

# KNOWLEDGE MANAGEMENT AND ITS IMPACT ON STRATEGIC PERFORMANCE: A FIELD STUDY IN YEMENI TELECOMMUNICATION COMPANIES

**Isam Ali Ahmed Al-Hamli <sup>1\*</sup> and Senan Ghaleb Almarhdi <sup>2</sup>**

<sup>1</sup> PhD Scholar, Center of Business Administration, Sana'a University, Sana 'a, Republic of Yemen. \*Corresponding Author Email: [a.Al-Hamli.cba@su.edu.ye](mailto:a.Al-Hamli.cba@su.edu.ye).

<sup>2</sup> PhD Professor of Business Administration, Center of Business Administration, Sana'a University, Sana 'a, Republic of Yemen. Email: [s.almarhdi@su.edu.ye](mailto:s.almarhdi@su.edu.ye).

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## Abstract

This study aimed to identify the reality of the application of knowledge management in its dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and its impact on strategic performance in Yemeni telecommunications companies, and the study used the descriptive analytical approach, and relied on the questionnaire as a main tool for data collection, and the study population consisted of the Yemeni telecommunications companies numbering (5) companies (Yemen Mobile, Sabafon, YOU, Y, TeleYemen), with all its employees of (2238) employees, and the study adopted the method of random stratified sample is not relative to choose Members of the study sample ,and (560) questionnaires were distributed (515) ,questionnaires were recovered, of which (479) questionnaires are valid for analysis. The study found the most important results that the application of knowledge management in Yemeni telecommunications companies is at a high level, and there is a statistically significant positive impact of knowledge management in its combined dimensions on the strategic performance of Yemeni telecommunications companies, and there is a statistically significant impact of the dimensions of knowledge management (knowledge generation, knowledge application, knowledge distribution) individually on strategic performance, and there is no statistically significant effect of the dimension of storing knowledge individually in strategic performance. The study recommended that Yemeni telecommunications companies increase interest in applying knowledge management in accordance with best practices, adopting modern technologies for storing , retrieving and distributing knowledge, encouraging a culture of sharing and exchanging knowledge, paying attention to nurturing creative ideas and research and development efforts, and developing the skills of workers in knowledge management because of its significant impact on raising the level of strategic performance.

**Keywords:** Knowledge Management, Strategic Performance, Telecommunication Companies.

## INTRODUCTION

During the last years of the twentieth century and the beginning of the twenty-first century, the world witnessed a wave of rapid transformations and changes, foremost of which is the information and technological revolution, which adopts advanced scientific knowledge and the optimal use of the flow of information resulting from the rapid development of computers, software and means of communication and the emergence of the global Internet (Abu Srour, 2016: 1).

The rapid changes taking place in the modern business environment force different organizations in the current era to respond to these changes, by changing old working methods and using modern administrative systems and methods that are concerned with developing and improving the strategic performance of organizations.

Knowledge management is one of the most modern innovations and management methods that are well suited to face changes and adapt to new circumstances, as the creation, storage, development, dissemination, application and utilization of

knowledge has become a distinctive feature and a key indicator of the progress and success of organizations (Ateeg, 2023, 278).

Knowledge management has become the guarantee for today's organizations to generate, distribute and apply knowledge to help make rational management decisions, encourage creativity, increase competitiveness, achieve the strategic objectives of these organizations, increase their value and improve their performance (Belhaj, 2020, 52).

Knowledge management is of great importance because knowledge is linked to the performance of contemporary organizations, and because knowledge is the only resource that can achieve outstanding performance and a sustainable competitive advantage for the organization (Al-Saad and Harem, 2004: 226).

Strategic performance is one of the most important factors that concern all parties associated with companies (shareholders, managers, employees, customers, various state agencies). Successful strategic performance benefits all stakeholders, and strategic performance refers to "the final result of all the company's activities" (Al-Mulla and Al-Yasiri, 2017: 76). It is the common denominator of all efforts exerted by management and workers, and it is also a reflection of the ability of the business organization to achieve its objectives (Darwaza, 2008: 153).

Thus, strategic performance is a key pillar in various business organizations and includes financial performance, operational performance, marketing performance, and human performance, and therefore it represents a broad and comprehensive concept of all aspects of performance in the organization (Tarash, 2018: 84).

Telecommunications companies are considered one of the most important business organizations in Yemen, and they have an important role in economic and social development, and they face many variables, the most important of which are: rapid technological developments, intense competition and constantly changing customer demands, so it was necessary for these companies to adopt modern management methods to face the variables and improve their strategic performance in all aspects (human, operational, marketing, financial).

Given the important role played by knowledge management in raising the level of strategic performance of organizations, as it is one of the latest management methods that focus on managing knowledge resources and assets and achieving the benefit of knowledge and its application to develop the skills and capabilities of workers and raise the level of learning and growth, improve and develop the performance of various operations, meet the needs and requirements of customers, achieve their satisfaction, provide new and advanced services, increase sales and profits and reduce costs, to enhance and raise the level of strategic performance in all aspects, this study focused on studying the impact of knowledge management on strategic performance in Yemeni telecommunications companies.

### **Study Problem and Questions**

Yemeni telecommunications companies operate in light of many challenges and changes represented in the rapid technological development, intense competition, changing and continuous customer requirements and desires and other changes that affect the performance, competitiveness, survival and continuity of companies. These challenges and changes represent great pressure factors on these companies to enhance the efficiency and effectiveness of their strategic performance and provide

their services with high quality and modern technology, in order to meet the needs and requirements of customers and achieve their satisfaction, enhance their competitiveness and ensure their survival and continuity in the market.

Therefore, they need to apply knowledge management, as it is considered one of the best modern management methods aimed at improving and developing the strategic performance of companies to achieve outstanding standard performance through acquiring knowledge, raising the level of learning, innovation and development, improving and raising the efficiency of internal operations, raising the rate of sales growth and profits, gaining customer satisfaction and increasing market share, in a way that enhances their survival and position in the market, in a highly changing technological environment, and intensifying competition among them.

A number of reports and studies conducted on Yemeni telecommunications companies have shown that companies suffer from some deficiencies in their performance. The report issued by the Ministry of Communications and Information Technology indicated that there is a weakness in the penetration of mobile phones, and a decrease in the percentage of billing subscribers, as the percentage decreased from 5.09% in 2020 to 4.43% in 2021 (Ministry of Communications and Information Technology, Telecommunications Indicators, 2021: 4).

The report issued by the Sana 'a Center for Strategic Studies also indicated that there is a discrepancy in the level of performance of telecommunications companies in the Republic of Yemen, and a decrease in the penetration rates of mobile phone services, as it decreased from (46%) in 2014 to (42%) in 2019, which is lower than the regional rates of (64%) in the Middle East and North Africa region, and the global rates of (66%) (Al-Bashiri, 2021, 7:18).

The study of (Al-Bashari and Abdullah, 2021) indicated that the performance methods used in Yemeni telecommunications companies suffer from some shortcomings, as they focus on financial performance only, and neglect the strategic performance of the company as a whole, and the study of (Al-Ansi, 2019, 4: 141) indicated that the level of performance in Yemeni telecommunications companies does not reach the required level of efficiency.

To achieve this, Yemeni telecommunications companies have long searched for tools, methods and techniques that can enhance and improve their performance. Through the work of the researcher in telecommunications companies, he noted that they had worked during the previous period to adopt knowledge management through modernizing information technology and introducing new data and information management systems, hoping to improve strategic performance.

Since strategic performance is the result of all the efforts and resources available in the company, including knowledge management, it raises a question about the level of application of knowledge management in companies, and whether the application of knowledge management has contributed to improving strategic performance, or whether it needs to be updated to play its role in improving strategic performance better. Based on the above, the problem of the study can be crystallized in the following main question:

## **What is the reality of the application of knowledge management and its impact on strategic performance in Yemeni telecommunications companies?**

The following sub-questions emerge from the main question of the study:

1. What is the level of application of knowledge management in Yemeni telecommunications companies?
2. What is the level of strategic performance in Yemeni telecommunications companies?
3. What is the impact of knowledge management in its dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) on strategic performance in Yemeni telecommunications companies?

### **Study Objectives**

The study aimed to clarify the reality of the application of knowledge management and its impact on strategic performance in Yemeni telecommunications companies , and from this main objective emerges a set of the following sub-objectives:

1. Determine the level of application of knowledge management in its dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) in Yemeni telecommunications companies.
2. Determine the level of strategic performance in its dimensions (financial dimension, after customers, after internal operations, after learning and growth) in Yemeni telecommunications companies.
3. Determine the impact of knowledge management in its dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) on strategic performance in Yemeni telecommunications companies.

### **Study Importance**

The importance of the research is represented in the following:

#### **Theoretical Importance:**

- The importance of this study stems from the importance of the topic it deals with, which is knowledge management in Yemeni telecommunications companies, which is one of the most important modern management methods that aim to improve the level of strategic performance and keep pace with the rapid changes in the business environment.
- This study acquires great importance due to the scarcity of Yemeni and Arab studies - as far as the researcher knows - which dealt with the study of the reality of the application of knowledge management and its impact on strategic performance in telecommunications companies, and therefore this study will represent a new scientific addition in this field.
- This study provides a comprehensive scientific and intellectual framework of information, concepts, knowledge, tools and approaches for knowledge management and strategic performance, and this will represent a scientific tributary that benefits researchers, the Arab Library in general and the Yemeni Library in particular.

- This study contributes to opening new horizons for further studies and scientific research in modern administrative methods, due to its theoretical literature, previous studies, and relevant scientific methodology, and thus the possibility of benefiting from this study by researchers, as it is considered a starting point for other relevant research and studies.

### **Practical Importance:**

- The importance of this study stems from the importance of the study community it deals with, represented by Yemeni telecommunications companies, and the importance of raising the level of their strategic performance because of their important role in supporting the national economy, and their effective contribution to comprehensive and sustainable development.
- This study helps to diagnose the situation of Yemeni telecommunications companies with regard to determining the level of application of knowledge management and the level of strategic performance, and to provide a clear picture of this that helps the leaders of those companies in making appropriate decisions to develop and improve their strategic performance.
- This study helps determine the impact of knowledge management on strategic performance in Yemeni telecommunications companies, which has not been addressed in previous studies in Yemeni telecommunications companies (to the best of the researcher's knowledge).
- This study provides a set of recommendations that benefit leaders in Yemeni companies in general and telecommunications companies in particular, and urges them to focus on creativity and innovation, keep pace with the rapid changes and developments in the business environment, adopt modern management techniques and methods, and adopt knowledge management and increase interest in it, in order to help them develop and improve their strategic performance, and enable them to meet the challenges and keep pace with the changes surrounding them.

### **The Limits of the Study**

The study was determined by the following limits:

**Objective Limits:** The objective limits are represented in studying the reality of the application of knowledge management and its impact on strategic performance - a field study in Yemeni telecommunications companies.

**Time Limits:** This study was conducted during the study year 2023-2024.

**Spatial Boundaries:** The spatial domain is represented in the main centers of Yemeni telecommunications companies located in the capital Sana'a - Republic of Yemen.

**Human Limits:** The Human limits of the study consist of all employees of the main centers of Yemeni telecommunications companies in the capital Sana'a.

### **Terminological and Procedural Definitions**

The study included the following terms:

#### **Knowledge Management:**

Knowledge management is defined as: "A set of processes that work sequentially and integrally, helping the organization to diagnose, generate, store, distribute and apply knowledge, through which acquired experiences, skills and information are exchanged

and implicit and explicit knowledge is integrated to form a knowledge base that helps it promote excellence and strategic success.” (Saadawi and Dahmani, 2023: 47)

Jennex (2005) defines KM as that “system created to facilitate the capture, storage, retrieval and reuse of knowledge”. (Tayr, 2022: 59)

In this study, **knowledge management is procedurally defined** as the processes followed by the company to obtain the necessary knowledge for it, store it, and distribute it to its employees, in order to ensure its application, use, and utilization at all levels of the company to improve its performance.

**Knowledge Generation:** is the process by which an organization seeks to obtain knowledge (Mustafa, 2021: 370)

**Procedurally, it is** defined as the first process of knowledge management through which the company seeks to obtain knowledge through the creation of innovations, innovations and skills.

**Knowledge Storage:** is the process of storing and documenting knowledge in manuals or a database defined in a way that seeks to encode and document that knowledge so as to ensure its preservation (Al-Rawashdeh, 2020: 206)

**Procedurally, it is** defined as the operations carried out by the company to save and store information to maintain and retrieve it when needed.

**Knowledge Distribution:** The American Society for Information Science defines knowledge distribution broadly as "encompassing the processes necessary to communicate information to its users." (Al-Enezi, 2018: 6)

**Procedurally, it is** defined as the processes that take place within the company to communicate information to its users.

**Knowledge Application:** “It is about making knowledge more relevant to use in the implementation of the organization's activities and more relevant to the tasks it performs.” (Mustafa, 2021: 370)

**Procedurally, it is** defined as the implementation and use of knowledge by individuals within the company in all activities to conduct business efficiently and effectively.

## 2. Strategic Performance

Strategic performance is defined as: the actual results or outputs of the organization against the desired outputs of the company over a period of time (Al-Khafaji, 2022: 98).

Wheelen & Hunger defined strategic performance as: “It is the end result of the organization's activity, and it is a reflection of how the organization uses its material and human resources for the purpose of achieving its goals” (Al-Rawadiyah, 2023: 84).

**Strategic Performance is Procedurally Defined** in this study as the results achieved from the interaction of the company's activities and resources through the optimal use of resources to achieve the company's objectives at the lowest possible cost. Strategic performance in this study can be measured through four dimensions: the financial dimension, the customer's dimension, the internal processes dimension, and the learning and growth dimension.

## LITERATURE REVIEW

**1. A study (Alromimah & Alhakimi, 2024):** Entitled “Information technology and its impact on the quality of strategic decisions through knowledge management in the banking industry”, Yemen.

The study aimed to study the impact of information technology on the quality of strategic decisions through knowledge management in Yemeni banks. The study used the descriptive analytical approach, and the questionnaire was used as a tool to collect the necessary data. The study population was represented in all senior management employees in (10) Yemeni banks. The study sample consisted of (310) individuals. Structural modeling and reverse modeling were used to build the study model. The study concluded that there is a high level of information technology practice, the quality of strategic decisions, and knowledge management in the banks under study.

**2. A study (Almarhdi & Sagher, 2023):** Entitled “The Impact of Process Reengineering on Strategic Performance: A Field Study on Telecommunications Companies in the Republic of Yemen”, Yemen.

The study aimed to find out the impact of re-engineering administrative processes on strategic performance in Yemeni telecommunications companies. The study used the descriptive analytical approach, and the questionnaire was adopted as a tool for data collection. The study population consisted of (5) Yemeni telecommunications companies, and the number of their employees was (4,034) employees. The study adopted the non-proportional stratified random sample method to select the study sample, and the study sample consisted of (808) individuals. The study found that there was a statistically significant impact of the dimensions of re-engineering administrative processes on strategic performance in Yemeni telecommunications companies, and that the level of re-engineering of processes and strategic performance was somewhat high.

**3. A study (Saraa, 2023)** Entitled" The Role of E-Government in Improving Strategic Performance in Yemeni Universities through Human Resource Development", Yemen.

The study aimed to find out the mediating role of human resources development in the relationship between e-management and strategic performance in Yemeni universities. The study used the descriptive analytical approach. The questionnaire was adopted as a tool to collect the necessary data. The study community consisted of academic and administrative leaders in (6) Yemeni universities (3) government and (3) civil. The researcher used the stratified random sample method to select the 246 members of the study sample. The study found that there is a relationship between e-management and strategic performance. There is also a relationship between human resources development and strategic performance. There is a mediating role for human resources development in the relationship between e-management and strategic performance in the universities under study.

**4. A study (Ateeg, 2023):** Entitled “ The Impact of Knowledge Management on the Quality of Learning in Private Universities in Bahrain”, Bahrain.

The study aimed to research the impact of knowledge application, management and sharing on learning outcomes in private Bahraini universities. The study used the descriptive analytical approach and the questionnaire as a data collection tool. The study population consisted of faculty members in private universities in Bahrain. The

data was collected from a sample of 220 individuals from 13 universities. The study concluded that there is a strong correlation between knowledge management and the quality of learning outcomes in Bahraini private universities, and that knowledge management significantly affects the quality of learning outcomes in scientific environments.

**5. A study (Al-Awadi, 2022):** Entitled "The Impact of Knowledge Management in Improving Strategic Performance: A Field Study Applied to Governmental Community Colleges", Yemen.

The study aimed to study the impact of knowledge management in improving the level of strategic performance in Yemeni government community colleges. The study used the descriptive analytical approach and the questionnaire as a basic tool for data collection. The community consisted of academic and administrative staff in all 899 Yemeni government community colleges. A random stratified sample of all 576 members of the academic and administrative staff in four colleges was selected. The study reached the most important results: with regard to academic staff, there is a positive impact between the dimensions of knowledge management (information technology, organizational culture and organizational leadership) and the dimensions of strategic performance in the academic staff, and there is a positive impact between the dimensions of knowledge management (information technology, organizational structure and organizational leadership) and the dimensions of strategic performance in the administrative staff.

**6. A study (Al-Shater et al., 2021):** Entitled "The reality of the practice of knowledge management processes and their impact on achieving outstanding institutional performance among faculty members at the Academy of Graduate Studies, Ajdabiya Branch", Libya.

The study aimed to identify the reality of the practice of knowledge management processes and their impact on achieving outstanding institutional performance among faculty members at the Academy of Graduate Studies, Ajdabiya Branch. The study used the descriptive analytical approach, and the questionnaire was adopted as a main tool for all data, and the study population consisted of all faculty members of the Academy, of the 25 holders of the academic qualification (assistant professor, associate professor). The study concluded that the overall average of the knowledge management dimension came with a degree of approval, and that the overall average of the outstanding institutional performance dimension came with a neutral degree. The existence of a statistically significant effect of knowledge management on outstanding institutional performance, and the absence of statistically significant differences attributed to the degree variable between knowledge management and outstanding institutional performance.

**7. A study (Tirtayasa & Imaroh, 2021):** Entitled "Performance Measurement and Business Strategy through a Balanced Scorecard Approach and SWOT Analysis (Study in PT. Inti Nusa Permata)", Indonesia.

The study aimed to determine the performance of PT. Inti Nusa Permata for mining in Lampung Province, Indonesia, as measured by the Balanced Scorecard (BSC), in addition to making recommendations on a strategy to improve the company's performance in developing skills tests based on the Swot analysis.



The study relied on the analytical descriptive approach and the questionnaire as a tool to collect the necessary data. The study population was represented in all employees of the company, and (40) employees were selected as a sample for the study. The study found that the level of performance of the company in aspects (after customers, after internal operations, after growth and learning) is very good, and the level of performance of the company in the financial dimension is weak.

**8. A study (Alkilis, 2020):** Entitled "Knowledge management and its impact on institutional performance excellence: A study of the views of a sample of employees in MTN Communications

The study aimed to measure knowledge management and its impact on institutional performance excellence. The study used the descriptive analytical approach, and the study relied on the questionnaire form to obtain the data, and the study population consisted of the total number of employees in the company (250), the questionnaire was distributed to a randomly selected sample of (60) employees, and it was analyzed using the Statistical Packages for Social Sciences (SPSS) program. The study concluded that there is a relationship and impact of knowledge management on the excellence of institutional performance.

**9. A study (Belhadj, 2020):** Entitled "Knowledge management processes and their relationship to institutional performance: a field study at Al-Zawiya Teaching Hospital", Algeria.

The study aimed to identify the processes of knowledge management and its relationship to institutional performance at Al-Zawiya Educational Hospital. The study followed the descriptive analytical approach, and adopted the questionnaire as a data collection tool. The questionnaire was distributed to 40 employees of directors and heads of departments and a number of employees of Al-Zawiya Teaching Hospital. The recovered questionnaires reached 36 forms, and a statistical program was used from the SPSS software package.

The study found that the level of practice of knowledge management operations (generating, storing, disseminating and applying knowledge) in Al-Zawiya Teaching Hospital was average, and there is also a statistically significant relationship between knowledge management operations and institutional performance in Al-Zawiya Teaching Hospital.

**10. A study (Mansouri and Qashqari, 2020):** Entitled "The Role of Knowledge Management in Institutional Performance - Information Technology Center at the University of Jeddah as a Model", Saudi Arabia.

The study aimed to identify the impact of knowledge management on institutional performance at the Information Technology Center at the University of Jeddah. The study used the descriptive quantitative analytical approach, and relied on the electronic questionnaire as a tool for data collection. The study population represented all employees of the University Information Technology Center, which consists of (65) employees, and the study sample consisted of (45) individuals.

The study concluded that there is a statistically significant positive relationship between knowledge management and institutional performance, and that there is no difference between the opinions of the employees of the Information Technology Center towards the application of knowledge management and institutional performance processes due to the difference in gender and nature of work.

**11. A study (Al-Qubi and Abu Shweta, 2020):** Entitled "The Role of Knowledge Management Operations in Institutional Performance: An Exploratory Study on Commercial Banks Operating in the Libyan City of Sirte", Libya.

The aim of the study is to diagnose the reality of knowledge management in commercial banks operating in the city of Sirte, and to identify the role that knowledge management processes can play in improving institutional performance. The study adopted the descriptive analytical approach and the questionnaire as a tool for data collection. The study population consisted of all commercial banks operating in the city of Sirte, and the study took from the 55 managers and heads of departments working in these banks as a sample. The analysis of the data from the questionnaires also relied on the Statistical Packages for Social Sciences (SPSS) program. The study found a statistically significant impact of knowledge management processes on institutional performance. In addition, there is a weak correlation between knowledge management processes and institutional performance. The level of institutional performance of commercial banks operating in Sirte from the point of view of the respondents was average.

**12. A study (Al-Bashabsha study, 2019):** Entitled "The impact of the application of electronic management in the framework of human resources on the performance of the organization: an applied study in Jordanian telecommunications companies", Jordan.

The study aimed to identify the impact of e-management within the framework of human resources on the performance of the organization in Jordanian telecommunications companies. The study relied on the descriptive analytical approach, and the questionnaire was used as a main tool to collect preliminary information from the study sample. The study population consisted of all managers; assistant managers; heads of departments; and heads of divisions) working in the (200) Jordanian telecommunications companies. The study sample reached (170) individuals. The study concluded that the level of e-management and the level of performance of the organization came at an average general level, and that there is a positive impact of e-management within the framework of human resources on the performance of the organization in Jordanian telecommunications companies.

**13. A study (Al-Enezi, 2018):** Entitled "The Impact of Knowledge Management on the Internal Performance of the Supreme Council for Governorate Affairs in the State of Kuwait", Kuwait.

The study aimed to identify the impact of knowledge management represented in the fields of (knowledge generation, knowledge storage, knowledge distribution, knowledge application) on the internal performance of the Supreme Council for Governorates Affairs in the State of Kuwait. The study relied on the descriptive analytical approach and the questionnaire as a tool to collect the necessary data. The study population consisted of (180) administrative staff working in the Supreme Council, who were selected by the comprehensive survey method. The study found that knowledge management in the Supreme Council for Governorate Affairs in the State of Kuwait came at a high level, while the level of internal performance came with a high degree of evaluation, and there is a statistically significant impact of knowledge management in all its fields on the performance of workers, and there are no statistically significant differences in the views of the study community according to demographic variables.

**14. A study (Wibowo, et al, 2018):** Entitled “Knowledge Management Process and its Relationship to Contracting Company Performance, An Applied Study in Contracting Companies”, Indonesia.

The study aimed to clarify the relationship between the knowledge management process and the performance of the contracting company. To achieve the objectives of the study, the analytical descriptive approach was adopted. The study used the questionnaire tool to collect data from the contracting company's employees. The sample size of the study was (100) questionnaires distributed to contractors in the islands of Java and Borneo in Indonesia. Data analysis was conducted using the method of modeling the structural equation with partial least squares (SEM PLS). The relationship between knowledge management and organizational performance was verified. The study concluded that knowledge management processes have a significant and positive impact on the performance of companies. There is also positive interaction in knowledge management processes and corporate performance.

**15. A study (Abu Srou, 2016):** Entitled "Knowledge management and its impact on institutional performance" An applied study on security academies operating in the West Bank ", Palestine.

The study aimed to identify the impact of the application of knowledge management on the excellence of institutional performance in the Palestinian security academies, in addition to identifying the requirements of knowledge management, its processes and the relationship between them, and their impact on institutional performance. The researcher used the descriptive analytical approach and the questionnaire as a tool for data collection, and 121 questionnaires were distributed to the study sample.

The study found a statistically significant relationship between the requirements of knowledge management, distinguishing institutional performance as well as between knowledge management processes and distinguishing institutional performance in the security academies operating in the West Bank, and the existence of statistically significant differences in the responses of the study sample members due to demographic variables.

**16. A study (Al-Azzawi et al., 2014):** Entitled "The Role of Knowledge Management in Organizational Performance: An Applied Study in a Sample of Industrial Organizations", Iraq.

The study aimed to provide a theoretical briefing on knowledge management and the performance of the organization with the aim of achieving the objectives of industrial organizations. The researcher relied on the descriptive analytical approach and the questionnaire as a tool for data collection.

The study population was represented by the middle management leaders of three companies in industrial organizations, who numbered (360). A random sample of (36) members was selected. The study found that there are correlations between the knowledge management variables in the organizational performance in the General Company for Batteries Industry, and the levels of estimation of the knowledge management variables in the General Company for Batteries Industry, as all of them were at a high average level.

**17. A study (Chigada, 2014):** Entitled "the role OF knowledge management IN enforcing organic performance IN selected banks OF South Africa"

The study aimed to investigate the role of knowledge management in enhancing organizational performance in selected South African banks. The aim was to know how to identify, capture, organize and retain knowledge in order to enhance the performance of banks. The study followed the descriptive analytical approach and the questionnaire as a data collection tool. The study population consisted of all middle and senior managers from FNB and Nedbank. The questionnaire was distributed to the study sample of 120 managers, and 101 questionnaires were retrieved from them. The study found that knowledge management has been implemented in commercial and business environments towards operational advantages and financial gains, and may help banks in South Africa improve performance.

**Commentary on the Previous Studies:**

The current study agreed with some previous studies in some dimensions of the variables, differed with each other in some dimensions, agreed with some studies in the method, tool and procedures of the study, and disagreed with some studies in this aspect. The current study also differed from previous studies in terms of linking variables and the study community, as previous studies dealt with knowledge management and performance with different names in different organizations and work environments, while the current study dealt with the impact of knowledge management on strategic performance in Yemeni telecommunications companies, which no previous study - to the knowledge of the researcher - has ever combined these two variables with the same dimensions and in Yemeni telecommunications companies, which represents the research gap that the current study sought to fill, and this distinguishes it from previous studies, and gives it great scientific and practical importance, to address one of the most important modern management methods that enable telecommunications companies to manage their knowledge assets and benefit from them, and the speed of obtaining and dealing with information, and keeping pace with developments and facing the rapid changes they face, to improve and raise the level of their strategic performance, enhance their competitiveness, and ensure their survival and growth in the market.

**Theoretical Frameworks of the Study**

**Knowledge Management:**

The world lives in light of many continuous and accelerating changes in all aspects of life, and here comes the need to conduct studies in order to predict the future and changes that may affect the activities of organizations and their continuity and survival in light of the volatile and unstable environment, and there is also a need to make changes in management methods and practices commensurate with those changes in the business environment (Al-Sharjabi et al: 2023). (Hammoud, 2010) pointed out that knowledge is the real nerve of today's organizations and a purposeful and contemporary administrative means to adapt to the requirements of the times, as knowledge is the most important resource in creating wealth and achieving excellence and creativity in light of the intellectual data in which many intellectual concepts have escalated, such as globalization, privatization, the information revolution and the expansion of various human societies (Al-Rawashdeh, 2020: 201).

Knowledge is the product of information, concepts and culture formed in the minds of individuals (Mustafa, 2021: 368).

Knowledge management is defined as: " That department that works to identify the knowledge that individuals (whether employees, consultants or beneficiaries) have in their minds and minds, or to collect and find the knowledge shown in records and documents, and organize them in a way that facilitates their use and participation among the employees of the institution in order to achieve a higher level of performance and success of work in the best ways, and at the lowest costs." (Al-Kalbibi, 2008: 26)

(Mertins, et al, 2003:11) defined knowledge management as all means, tools and methods that contribute to the integration of core knowledge processes, including four core processes: knowledge generation, knowledge storage, knowledge distribution, and knowledge application to evaluate performance at all organizational levels by focusing on value creation for business processes (Al-Yasiri and Hussein,2013: 243).

He defined it (Laudon &Laudon, 2011: 434) as: "A set of processes developed in organizations to generate, store, transfer, and apply knowledge that increases the organization's ability to learn from its external and internal environment for decision-making" (Al-Yasiri and Hussein,2013: 243).

Knowledge management is defined as the systematic and continuous attempt to use knowledge in an organization to improve its performance. (Mustafa, 2021: 368)

The first appearance of knowledge management and interest in it was in the early 1980s. In 1980, the first American conference on artificial intelligence was held, where Edward Freigneboum delivered his famous speech "Knowledge is Power", which led to the emergence of successive new fields of knowledge. Since that time, a new field of knowledge called "Knowledge Engineering" was born. With its birth, a new job called "Knowledge Engineer" was created. In 1997, another new field emerged as a result of realizing the importance of knowledge in the information age called "Knowledge Management".

This concept was strengthened by a number of knowledge management conferences, such as the Third Paris International Conference on Knowledge Management organized by the Knowledge Forum in 2000, the 13th Conference on Information and Knowledge Management in Washington in 2004, and the Knowledge Management Conference in the Arab World held in Amman in 2004 (Mahyoub et al., 2021: 99).

The importance of knowledge management comes from its role in simplifying processes, reducing costs, eliminating unnecessary procedures, improving customer services, reducing the time taken to provide the required services, increasing material return by marketing products and services more effectively, applying available knowledge and using it for continuous improvement, innovating new products and services, and a tool to motivate organizations to encourage creative capabilities (Mustafa, 2021: 368).

### **Dimensions of Knowledge Management Addressed in this Study:**

- 1. Knowledge generation:** It is the process through which the organization seeks to obtain knowledge, and the sources of obtaining knowledge are multiple and range from implicit knowledge to explicit knowledge and sources of knowledge acquisition. They may be internal sources such as: sharing experiences and practices,

attending conferences and seminars, dialogue and communication between work groups and senior managers, customers and workers, or from basic data such as financial and economic data, through which knowledge is transferred and transformed from implicit to clear and vice versa, and may be from external sources that knowledge management brings across organizational boundaries or participates in (Mustafa, 2021: 370).

- 2. Knowledge storage:** It is the process of storing and documenting knowledge in guidebooks or a database defined in a way that seeks to encode and document that knowledge so as to ensure its preservation (Al-Rawashda, 2020: 206). Knowledge can be stored and preserved in two forms: (individuals), who are the custodians of expertise. Administrative procedures must be provided to ensure the preservation of their expertise through systems of incentives, encouragement and procedures for the orderly transfer of experiences in the career ladder, and the second form: (computers /computer). Computers are one of the common means of preserving knowledge for their efficiency, accuracy and the enormous breadth of storage space in them. Knowledge storage serves as a bridge between knowledge capture and retrieval (Al-Yasiri and Al-Qattan, 2019: 27-29).
- 3. Distribution of knowledge:** It means the dissemination and sharing of explicit and implicit knowledge and its exchange among all employees of the organization, and its timely access to the researcher, as well as its access to the largest number of employees in the organization, through modern technology means such as electronic means, training programs, and records of the organization and others (Abu Riziq, 2017); (Belhaj, 2020: 59).
- 4. Applying knowledge:** The main objective and purpose of knowledge management is to apply it and make the best and effective use of the available knowledge in the best way to ensure the best results and achieve the desired goals (Al-Rawashda, 2020: 206). Applying knowledge means taking advantage of it as required and employing it in solving the problems facing the organization. Obtaining, storing and sharing knowledge is not enough, unless it is transferred to implementation. The responsibility for implementation lies with the manager by urging workers to apply knowledge, with material and non-material rewards that encourage them to use knowledge effectively (Al-Osaimi, 2014); (Belhaj, 2020: 59).

Based on the above, it can be said that the importance of knowledge management lies in the fact that it has become one of the most important strategic resources for organizations that play an important role in enhancing their competitiveness and improving and raising the level of their strategic performance, as it works to improve and develop internal processes, spread the culture of creativity and innovation, develop human resources skills, raise the level of learning and growth, respond quickly to customer requirements, achieve their expectations and satisfaction, optimize resources, reduce costs and save time and effort in doing business.

Therefore, the organization that uses knowledge management in its activity is able to face challenges and keep pace with developments, maintain its continuity of survival and growth in the market and achieve a high level of performance, and occupy a prominent position in society in general, and among competing organizations in particular.

## Strategic performance

Strategic performance is one of the variables that have been the focus of attention during the recent period, as many companies resort to the adoption of strategic management to meet change, and to optimize the use of their resources and achieve their strategic objectives. Therefore, companies need to identify the final result of their activities, operations, investment of resources and the extent to which they achieve their strategic objectives.

This is what represents the strategic performance that companies are working to improve, as well as being the most important dimension for various companies, and the function of overall performance that revolves around the existence of the company or not (Al-Khafaji, 2022: 90). Strategic performance is the common denominator of all efforts exerted by management and employees within the framework of business organizations.

Traditional trends in management seek outstanding performance through directions and practices that seek to develop performance. Strategic performance is also a fundamental concept for organizations, and is almost a comprehensive phenomenon for all fields of management knowledge (Abu Surour, 2016: 46). It aims to identify, analyze, implement and continuously improve organizational strategy by setting performance measures that are used to formulate strategy, improve strategic thinking, support strategic decision-making and contribute to strategic learning, et al. et al., 2020: 1).

Therefore, strategic performance is important to the success or failure of the organization as it provides the information required by the strategy formulation process, and detects whether there is a problem by monitoring and evaluating the business strategy (169Dahlan et al., 2019: ). It also reflects the organization's ability to achieve its strategic objectives such as market share, sustainable profit and sales growth, and helps achieve multiple strategies such as marketing, financing, promotion, etc. (Majid et al, 2020: 5). It also reflects the company's ability to appropriately use its material, human and financial resources (& Al Doubi, 2021: 10 Al-Oumi).

On a related level, strategic performance represents the competitiveness of the company and covers the most influential position among competitors in achieving a foothold in the industry, increasing the company's awareness and responding to those competitive challenges created by competitors. Therefore, it enhances the learning process and helps the company to establish unique and competitive ability in operational areas (Yousaf & Majid, 2016: 1), enabling it to obtain high rates of financial returns as a result of high performance levels, and to achieve a prominent position among competing organizations (Mia et al., 2021: 307).

### **Dimensions of strategic performance according to the balanced scorecard:**

The concept of the Balanced Scorecard (BSC) emerged in the early 1990s, as it was introduced by the American scientists (Kaplan & Norton) in 1992 as a tool for managing and evaluating strategic performance from all financial and non-financial aspects that correspond to the organizational dimensions and planned strategies that can be evaluated in the overall structure and hierarchical levels of the organization (Al-Hosaini et al, 2023: 2904).

Kaplan & Norton defined the Balanced Scorecard (BSC) as a management style that translates the organization's vision and strategy into a set of financial and non-financial

measures that cover the organization's overall performance, and provide a framework for measuring and managing the strategy through four dimensions: the financial dimension, after customers, after internal operations, after learning and growth (Al-Omush et al, 2023: 2534).

The balanced scorecard is also defined as a system that combines financial and non-financial performance measures into a single scorecard. The balanced scorecard focuses on the link between business processes, decisions and results, and includes the four perspectives of performance (financial, customers, internal processes, learning and growth) (Hansen& Schaltegger, 2016: 196).

1. **Financial dimension:** This dimension refers to the organization's ability to achieve the interests of shareholders and owners by achieving the financial objectives (profitability) of the organization and includes (the size of income, its operational level and the return on invested capital) through its focus on return on investment and return on equity (Al-Sudani and Shawna, 2017: 159). This dimension focuses on the financial aspect in the organization's performance such as returns, profits, expenses, asset value and shareholders' rights. The importance of this axis is highlighted in the fact that the main goal of the organizations' existence is to achieve profits and provide the necessary resources for continuity and development. Financial measures are profitability, sales growth and risk measurement (Al-Jubouri, 2016: 153).
2. **Customer dimension:** This dimension focuses on the relationship with the customer, and improving institutional performance requires the need to work to meet the needs and aspirations of customers (Barakat, 2005: 123), **and** this dimension includes a set of indicators, the most important of which are: market share, retention of existing customers, acquiring new customers, customer satisfaction, customer leakage rate (Tuan, 2020: 73).
3. **Internal processes dimension:** This dimension focuses on how business is performed within the organization, in terms of accuracy, speed, cost and productivity. Internal processes consist of innovation processes related to improving and developing the production of goods and services according to the needs and requirements of customers, operations related to the production and distribution of goods and services, and after-sales operations related to the performance of after-sales services for goods and products. This dimension is related to the financial dimension of performance in terms of its focus on improving the efficiency of internal operations and also related to the axis of customer relations in terms of its interest in creating value for customers. It is also related to the axis of education and growth through the relationship of cause and effect (Haykel, 2015: 30).
4. **Learning and growth dimension:** Learning and growth means identifying and diagnosing the infrastructure on which the organization depends for its work, and that any organization needs the appropriate resources, systems and facilities to support it in achieving its goals (Al-Jubouri, 2016: 155), and the dimension of learning and growth ensures the organization's ability to renew as it is the prerequisite for long-term survival and survival, and aims to guide individuals towards the development and continuous improvement necessary for the survival and continuity of the organization (Bouchachi, 2020: 9), and (Khatoon&Farooq, 2014:115) indicates that learning and growth can include other issues such as



employee satisfaction and development of their skills, attention to training and learning activities, and the promotion of innovation (Rehab et al., 2019: 66).

From the above, it can be said that strategic performance is the decisive factor for the success or failure of any organization, and its importance lies in the fact that it represents the overall performance of the organization.

It covers all areas of performance (financial, marketing, operational, human), focuses on achieving the goals of all stakeholders, and focuses on the future aspects of the organization by anticipating potential changes in the surrounding environment. It draws the strategic direction of the organization through the comprehensive information it provides about the organization's performance to decision-makers, enabling them to develop the vision and strategic mission, set goals, and develop the necessary strategies to achieve them. Strategic performance also allows the organization to control resources and coordinate operations, and contributes to launching creativity, employing modern technology, improving organizational excellence, improving the organization's overall performance, enhancing its competitiveness, and helping it to face changes and ensure its survival and growth in the market.

## **STUDY METHODOLOGY AND PROCEDURES**

### **Study Methodology:**

The study used the descriptive analytical approach, because it is the common approach used in the social and administrative sciences, which helps to understand the phenomenon theoretically through secondary data and information, and to study, analyze and describe the characteristics of the phenomenon as it actually is by conducting the field study and collecting data and information about this phenomenon without bias during analysis and description (Al-Ariqi, 2020: 7), and therefore it is the appropriate approach to the nature and objectives of this study.

### **Study Population:**

The study population consisted of all employees with job titles (Executive General Manager, Deputy Executive General Manager, Department Manager, Head of Department, Supervisor, Specialist), who numbered (2,238) employees, working in the (5) Yemeni telecommunications companies (Yemen Mobile, SabaFon, You, Y, TeleYemen).

### **Study Sample:**

Due to the difference in the number of individuals in each layer of the study population, the study used the non-proportional stratified random sample method to select the study sample members, and the sample size was determined according to the "Richard Geiger" equation by (328) individuals, and this is the minimum acceptable sample size, and according to the study (Keener & Taylor, 1983), which believes that increasing the size of the study sample contributes to obtaining accurate and generalizable results (Ismail, 2016: 28), and (Hair et al, 2019) stated that the optimal size of the number of study sample members ranges from (15) to (20) individuals for each paragraph of the questionnaire. In order to obtain accurate and generalizable results, (560) questionnaires were distributed to the study sample members, (515) questionnaires were recovered, of which (479) questionnaires were valid for analysis and (85.54%) of the questionnaires distributed.

Table (1) shows the relative distribution of the study population, its target sample, and the number of retrieved and valid questionnaires for analysis.

**Table No 1: The relative Distribution of the Study Population, its Target Sample, and the Questionnaires Distributed, Recovered, and Valid for Analysis**

Job Title	Yemen Mobile	Sabafon	YOU	Y	Telemen	Total
General Executive Director	1	1	1	1	1	5
Deputy Executive Director	4	0	7	1	4	16
Department Manager	20	5	20	7	22	74
Head of Department	69	62	56	32	35	254
Supervisor	56	137	29	0	45	267
competent	393	500	387	229	113	1622
<b>Total Community</b>	<b>543</b>	<b>705</b>	<b>500</b>	<b>270</b>	<b>220</b>	<b>2238</b>
<b>The ratio</b>	24.26%	31.50%	22.34%	12.06%	9.83%	<b>100%</b>
<b>Sample according to (Geiger Equation)</b>	<b>80</b>	<b>103</b>	<b>73</b>	<b>40</b>	<b>32</b>	<b>328</b>
<b>Questionnaires distributed</b>	<b>240</b>	<b>110</b>	<b>90</b>	<b>50</b>	<b>70</b>	<b>560</b>
<b>Questionnaires recovered</b>	235	90	83	43	64	<b>515</b>
<b>Missing and invalid questionnaires for analysis</b>	6	9	3	17	1	36
<b>Valid questionnaires for analysis</b>	<b>229</b>	<b>81</b>	<b>80</b>	<b>26</b>	<b>63</b>	<b>479</b>
<b>Ratio of valid questionnaires to distributed</b>	95.42%	73.64%	88.89%	52%	90%	85.54 %

## Study Tools

The study used the questionnaire as a main tool for field data collection, because it is the most appropriate tool to achieve this. The questionnaire consisted of a set of axes (study variables and dimensions) that reflect the philosophy of the questions, objectives and hypotheses of the study. The Likert Scale was used as a measure to answer the questionnaire paragraphs. This scale includes seven answer scores: (7) strongly agree, (6) agree, (5) somewhat agree, (4) neutral, (3) disagree somewhat, (2) Disagree, (1) Strongly Disagree.

### Validity and Reliability of the Study Tool (Questionnaire):

**1. Apparent Validity:** In order to ensure the apparent validity of the study tool, it was presented in its initial form to (16) academics in the relevant disciplines, who reviewed it and expressed their views on the validity and appropriateness of the paragraphs and axes of the questionnaire in terms of their formulation, clarity and belonging, and the compatibility of the axes with the questions, objectives and hypotheses of the study, and made observations on the reformulation and arrangement of some paragraphs, or the addition, deletion, merger or separation of other paragraphs, and in light of those observations that had an impact on the improvement of the questionnaire, the researcher made the necessary adjustments and took out the questionnaire in its final form.

**2. Stability and Validity of the Study Tool:** The Cronbach's Alpha coefficient was used to ensure the overall stability of the questionnaire. The Cronbach's Alpha ratio measures the stability of the questionnaire if it is redistributed again within a specified period of time. It is acceptable if it is greater than (68%) (Taber, 2018: 1276-1277). In order to test the validity of the internal consistency of the dimensions of the study

variables (the questionnaire axes), the correlation coefficients between each dimension and the total degree of its variable were calculated using the Pearson Correlation coefficient.

**Table No 2: Results of Cronbach's Alpha and Pearson Correlation Coefficient Analysis to Test the Stability and Validity of the Study Tool**

Study Variables	Dimensions	Number of paragraphs	Cronbach's Alpha	Pearson correlation coefficient
<b>Knowledge Management</b> The independent variable	Knowledge generation	6	0.854	0.815**
	Knowledge Storage	6	0.898	0.881**
	Knowledge Distribution	6	0.859	0.899**
	Applying the Knowledge	5	0.870	0.886**
<b>Strategic performance</b> Dependent variable	Financial Dimension	7	0.881	0.811**
	Customer Dimension	7	0.880	0.862**
	Internal processes Dimension	6	0.870	0.839**
	Learning and Growth Dimension	6	0.857	0.863**

\*\* Statistically significant at significance level ( $\alpha < 0.001$ )

Through Table No. (2), it is clear that there is high stability in the dimensions of the study, as the values of Cronbach's Alpha coefficient exceeded the 0.70 barrier, and were high in each dimension of the independent variable (knowledge management) and the dependent variable (strategic performance), and ranged between (0.898-0.854). This indicates that the study tool (the questionnaire) has a high degree of stability, and this shows a high consistency in the paragraphs of the study tool, which enhances the possibility of its successful application to similar samples, with the expectation of obtaining results similar to those obtained in the current study. Moreover, the results show that there is a strong correlation between the variables and their dimensions, as it is clear from the table that the value of the Pearson Correlation coefficient was high in all dimensions of the independent variable Knowledge management, and the dependent variable Strategic performance, and ranged between (0.899-0.811), which is a statistical function at a level of significance less than (0.05), and this indicates that all dimensions of each variable are related to each other, and are related to the total degree of the variable, and this indicates that the study tool has a high degree of validity of internal consistency for all axes of the questionnaire (dimensions and variables), and its ability to measure what it was developed to measure.

**Research Variables:**

**Independent Variable:** Knowledge management in its dimensions: knowledge generation, knowledge storage, knowledge distribution, knowledge application.

**Dependent Variable:** Strategic performance in its dimensions: financial dimension, customers dimension, internal processes dimension, learning and growth dimension.

**Statistical Processes and Methods:**

After completing the compilation and retrieval of the questionnaires, the data were coded and entered into the computer, and the statistical processing of the data was carried out using the Statistical Package For Social Sciences (SPSS) program, and

some appropriate statistical methods were used to analyze the data and answer the study questions, as follows:

1. Cronbach's Alpha was used to confirm the stability of the study instrument, and Pearson Correlation to confirm the validity of the study instrument.
2. The arithmetic mean, standard deviation and relative importance were used to find out the views of the study sample on the level of dimensions and variables of the study, and to answer the first and second questions.
3. Torsion coefficient (Skewness) and kurtosis coefficient (Kurtosis) were used to test the normal distribution of data.
4. The Variance Inflation Factor (VIF) test and the Tolerance test were used to confirm that there is no linear correlation between the dimensions of the independent variable.
5. Multiple of Regression analysis was used to test the effect of the dimensions of the independent variable (knowledge management) in the dependent variable (strategic performance) in Yemeni telecommunications companies.

### Criteria for Judging and Interpreting the Results of the Study:

For the purpose of analyzing and describing the views of the study sample on the dimensions and variables of the study accurately and objectively, and answering the questions of the study, the arithmetic mean according to the Likert Scale was used to know the average views of the study sample, and the standard deviation to know the extent of dispersion in the answers of the study sample, and the value of the standard deviation ranges between (0) and (4), and the closer the value of the standard deviation to zero, the less dispersion of the views of the study sample, and the higher the value of the standard deviation approaching (4), the higher the dispersion of the views of the study sample, and the use of relative importance and verbal estimation to explain and interpret the views of the study sample. Accordingly, the results of the responses of the study sample were classified on the dimensions and variables of the study and the verbal estimation (level) was determined according to the arithmetic means and relative importance to seven levels (very high, high, somewhat high, medium, somewhat low, low, very low), and the length of the levels was found by distributing the range of scores ( $7-1=6$ ) over seven options of approval, so the length of each level is equal to ( $6\div7=0.86$ ) and this value was added to the lowest value in the scale (the beginning of the scale, which is one correct) ( $1 + 0.86 = 1.86$ ) and the process is repeated at each level, and the classification of the levels and the range of the weighted average becomes weighted and their verbal estimation as shown in the following table

**Table 3: Levels, Scores, Weighted Average Range and Relative Weights of the Seven Likert Scale Answers**

Opinion	Score	Weighted average range	Relative weight%	Verbal appreciation
Strongly disagree	1	1 to 1.86	14.3% to 26.6%	Too low
Disagree	2	1.86 to 2.71	26.6% to 38.8%	Low
Somewhat Disagree	3	2.71 to 3.57	38.8% to 51%	Somewhat Low
Neutral	4	3.57 to 4.43	51% to 63.2%	Average
Somewhat Agree	5	4.43 to 5.29	63.2% to 75.5%	Somewhat high
Agree	6	5.29 to 6.14	75.5% to 87.7%	High
Strongly agree	7	6.14 to 7	87.7 to 100%	Very high

## PRESENTATION AND DISCUSSION OF STUDY RESULTS

**Findings related to the first question:** What is the level of application of knowledge management in Yemeni telecommunications companies?

**Table No. 4: Results of the Statistical Analysis of the Responses of the Study Sample on the Level of Application of Knowledge Management in Yemeni Telecommunications Companies**

No	Dimension	Moderate	Standard Deviation	Relative importance	Verbal appreciation	Order
1	Knowledge generation	5.339	1.133	76.3%	High	3
2	Knowledge Storage	5.240	1.189	74.9%	Somewhat high	4
3	Knowledge Distribution	5.419	1.063	77.4%	High	1
4	Applying the Knowledge	5.375	1.122	76.8	High	2
<b>Knowledge Management</b>		<b>5.342</b>	<b>0.979</b>	<b>76.3%</b>	<b>High</b>	

From the results of the statistical analysis in Table No. (4), it is clear that the distribution of knowledge obtained the highest average value of 5.419 and a standard deviation of 1.063 and an importance of 77.4% with a high rating. This indicates that the study sample sees the importance of knowledge distribution and encourages the process of knowledge exchange in Yemeni telecommunications companies. In addition, knowledge application and knowledge generation also received a high rating for knowledge management, with high averages and a moderate standard deviation. This suggests that the study sample sees the importance of distributing, applying, and generating knowledge on a large scale in companies. On the other hand, the knowledge storage dimension obtained the lowest average value of 5.240 and a standard deviation of 1.189 and the least important by 74.9% with a somewhat high rating. This indicates that the study sample sees the need to improve the process of knowledge storage and promotes the use of more effective methods and tools to preserve knowledge in companies. As for the overall average of the "knowledge management" variable, it was 5.342, with a standard deviation of 0.979. And the importance of 76.3% and a high estimate, this indicates that the study sample sees this variable in general of high importance and encourages knowledge management in companies.

In conclusion, the study sample sees a high importance to the process of knowledge generation and promotes its distribution and application in companies. However, there is a need to improve the knowledge storage process to ensure that the acquired knowledge is effectively maintained in Yemeni telecommunications companies.

Based on the previous results, it can be said that there is a high interest by telecommunications companies in knowledge management in all its dimensions, as this interest appeared at the high level of knowledge management in its dimensions (knowledge distribution, knowledge application, knowledge generation). After storing knowledge, it was at a somewhat high level. However, this interest is still below the required level and requires greater attention in order to reach a very high level. It also requires the leadership of telecommunications companies to pay great attention to the dimension of knowledge storage because it is considered one of the most important dimensions in knowledge management and is reflected on the rest of the dimensions of knowledge management.

This result is consistent with the study of (Alromimah & Alhakimi, 2024), which reached a high level in the practice of knowledge management in the banks under study, and the study of (Al-Shater et al., 2021), which found that the general average of knowledge management H with a degree of approval, and the study of (Al-Enazi, 2018), which found that knowledge management in the Supreme Council for Governorate Affairs in the State of Kuwait came at a high level. They differ with the study of (Belhaj, 2020), which found that the level of knowledge management practices in Al-Zawiya Hospital was average, and the study of (Al-Azzawi et al., 2014), which reached a high average level of knowledge management variables in the General Company for Batteries Industry in Iraq.

**Second: Results Related to the Second Question:** What is the level of strategic performance in Yemeni telecommunications companies?

**Table No 5: Results of the Statistical Analysis of the Responses of the Study Sample on the Level of Strategic Performance in Yemeni Telecommunications Companies**

No	Dimension	Moderate	Standard Deviation	Relative importance	Verbal appreciation	Order
1	Financial Dimension	5.658	1.067	80.8%	High	3
2	Customers Dimension	5.751	0.901	82.2%	High	1
3	Internal processes Dimension	5.659	0.968	80.8%	High	2
4	Learning and Growth Dimension	5.583	1.023	79.8%	High	4
<b>Strategic performance</b>		5.666	0.833	80.9%	High	

From the results of the statistical analysis in Table No. (5), it is clear that the customer dimension obtained the highest average value of 5.751, a moderate standard deviation of 0.901, the highest importance of 82.2%, and a high estimate. This indicates that the study sample emphasizes the importance of the customer dimension in the general strategy of companies, and wants to achieve high satisfaction among their customers. In addition, after internal operations and the financial dimension, they also received a high rating, with high averages and a moderate standard deviation. This indicates that the study sample promotes the enhancement of internal processes and the improvement of customer experience, which is reflected in financial performance and the achievement of the desired strategic performance. On the other hand, after learning and growth, he obtained a minimum average of 5.583, a standard deviation of 1.023, 79.8% less important, and a high estimate. This indicates that the study sample sees the importance of learning and growth in achieving strategic performance, but there is a need to improve this dimension. As for the overall average strategic performance, it was 5.666, with a standard deviation of 0.833, a significance of 80.9% and a high estimate. This suggests that the study sample promotes strategic performance and sees its importance in the overall achievement of corporate goals.

In conclusion, the study sample sees a high importance of customer dimension, internal operations dimension and financial dimension in strategic performance. However, there is a need to improve the learning and growth dimension to further enhance strategic performance. The researcher responds to the reason for the increased interest in the dimension of customers because telecommunications companies operate in a competitive market among themselves and seek to retain their customers and attract new customers and work to increase their market share, by

improving the quality of services, expanding and spreading coverage, moving to the fourth generation technology in communications, and competing in introducing high speeds in the Internet and reducing their prices with competitive packages and offers. This is also due to the keenness of companies and their endeavor to maximize profits in all ways, including increasing sales, and meeting the desires and requirements of customers by giving great importance to the services they provide and the diversity of these services, which requires great effort and endeavor to work on development, renewal, continuous improvement and maximizing the spirit of creativity and excellence of their employees, because of the importance of this in raising the level of strategic performance. Based on the previous results, it can be said that there is a high interest by telecommunications companies in strategic performance in all its dimensions, as that interest appeared in the high level of strategic performance in all its dimensions. However, this interest is still below the required level and requires greater attention in order to reach a very high level. It also requires the leadership of telecommunications companies to pay great attention to the dimension of learning and growth because it is considered one of the most important dimensions in strategic performance and is reflected on the rest of the operational, competitive and financial dimensions. This result is consistent with the study of (Tirtayasa & Imaroh, 2021), which found that the level of performance of the company (PT, Inti Nusa Permata) was at a very good level in the dimensions of (after customers, after internal operations, after learning and growth) and differed with it in the financial dimension, which came at a weak level.

It is consistent with the study of (Al-Enazi, 2018), which found that the level of internal performance of the Supreme Council for Provincial Affairs in Kuwait was high. It differs with the study of (Almarhdi & sagher, 2023), which reached a rather high level of strategic performance in Yemeni telecommunications companies, and the study of (Al-Bashabsha, 2019), which found that the level of performance of the organization was average in Jordanian telecommunications companies.

**Third: Results related to the third question:** What is the impact of knowledge management in its dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) on strategic performance in Yemeni telecommunications companies?

Before answering this question, the two researchers conducted the Multiple of Regression analysis test after ensuring that the data must be normally distributed, and that there is no linear overlap between the variables, as well as the independence of errors from each other.

### 1- Normal Residual Distribution Test:

The normal distribution of data was tested using the values of the coefficient of torsion (Skewness) and kurtosis (Kurtosis)

**Table No 6: Results of the Analysis of the Torsion Coefficient (Skewness) and the Kurtosis Coefficient (Kurtosis) to Test the Normal Distribution of Data**

Study Variables	Modulus of torsion Skewness	Kurtosis coefficient
Knowledge Management	-.701-	-0.087
Strategic performance	-.886-	0.870

It is clear from the results of Table No. (6) that the data follow the normal distribution, as the values of the torsion and kurtosis coefficient came between (-2, +2), and the study sample reached (479) individuals, which is a large sample, and this supports that the data follow the normal distribution, and therefore it can be said that the sample represents the community and that the results are generalizable

High reliability

## 2- Linear Interference and Error Independence Test:

Whether there is a common linear relationship between the variables and the independent dimensions must be ascertained before any results or predictions are obtained through the statistical model. The variation inflation coefficient (VIF) measures the correlation between the variables and the independent dimensions in the multiple regression analysis. The value of the variation inflation coefficient (VIF) of (10) or greater indicates a high degree of multiple linear relationship. In order for the study variables to be independent of each other, the value of the variation inflation coefficient (VIF) must be less than (10), and the value of the allowed variation (Tolerance) is greater than (0.20) (Hair, et al, 2006).

In this study, the multiple linear relationship between the dimensions of the independent variable was tested through indicators of variance inflation coefficient (VIF), and tolerance variance (Tolerance), and the results were as follows:

**Table No 7: Results of testing the Multiple Linear Relationship between the Dimensions of the Independent Variable (Knowledge Management)**

The independent variable	coefficient of variation inflation	Tolerance
Knowledge generation	1.831	.546
Knowledge Storage	2.696	.371
Knowledge Distribution	3.027	.330
Applying the Knowledge	3.010	.332

From Table No. (7), the values of the variance inflation coefficient (VIF) for all dimensions of the independent variable ranged between (1.831-3.027), which is less than the customary value of (10), and the values of the allowed variance (Tolerance) for all dimensions of the independent variable ranged between (0.330-0.546), which is greater than (0.20). This indicates that there is no multiple linear relationship between the dimensions of the independent variable in the model, and confirms the validity of the model to test the impact of the dimensions of knowledge management on strategic performance in Yemeni telecommunications companies.

## 3- Testing the impact of knowledge management dimensions on strategic performance in Yemeni telecommunications companies:

After ensuring that the data is normally distributed, that there is no linear overlap between the variables and that the errors are independent of each other, the Multiple of Regression analysis test was conducted and the answer to the third question was as shown in the following table:



**Table No 8: Results of Multiple Linear Regression Analysis to test the impact of knowledge management dimensions (knowledge generation, knowledge storage, knowledge distribution, knowledge application) on strategic performance in Yemeni telecommunications companies.**

Model Summary					
Model	Correlation coefficient R	Coefficient of determination R <sup>2</sup>	Coefficient of determination Adjusted(R <sup>2</sup> )	Standard error	
	.682 <sup>a</sup>	.465	.460	0.612	
a. Predictors: (Constant): knowledge generation, knowledge storage, knowledge distribution, knowledge application					
Variance analysis: ANOVA <sup>a</sup>					
Source of variance	Squares Total	Degree of freedom Df	Squares Mean	Value F	Significance level Sig
Regression	154.263	4	38.566	102.93	.000 <sup>b</sup>
Residuals	177.584	474	0.375		
Total	331.848	478			
a. Dependent Variable: Strategic Performance b. Predictors: (Constant): Knowledge generation, knowledge storage, knowledge distribution, knowledge application					
Transactions: Coefficients <sup>a</sup>					
Model	Non-standard coefficients		Non-standard coefficients	T value	Significance level Sig
	Coefficient of regression	Standard error	Beta		
Constant	2.566	0.157	—	16.319	0.000
Knowledge generation	0.276	0.033	0.376	8.265	0.000
Knowledge Storage	-0.009	0.039	-.013	-.241	0.810
Knowledge Distribution	0.157	0.046	0.200	3.415	0.001
Applying the Knowledge	0.154	0.043	0.207	3.548	0.000
a. Dependent Variable: Strategic Performance					

It is clear from Table No. (8) that the value of the correlation coefficient R was (0.682) at a significance level of less than (0.05), and this indicates that there is a strong positive relationship between the dimensions of the independent variable: knowledge management (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and the dependent variable: strategic performance, and the value of the corrected identification coefficient Adjusted R<sup>2</sup> (0.460), and this indicates that the dimensions of the independent variable: knowledge management explain (46%) of the variation in the dependent variable: strategic performance, that is, the change in strategic performance is due to the change in the dimensions of knowledge management by (46%), and the value of (102.93) at degrees of freedom (4, 474), which is statistically significant at a level of significance less than (0.05), on the model's significance, predictive quality and high interpretive accuracy to study the relationship between the dimensions of the independent variable: knowledge management (knowledge generation, knowledge storage, knowledge distribution, knowledge application) and the dependent variable: strategic performance, and accordingly, the

impact of the dimensions of knowledge management in strategic performance was tested at each dimension level, and the results were as follows:

- There is a statistically significant positive impact of the knowledge generation dimension on strategic performance, as the value of the regression coefficient B for this dimension reached (0.276), and the value of T (8.265), which is statistically significant at a significance level of less than (0.05), and the value of Beta (0.376). This indicates that after knowledge generation can improve strategic performance, and assuming the neutralization of other variables, the increase in knowledge generation by one degree will increase strategic performance by (37.6%), which is the most influential dimension of knowledge management in strategic performance.
- There is no statistically significant effect of the knowledge storage dimension on strategic performance, as the value of the regression coefficient B for this dimension reached (0.009-), the value of T (0.241-) and the level of significance (0.810), which is greater than (0.05) and therefore it is not statistically significant.
- There is a statistically significant positive impact of the knowledge distribution dimension on strategic performance, as the value of the regression coefficient B for this dimension was (0.157), and the value of T (3.415), which is statistically significant at a significance level of less than (0.05), and the value of Beta was (0.200). This indicates that the distribution of knowledge can improve strategic performance, and assuming the neutralization of other variables, the increase in the knowledge distribution dimension by one degree will increase strategic performance by (20%).
- There is a statistically significant positive impact of the knowledge application dimension on strategic performance, as the value of the regression coefficient B for this dimension was (0.154), and the value of T (3.548), which is statistically significant at a significance level of less than (0.05), and the value of Beta was (0.207). This indicates that the application of knowledge can improve strategic performance, and assuming the neutralization of other variables, the increase in the knowledge application dimension by one degree will increase strategic performance by (20.7%).

Based on the previous results, it is clear that there is a statistically significant positive impact of knowledge management with its combined dimensions on strategic performance in Yemeni telecommunications companies, and this is an indication that knowledge management plays a significant role in raising the level of strategic performance in those companies.

These results are consistent with the study of (Al-Shater et al., 2021), the study of (Al-Kalas, 2020), the study of (Belhaj, 2020) and the study of (Al-Qubi and Abu Shweta, 2020), which found a positive and statistically significant impact of knowledge management on institutional performance, and the study of (Wibowo, et al, 2018), which found that knowledge management processes have a significant and positive impact on the performance of contracting companies in Indonesia.

These results differ with the study of (Al-Enazi, 2018), which found a statistically significant effect of knowledge management in all its fields on the performance of workers.

These differences in results may be due to the different nature of the study community as it was conducted on telecommunications companies, while previous studies were conducted on banks, universities and other organizations, or due to the different Yemeni environment from the environment in which other previous studies were conducted, or it may be due to the fact that the dimensions of knowledge management may affect society and not individually in strategic performance.

## CONCLUSIONS

- 1) The results of the study showed that the level of application of knowledge management in Yemeni telecommunications companies was at a high general level, as well as at a high level and to varying degrees in each of its dimensions, except for the dimension of knowledge storage, which was at a rather high level, where the distribution of knowledge came in the first place, followed by the application of knowledge, then the generation of knowledge, then the storage of knowledge, and this is an indication that there is interest and awareness by these companies of knowledge management in line with changes and keep pace with the rapid technological developments in the world of communications and information.
- 2) The results of the study indicate that the interest in knowledge storage in Yemeni telecommunications companies is still below the required level, as it came at a somewhat high level and was the least among the dimensions of knowledge management, and this is an indication that the interest in the process of knowledge storage is not at the required level despite its importance for the rest of the dimensions, and therefore it needs to be improved through the design of effective technological systems to store, retrieve and distribute knowledge easily.
- 3) The results of the study showed that the level of strategic performance in Yemeni telecommunications companies was at a high general level, as well as at a high level and to varying degrees in each of its dimensions, where the customer dimension was the highest, followed by operations, then the financial dimension, and then after learning and growth. This indicates that there is a high interest by Yemeni telecommunications companies in their strategic performance.
- 4) The results of the study indicate that attention to some indicators of learning and growth represented in creativity and innovation, and research and development efforts are not at the required level, and need to increase attention, because of its great importance and because of its significant impact on other dimensions of strategic performance.
- 5) The results of the study showed that there is a statistically significant positive impact of knowledge management in its combined dimensions on strategic performance in Yemeni telecommunications companies, and this is an indication that knowledge management plays a significant role in raising the level of strategic performance in those companies.
- 6) The results of the study showed that there is a statistically significant positive impact of the dimensions of knowledge management (knowledge generation, knowledge application, knowledge distribution) individually in the strategic performance in Yemeni telecommunications companies, and this is an indication that they play a significant role in raising the level of strategic performance in those companies.

- 7) The results of the study showed that there is no statistically significant effect of storing knowledge individually in strategic performance, and this is an indication of the need for integration with the rest of the dimensions to be influential on strategic performance.

## RECOMMENDATIONS

Based on the results of the study, the study concluded the following recommendations:

- 1) The need to pay attention to the application of knowledge management in Yemeni telecommunications companies in accordance with best practices, through the development of an integrated strategic plan for knowledge management within the framework of the strategic plan of companies, including objectives, procedures, indicators of measurement and targets, and the formation of a specialized team to supervise the implementation of the plan and ensure the achievement of its objectives, because of its importance in raising and improving the level of strategic performance.
- 2) Launching various training programs to develop the skills of knowledge management workers, and to benefit from them in their daily operations.
- 3) Adopting modern technologies for storing, retrieving and distributing knowledge within companies.
- 4) Encourage a culture of sharing and exchange of knowledge between different business departments and units.
- 5) Leverage the expertise of leading companies in the field of knowledge management and adopt successful practices.
- 6) Establish clear mechanisms to measure the impact of knowledge management on strategic performance and improve the process based on results.
- 7) The need to continuously work to raise the level of strategic performance in Yemeni telecommunications companies, in order to help them face the changes that occur in the surrounding environment, and enable them to enhance their competitiveness, and their ability to survive and continue in the market.
- 8) Paying attention to the learning and growth indicators represented in encouraging creative and distinguished workers, taking care of nurturing creative ideas and research and development efforts, developing the capabilities and skills of workers, and continuing to develop work methods in modern ways, as this has a great impact on raising the level of strategic performance.
- 9) Conducting similar future studies on a sample of commercial companies.

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