human factors, and sometimes it appears as the result of productivity and its images.

Performance can be defined as: "A behavior that produces an outcome"; it is the way an individual reacts in response to a particular task that is whether imposed by others or done by the individual himself [4].

Therefore, performance may be viewed as the organization's ability to achieve its long-term objectives, including the goals of profit maximization, survival, growth and adaptation, using both physical and human resources, with high effectiveness and efficiency, under continuously changing environmental conditions [5].

II.5 Performance characteristics

Organizational performance is characterized by the features cited below [6]:

- It maintains the stability of work and its continuity through accumulated expertise and previous experiences that can enrich the institution; it helps to pass on these experiences from generation to generation so that the institution is not affected by the absence or change of leadership.

- It helps to maintain the administrative and financial stability of the institution, by adopting specific policies, regulations and rules; it orientates the efforts of all individuals working in the institution towards its development within a clear framework of duties and responsibilities, with a collective participation in achieving the objectives. The head of the organization is not the only person responsible for the management, administration and decision-making.

- It constantly focuses on the development and rehabilitation of the human resources by attracting the best talent through the policy adopted by the institution in the recruitment operation.

- It helps to strengthen the workers' loyalty and affiliation to the institution and its systems. This institution, which should be regarded as belonging to all, requires hard work in order to ensure its survival and maintain its progress.

II.6 Relationship between knowledge management and performance

Knowledge Management (KM) has a significant impact on organizational performance in various dimensions; it affects individuals, processes and products, and influences the overall performance of the organization.

II.6.1 The impact of Knowledge Management on employees:

Knowledge Management affects the employees because it:

- Improves their learning process; employees may learn from each other's experience as well as from external sources of knowledge. This allows their learning to grow steadily so as to achieve the ability to change in response to the requirements of technology;

- It makes employees more flexible and enhances their satisfaction at work; it also helps them to build and strengthen their learning capacities to solve and cope with the various problems they face in the business world.

II.6.2 The impact of Knowledge Management on processes

Knowledge management aims to[7]:

- Help to carry out processes in accordance with the pre-set objectives of increasing operational efficiency within the organization;

- Increase the efficiency of operations by simplifying processes and reducing costs;

- Achieve operations in a creative and modern way, based on increasing reliance on knowledge sharing among employees in order to find innovative solutions within the organization where Knowledge Management is used as a brainstorming tool.

II.6.3 The impact on products

Knowledge Management affects different products and outputs because it:

- Impacts value-added products. Knowledge management processes help the organization to develop new products and improve the existing ones; consequently, it helps to achieve higher added value products as compared with previous ones. [8]

- Affects knowledge-based products through knowledge bases owned by investment companies that are specialized in the development of software industry [9].

II.6.4 Impact on overall performance

Knowledge Management can have a significant impact on the overall organizational performance of the institution through the development and innovation of new products which should result in increased returns and profits. This also occurs when the Knowledge Management strategy adopted is in line with the organization's business strategy or with the organization's vision and policy. KM affects revenue and expenses which depend on the adequacy between

managers and industry, As a result, this leads to increased customer loyalty to the organization. In addition, KM uses knowledge to gain competitive advantage with respect to competitors and business partners.

III. THE PRACTICAL FRAMEWORK OF THE STUDY

The results of the field study were first reviewed within the context of this investigation. This was done by means of a questionnaire that included a set of questions related to knowledge management and to the overall level of performance within small and medium-size enterprises, in western Algeria.

III.1 Study methodology and data collection tools

Considering the type of subject under study, the researcher considers that the method that is best suited for the case study at hand is the descriptive analytical approach, where the data and information are collected from library and Internet sources, for the theoretical part of the study. The questionnaire was distributed to the managers of small and medium-size enterprises operating in western Algeria, for the practical side. The present study attempts to diagnose, analyze, link, and interpret, classify and measure data, and also to determine the type of relationship between its variables, causes and trends, and finally to derive the results from them.

III.2 Community and sample of the study

The study population consists of a sample of 40 small and medium-size enterprises operating in western Algeria; each institution was given one questionnaire. The statistical tools and methods used were all based on the *Statistical Package* for the Social Sciences (*SPSS*).

III.3 Study tool

In view of the nature of the exploratory study, the methodology used in the descriptive approach, and the possible alternatives, and based on the topic of the study, its objectives, queries, and the desired data, the researcher used the form tool which, in its final form, included 47 questions divided as follows:

- 04 questions relating to personal information about the manager, like the age, qualifications, seniority and size of his institution;

- 43 questions whose answers were formulated according to the five-point Likert scale [is a method of measuring behaviors and preferences, using psychometric tests. It was developed by psychologist Rensis Likert, who used questionnaires, especially in statistics. The scale is based on responses to the degree of approval or objection to a statement.], which comprised the following two axes:

The first axis included 24 questions on knowledge management processes which were divided into five dimensions as follows:

Dimension 1: Knowledge recognition. It included 4 questions that focus on the level of awareness of managers and workers in the institutions under study, in view of the importance of knowledge management in their institutions;

Dimension 2: Knowledge generation. It included 5 questions that focus on the availability of instruments, such as the training of employees and the realization of modern scientific methods, to generate knowledge within the institutions under study;

Dimension 3: Knowledge storage. It included 6 specific questions on the availability within the institution of the technical and technological means to store its innovative knowledge;

Dimension 4: Knowledge application. It included 5 questions related to the extent of application of knowledge management within institutions;

Dimension 5: Knowledge dissemination. It included 4 questions on the concern of institutions in disseminating knowledge, through the use of modern communication technologies, flexible organizational structure and exchange of tasks among workers inside the institution.

The second axis included 19 questions on overall performance within the institutions under study; it was divided into four dimensions as follows:

Dimension 1: Workers' satisfaction. It included 6 questions that focused on the satisfaction of workers at work within the institutions under study;

Dimension 2: Internal processes. It consisted of 4 questions on the quality of production, level of innovation, and cost reduction in the institutions under study;

Dimension 3: Customer's satisfaction. It comprised 5 questions relating to the level of interest of the studied institutions in taking into consideration the expectations and desires of their customers; it also examined their degree of satisfaction in a timely manner and appropriate form.

Dimension 4: Institution growth and development. It comprised 4 questions that are related to the high market share and profitability of the institutions under study.

III.4 Measuring the validity of the paragraphs of the questionnaire and its stability

Two methods are used to validate the questionnaire. The first approach is based on the honesty and sincerity of a group of arbitrators who are professors with specific knowledge in the field of economics. The researcher presented the questionnaire, in its initial form, to a group of professors in business administration, economics and statistics, from different universities; they all expressed their views on the form of the questionnaire. Once the *necessary changes* were made, it was distributed to a group of institutions operating in northwestern Algeria. Eight copies were recovered from the city of Oran, 4 from Tlemcen, 7 from Mascara, 5 from Sidi Bel-Abbes and 16 from Ain Temouchent, for a total of 40.

The second approach used the internal consistency test. Once the data collected were dumped into the SPSS program, the researcher studied the validity of the questionnaire by measuring the internal and structural consistency of its paragraphs. A strong correlation was found between the paragraphs of each axis and its overall rate. All correlation coefficients were high (between 0.533 and 0.941) with a significance level between 0.000 and 0.034. Therefore, the questions about these axes can be trusted; they can be used in what they are *intended* to *measure*.

Moreover, the results obtained from the analysis of structural validity indicated that the correlation coefficients are at the significance *level of 0.01,* for knowledge awareness, knowledge storage, knowledge application and knowledge dissemination. The probability value for each dimension is less than or equal to 0.01, with a significance at the level of 0.05 for knowledge generation. Furthermore, the probability value was estimated at 0.02 for this dimension. In addition, the correlation coefficients for the performance axis showed a significance level of 0.01 for all dimensions. Therefore, it can be said that there is a strong correlation between the different axes of the questionnaire and the overall rate of its paragraphs. Thus, the questionnaire is valid and can be used to measure what it is intended to measure. The Cronbach's alpha coefficient was used for the measurement of stability. This stability of the axes ranged from 0.842 to 0.916, indicating the stability of the study scale.

III.5 Data analysis and hypothesis testing

III.5.1 Descriptive analysis of personal data:

The characteristics of sample members are summarized in the following table:

Table 01 - Personal characteristics of respondents

Variable	Variable classes	Recurrence	Percentage
Age	Less than 30 years of age	4	10%
	From 30 to less than 40 years	12	30%
	From 40 to less than 50 years	18	45%
	50 years and older	6	15%
Educational level	High school level	4	10%
	Vocational training certificate	2	7%
	Bachelor's degree (3 years)	28	50%
	Master's degree	2	7%

	Post-Graduate Diploma	4	10%
Expériences	Between 2 and 5 years	16	40%
	Between 5 and 10 years	14	35%
	More than 10 years	10	25%
Size of the enterprise	Small enterprise	20	50%
	Medium enterprise	20	50%

***Source**: Elaborated by the author, based on software SPSS results*

From the above table, the following conclusions may be drawn:

Age: The above results indicate that the largest proportion of managers are aged between 30 and 50 years, with a cumulative rate of 75%. This is the appropriate age for creating and managing an institution. Furthermore, 15% of them are over 50 years old, which gives the researcher some confidence about the answers provided by respondents, who are characterized by intellectual maturity.

Educational level: from the above results, one can clearly observe that about 67% of managers have a bachelor's degree or more, which represents a strength point for the institutions under study. The higher the manager's level of education is, the more his professional competence grows and his comprehension of modern management techniques becomes greater. This will certainly contribute, in an effective way, to the profitability of the institution, and would give greater confidence to the researcher in the results given by the study. These findings indicate that the respondents understood the questionnaire; their answers present a high degree of credibility.

Years of seniority: The percentages depicted in the table are consistent with the age variable previously discussed. In general, the managers' ages range from 30 to less than 50, which means that the majority of them have a work experience greater than two years but not exceeding ten years, with a cumulative rate of 75%. This is a positive indicator of the managers' experience in management and its components.

Size of the institution: The results in the table indicate that although the sample was chosen randomly, the number of small enterprises was found equal to that of medium-size enterprises, i.e. each type representing 50% of the total number.

III.5.2 Testing the study hypotheses

Analysis of the first main hypothesis: The first main hypothesis is as follows:

H_0: Small and medium enterprises in western Algeria do not use Knowledge Management and its five components, namely knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination as a modern management approach.

H_1: Small and medium enterprises in western Algeria use Knowledge Management and its five components, namely knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination as a modern management approach.

To study the first main hypothesis, the researcher used the *one-sample t-test*, and the results obtained are summarized in the following table.

Table 02: Test results (*One-sample t-test*)

	Test value = 3					
					95% Confidence Interval for the *differences*	
	t	ddl	Sig. (bilateral)	Average difference	Inferior	Superior
Knowledge Management	5.444	39	0.000	0.61300	0.3853	0.8407

***Source**: Elaborated by the author using the software SPSS results*

We can clearly note, from the previous table, that the significance value is equal to 0.000, which is smaller than the significance level of 0.05. Moreover, the calculated t value is equal to 5.444, which is greater than the value 1.645 in the T statistic table, at the degree of freedom 39. Based on this, the null hypothesis is rejected but the alternative hypothesis, which states that the managers of the institutions under study use Knowledge Management in administering their institutions, is accepted.

Analysis of the second main hypothesis:

The second main hypothesis addresses the relationship between the use of Knowledge Management in the institutions under study and the level of overall performance. The hypothesis may be formulated as follows:

H_0: There is no statistically significant relationship between Knowledge Management (KM) with its five components, namely knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination, on one side, and Overall Performance (OP), on the other, in small and medium-size enterprises in western Algeria, at the significance level of 0.05.

H_1: There is a statistically significant relationship between Knowledge Management with its five components, namely knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination, on one side, and Overall Performance (OP), on the other, in small and medium-size enterprises in western Algeria, at the significance level of 0.05.

In order to test this hypothesis, the simple Pearson's correlation coefficient was used, and the results obtained are depicted in the following table.

Table 03: Pearson's correlation coefficient between Knowledge Management and Performance

		Performance
Knowledge Management	Pearson's correlation	0.541**
	Sig. (bilateral)	0.001

***Source**: Elaborated by the author, using the software SPSS results*

This table indicates that the correlation coefficient between Knowledge Management (KM) and Performance is equal to 0.541. Moreover, the probability value is equal to 0.001, which is below the significance level of 0.05; this means that a statistically significant correlation exists between Knowledge Management and Performance.

Through the preceding results, We can reject the null hypothesis and accept the alternative hypothesis, which states that a statistically significant correlation exists between Knowledge Management and its five components, i.e. knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination, on one hand, and Overall Performance (OP), on the other, in small and medium-size enterprises; the significance level is at 0.05.

Analysis of the third main hypothesis

The third major premise is the causality hypothesis which addresses the impact of using Knowledge Management in small and medium-size enterprises in western Algeria on their Overall Performance. This hypothesis is presented as follows:

H_0: There is no statistically significant impact of Knowledge Management processes on Overall Performance within small and medium-size enterprises in western Algeria, at the significance level of 0.05.

H_1: There is a statistically significant impact of Knowledge Management processes on the Overall Performance within small and medium-size enterprises in western Algeria, at the significance level of 0.05.

The simple linear regression was used to test the hypothesis, and the results obtained are depicted in the following table.

Table 4: Simple linear regression to examine the impact of Knowledge Management on Performance.

Summary of models

Model	R	R^2	*Adjusted* R^2	Standard error of the estimate	Change statistics				
					Variation of R^2	Variation of F	ddl1	ddl2	Sig.
1	0.541[a]	0.292	0.274	0.60275	0.292	15.690	1	38	0.000

a. Predictors: Knowledge Management (Constant)

ANOVA[a]

Model		Sum of squares	ddl	Mean square	F	Sig.
1	Regression	5.700	1	5.700	15.690	0.000[b]
	Residue	13.806	38	0.363		
	Total	19.506	39			

a. Independent variable: Overall Performance

b. Predictors: Knowledge Management (Constant)

Coefficients[a]

Model		*Unstandardized coefficients*		Standardized coefficients	t	Sig.
		B	Standard error	Beta		
1	(Constant)	1.711	0.499		3.429	0.001
	Knowledge Management	0.537	0.136	0.541	3.961	0.000

a. Dependent variable: Overall Performance

***Source**: Results of software SPSS*

It is easy to observe from the first table, that R2 is equal to 0.292 and the adjusted R2 is estimated at 0.274. This indicates tha Knowledge Management has improved the Overall Performance within the institutions studied by only 29.2%. However, 70.8% performance improvement can be attributed to other variables that have not been taken into considered in this study.

The results in the second table may be summarized as follows:

The sum of squares due to regression is 5.70, and the sum of squares is equal to 13.806, while the total sum of squares is 19.

The number of degrees of freedom associated with the regression is 1, while that associated with residuals is 38.

The mean square regression is estimated at 5.70, and the mean square of residuals is estimated at 0.363.

The value of the contrast analysis test in the linear regression is 15.69.

The significance level is equal to 0.000, which is smaller than 0.005, the significance level of null hypothesis. In addition, th calculated P value, which is estimated at 15.69, is greater than the tabular value of 4.0847, at the degrees of freedom levels of 1 a Therefore, the null hypothesis can be rejected and the alternative hypothesis is accepted. Consequently, it can be concluded that is a statistically significant impact of the independent variable of Knowledge Management (KM) on the dependent variable of O Performance in small and medium-size enterprises in western Algeria.

Table 3 clearly indicates that the y-*intercept* of the *regression line* is 1.711, which represents a in a straight line equation (i.e. y = a + bx). Therefore, the regression line is: $y = 1.711 + 0.537x$

Where x represents the independent variable and y is the dependent variable. So, the regression line equation may be

written as:

Overall Performance = 1.711 + 0.537 Knowledge Management (or OP = 1.711 + 0.537KM).

Consequently, it is possible to reject the null hypothesis, which states that Knowledge Management (KM) has no impact on Overall Performance (OP) within small and medium-size enterprises in western Algeria, and accept the alternative hypothesis that confirms the impact of Knowledge Management on Overall Performance within small and medium enterprises in western Algeria.

III.5.3 Discussion of study results: The field study resulted in the following set of findings:

- There is a medium to high degree of agreement between all managers interviewed regarding each dimension of Knowledge Management, which indicates that everyone is aware of the importance of using Knowledge Management as a new approach to *governing SMEs*;

- There is a medium to high degree of agreement between the respondents that their overall performance is continuously improving as compared to previous years; their overall performance is better than that of competitive institutions. This means that changing and developing new management methods helps to greatly improve performance;

- Small and medium-size enterprises in western Algeria use Knowledge Management as a modern approach to governance with its five components, i.e. knowledge recognition, knowledge generation, knowledge storage, knowledge application and knowledge dissemination;

- There is a statistically significant correlation between Knowledge Management (KM) and Overall Performance (OP) in the institutions under study;

- There is a statistically significant impact of Knowledge Management (KM) on Overall Performance (OP) within the small and medium-size enterprises under study.

IV. Conclusion

Currently, Knowledge Management is considered as one of the most decisive and modern methods of management; it has proved useful in achieving excellence within institutions that adopted it. Indeed, this study was conducted to determine the extent to which this approach is used in the management of small and medium enterprises operating in western Algeria, and how this method may affect the overall institutional performance.

In order to answer the research problem, it was decided to divide this study into two major parts. The first part, which concerned the theoretical framework of the study, included a set of concepts related to knowledge management and performance; the relationship between them was also investigated. The following results could be found:
- In light of the fierce competition and great technological development, managers cannot ignore the importance of Knowledge Management in their enterprises;

- Knowledge Management is viewed as the primary resource for organizations to achieve profit, profitability and competitive advantage on the market;

- Knowledge Management is closely linked to the human element and all his/her ideas, information and experiences; it is also associated with the way the institution uses the human element to achieve its objectives;

- The concept of performance is not limited only to the individual's behavior within the institution; it also includes many variables such as the employee's satisfaction, customer's satisfaction, and the institution's evolution as compared to its competitors;

- Knowledge management has a significant impact on the company's performance because it can influence the learning process of employees as well as their satisfaction at work. KM can also affect the internal processes by improving production and launching the spirit of creation and innovation within the institution. It can also raise the customer's satisfaction by supplying the product or service in the appropriate form and at the right time.

The second part of the study concerned the practical framework of the research. It was conducted on a sample of 40 institutions, all operating in the western region of Algeria. The results of hypothesis testing were as follows:

- The first hypothesis, which states that small and medium-size enterprises operating in western Algeria were aware of the importance of Knowledge Management (KM) and used it, has been validated;

- The second hypothesis testing was performed and it was found that a close relationship exists between Knowledge Management and performance within the institutions under study;

- The third hypothesis testing confirmed that Knowledge Management affects only 29.2% of the overall performance within the institutions under study, while 27.8% may be attributed to other variables not considered in this research.

In addition to the results obtained from hypothesis testing, the author was able to get to some other interesting results through observation and contact with the managing directors of the institutions under study; these may be summarized as follows:

- Some uncertainty still exists as to whether managers fully understand the proper meaning of Knowledge Management, the way it should be used and its importance within the institution;

- Despite the remarkable progress in using modern technologies in Algerian institutions, many of them, especially small and medium-size enterprises, still fall far behind expectations in using these technologies in the promotion of the institution and its products through the Internet, and the acquisition of new knowledge through it;

- Small and medium-size enterprises lack the culture of leadership training; they should organize some internal and external cultural training programs for their workers in order to enhance their knowledge and skills;

- Many small and medium-size enterprises suffer from poor teamwork; their employees are generally not involved in decision-making and problem solving within the institution. This is considered as one of the most important disincentives to achieve high employee loyalty and commitment to the institution he/she works in.

REFERENCES

[1] Alan Frost, What is knowledge management, *www.Knowledge management.tools.net*.
[2] David Skyrme, KM Basics, *www.Syrme.com/KMbasic/definition.htm*.
[3] Al-Kubaisi, Salah al-Din, *knowledge management* (Arab Organization for Administrative Development, Cairo,2005).
[4] Nobli Najla, *The Use of Administrative Accounting Tools to Improve the Financial Performance of the Economic Corporation the Case Study of the Grand Mills enterprise for South-Biskra* ,Thesis for the PhD in Commercial Sciences, Accounting, University of Mohammed Khaidar, Biskra, 2014-2015.
[5] Suleiman Al-Fares, The role of knowledge management in raising the efficiency of the performance of organizations: a field study on the private manufacturing companies in Damascus, *Damascus University Journal of Economic and Legal Sciences, Vol 26, No. 2*, 2010.
[6] Eyad Ali Al-Dajani, *The Role of Strategic Planning in the Quality of Institutional Performance: An Analytical and descriptive Study in Palestinian Public Universities* , A Proposal for a PhD in Education", Curriculum and Teaching Methods, Syrian Arab Republic, Damascus University, Faculty of Education, 2010/2011.
[7] Amina Moulay, Mimoun Kafi, The Use of Analysis in Basic Vehicles and Taxonomic Analysis to Determine the Level of Knowledge Management and its Impact on Performance (Using scale Andersen and the Balanced Scorecard) A Field Study of a Sample of Institutions in Saida Governorate", *Journal of Economics, University of Qasdi Merbah, Ouargla, Issue 15, 2015.*
[8] Khadr Mesbah Ismail Titi, *Knowledge Management, Planning, Techniques and Solutions*", Dar Al-Hamed Publishing and Distribution, 1st Edition, 2010.
[9] Khadr Mesbah Ismail Titi, *Knowledge Management, Planning, Techniques and Solutions*", Dar Al-Hamed Publishing and Distribution, 1st Edition, 2010.