

# Knowledge Management Practices and Firm Performance: The Moderating Role of Resource Commitment

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*Abstract:* - Knowledge management has become crucial for the firm's sustainable and long-term performance. Knowledge management practices in the firm make such exchange, transfer, and reuse of knowledge increase the efficiency of firm performance. Therefore, this study tries to investigate the relationship between knowledge management practices and firm performance in the IT sector of Saudi Arabia and to inspect resource commitment as a moderator for developing the relationship between knowledge management practices and firm performance. For analysis, this study collected data from 356 participants from the IT sector of Saudi Arabia and measured the model using SmartPLS. In the data analysis, this study found that knowledge management practices have a positive and significant relationship with firm performance, whereas resource commitment plays a vital role as a moderator for strengthening this relationship between knowledge management practices and firm performance. Further, this study also linked RBV (resource-based view) theory and KB (knowledge-based) theory, with the study's conceptual framework to make strong theoretical and practical implications of results. In the end, this study concluded that knowledge management practices are important to firm long-term existence in the market by using accessible resources. The results of the study urge the policymakers and administrators to give more consideration to the IT sector and enable knowledge management practices to enhance the performance of the organization, as well as attain innovation in this sector within the limit of available resources.

*Key-Words:* - Knowledge management practices, firm performance, resource commitment, SmartPLS, IT sector, Saudi Arabia

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## 1 Introduction

The theme of knowledge management practices (KMP) has increasingly captured the attention of various fields of business studies. This growing awareness is attributed to its significant impact on societal innovation and organizational success. According to, [1], the knowledge-based economy is experiencing rapid development, and knowledge is viewed as a vital factor in generating prosperity and achieving success. Further, [2], suggests that knowledge is the primary driver of entrepreneurial and organizational performance and is fundamental to achieving success in these areas. KMP involves a range of strategies and techniques that enable organizations to capture, store, and distribute information and expertise. Therefore, these practices are essential for organizations to make progress and keep innovation in production processes and services, [3].

Numerous research on knowledge management and firm performance have shown that effective KMP can have a significant positive impact on firm performance. For instance, a study by, [4], found that effective KMP can lead to increased innovation and competitive advantage. Similarly, a study by, [5], found that KMP can significantly affect organizational performance, including improved customer satisfaction, increased sales, and enhanced productivity. There are a few more studies that also explained a positive relationship between KMP and firm performance. For instance, [2], [6], found that KMP can positively impact the financial performance of firms in the high-tech industry. Some studies have contributed to the research, but they used a different measurement scale, time period and region, etc., and neglected a very important variable, such as resource commitment, [7].

The motive behind using resource commitment in the current study is its uniqueness. Effective

resource commitment is critical for achieving organizational goals and objectives and can lead to the improvement of a firm's performance. But, it is imperative to understand that the impact of resource commitment on firm performance is contingent on how effectively those resources are managed and utilized, [7]. Side by side, this requires careful planning and management, including regular assessment of resource needs, allocation decisions, and monitoring and evaluation of resource utilization that can fulfill the knowledge management. Consequently, the present study aims to inspect the relationship between KMP and firm performance in the current scenario, such as Vision 2030 of Saudi Arabia. Further, this study also investigated the moderating role of resource commitment to strengthen the relationship between KMP and firm performance. This study is very substantial in its scope and to the best of the author's knowledge, no research existed with the combination of these variables to explain Vision 2030 in Saudi firms. This research links the research framework with two renowned theories, the resource-based view theory, and the knowledge-based theory. These theories gave the base to explain knowledge management practices and resource commitment to enhance firm performance.

## 2 Literature Review

### 2.1 Resource-Based View Theory (RBV) and Knowledge-Based Theory (KBT)

These theories are included among other institutional theories, such as resource-based view theory (RBV) and resource advantage theory (RAT), [8]. Previous studies argue that RBV was the most used theory in intellectual capital research, [9]. Other arguments were anchored in the premise that firms with improved, unique, and non-imitable resources and capabilities have a greater chance of improving performance because of the competitive advantage gained from superior intellectual capital, [10]. RBV theory assumed that a firm's tangible and intangible resources were utilized to influence the competitive advantages toward firm performance. Therefore, RBV theory will be used because it is associated with a firm's concept that constitutes resources or capabilities intended to generate superior competitive advantages and firm performance, [11].

According to knowledge-based theory (KBT), effective and efficient KMP management results in the development of exclusive capabilities that

enhance organizational performance through innovation, [12]. Consequently, organizations with greater KMP are more likely to achieve higher organizational performance, [13]. Further, [14], suggests that KMP, for example, knowledge acquisition, knowledge sharing, and knowledge application, contribute to innovation and can lead to improved organizational performance.

### 2.2 Knowledge Management Practices

Knowledge management practices have become a significant factor for organizations' sustainability and innovation in the current dynamic business environment, [15], [16]. KMP involves a range of strategies, techniques, and tools that enable organizations to capture, store, and distribute information and expertise. Some of the key practices include "knowledge sharing, knowledge capture, knowledge storage, knowledge retrieval, knowledge transfer, knowledge creation, and knowledge measurement", [17]. These practices help organizations to influence their combined knowledge and proficiency, improve decision-making, foster innovation, and enhance their overall performance. Studies have shown that effective KMP can significantly impact organizational outcomes, [18]. KMPs are essential for organizations to succeed in today's knowledge-driven economy by leveraging their collective knowledge and expertise, improving decision-making, and enhancing their overall performance, [19]. Therefore, organizations should invest in effective KMP to stay competitive and achieve their strategic goals.

### 2.3 Firm Performance

Firm performance denotes the competence of a business to attain its strategic goals and objectives and can be measured in a variety of ways, such as "profitability, productivity, market share, and customer satisfaction." It is a crucial aspect of business success, as it determines the long-term sustainability and growth of the organization, [19], [20].

Organizational performance is important, complex, and has a multidimensional perspective. In any country, organizations face many internal and external challenges, and organizations have to enhance their flexibility, efficiency, responsiveness, and response to innovations within and outside the association to curb these challenges, [21], [22]. The main cause of novelty in the organization is quickly changing the service and product capabilities, innovation in different sectors, and internal processes of organizations.

Shifting from a productivity view to the modernization of organizations, the requirement for more learning has been increased, and individuals can be synchronized to expand innovation and performance at the administrative level. Further, the best activity of the employees indirectly affects the organization's values and the overall performance and financial positions, [21]. Organizational performance includes the real manufactures or services of an organization, which can be estimated in contradiction to proposed results, goals, and intentions, [23]. The organizational performance comprises three zones related to the association's pecuniary performance, such as "investment, profit and return, and product/service market performance market share and sales," etc., [24].

#### **2.4 Resource Commitment**

Resource commitment discusses the division of assets, such as time, money, personnel, and equipment, to support a particular activity or project, [25]. It involves dedicating resources to achieve a specific goal or objective and is an important aspect of effective project management and strategic planning. Resource commitment is essential for organizations to achieve their goals and objectives.

Effective resource commitment requires careful planning and management. Organizations need to consider their strategic priorities and goals, as well as the availability and cost of resources when making resource allocation decisions, [26]. Resource commitment is a critical aspect of project management and strategic planning. By allocating the necessary resources, organizations can ensure they have the capacity and capability to achieve their goals and objectives, [26], [27]. Effective resource commitment requires careful planning and management to provide a guarantee that resources are used effectively and proficiently, [27].

#### **2.5 Knowledge Management Practices and Firm Performance**

KMP refers to the systematic processes and strategies organizations use to recognize, create, capture, store, and share knowledge assets. The effectiveness of KMP can positively impact firm performance, [28], [29].

A growing body of research suggests that effective KMP can lead to improved firm performance, [30], including increased innovation, [31], higher productivity, and better decision-making. Some of the ways that KMP can improve firm performance, for example, is by capturing and sharing knowledge across the organization, as KMP

can help foster a culture of innovation and encourage the development of new ideas, [32]. In addition, KMP can provide employees with access to the knowledge and expertise they need to make better decisions, leading to more effective strategies and improved performance. By reducing redundant efforts and enabling employees to work more efficiently, KMP can increase productivity and reduce costs, [33]. The knowledge-based theory also explains that organizations with greater KMP will likely attain organizational performance, [13], [28]. Based on the literature review, this study hypothesized that:

H1: There is a positive and significant relationship between knowledge management practices and firm performance.

#### **2.6 Resource Commitment as Moderator**

Resource commitment and KMP are closely related, as effective knowledge management requires the allocation of appropriate resources to support knowledge formation, sharing, and operation, [29]. Effective resource commitment is critical for the success of knowledge management. Organizations need to ensure that they have the necessary resources to support knowledge management activities and that these resources are allocated appropriately, [7]. This requires careful planning and management, including regular assessment of resource needs and allocation decisions, [30]. Resource commitment is an important factor that can significantly impact firm performance. Effective resource commitment involves the allocation of appropriate resources to support organizational activities and initiatives, [34]. These resources may include financial capital, human capital, technological resources, and other key resources essential for achieving organizational goals and objectives, [7]. A study by, [35], found that resource commitment, including investment in research and development and capital expenditures, significantly impacts firm innovation and performance. Similarly, a study by, [36], found that resource commitment, including investment in human capital, significantly impacts firm productivity and profitability. In this context, the resource-based view theory also explains that firm performance can be achieved at a high level by the best use of tangible and intangible resources, [37]. Based on the literature review, this study hypothesized that:

H2: Resource commitment strengthens the positive relationship between knowledge management practices and firm performance.

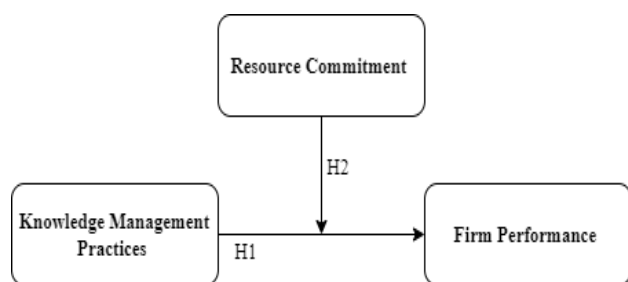


Fig. 1: Conceptual Framework

This study has developed the above framework based on the literature review of previous studies, which indicates knowledge management practices as an independent variable, firm performance as a dependent variable, and resource commitment as the moderator. Resource commitment plays an important role to make the strong relationship between knowledge management practices and firm performance. As resource commitment is essential for the successful implementation of knowledge management practices, firms that invest in these resources are likely to see positive outcomes in terms of performance. The conceptual framework of this study is presented in Figure 1.

### 3 Methodology

This is a cross-sectional study and adopted convenience sampling techniques for data collection. The objective of adopting this method is its accurate results, [38]. It is among the most common and universally used sampling processes in social studies research, [39]. This technique provides the population with representative standards, including accessibility, geographical closeness, convenience at a specified time, and readiness to participate in the cause of observation, [40].

The target population was the IT (information technology) sector of Saudi Arabia. This sector is selected because the IT sector drives innovation and advancement in other industries, as well as in its domain. This sector contributes significantly to the economy through career formation, revenue generation, and business growth, [41]. It is a major source of employment, and its growth has a multiplier effect on other industries, such as finance, healthcare, education, and manufacturing, [42].

The IT sector has enabled the world to become more connected and globalized. It has facilitated international trade, communication, and collaboration, breaking down geographical barriers and making it easier for businesses to operate

globally. This sector has improved efficiency and productivity in almost every aspect of life, [43], [44]. It has made it easier to access and share information, automate processes, and streamline operations, thereby saving time and reducing costs. This sector has also had a significant social impact, providing access to information and education, improving healthcare and public services, and empowering individuals and communities. It has transformed the method to link and interrelate the departments within the country as well as all over the world. Overall, the IT sector is important because it drives innovation, fuels economic growth, promotes globalization, enhances efficiency and productivity, and has a significant social impact, [45].

Before the distribution of questionnaires and formal data collection, the author confirmed the efficiency of the questionnaire by using a preliminary test. Furthermore, after authorizing the rationality of the questionnaire, this study distributed 500 questionnaires to the participants. The participants were guaranteed that this exploration was solely for educational purposes and that the statistics would be confidential. To increase the response rate, the author translated the questionnaire from English into the Arabic language. The data is collected from Riyadh, Mecca, and Eastern regions in the Kingdom of Saudi Arabia to address the research objectives. Participants from five different organizations answered the questionnaires via Google Forms, and around 356 usable questionnaires were returned for exploration. The total response rate was 71.2 percent. This was made between October to December 2022. The demographic characteristics of participants are elaborated on in Table 1.

Table 1. Demographic characteristics of participating employees

Demographic characteristics	Percentage 100%
<b>Gender</b>	
Male	81.5
Female	18.5
<b>Age</b>	
20-30 years	24.6
31-40 years	30.4
41-50 years	27.8
More than 50 years	17.2
<b>Degree</b>	
Less than bachelor	22.5
Bachelor	60.8
Master's degree or above	16.7
<b>Position</b>	
Top management	12.9
Middle management	31.5
Lower management	55.6
<b>Experience</b>	
Less than 1 year	10.4
1-5 years	20.2
6-10 years	26.6
11-20 years	30.5
More than 20 years	12.3

### 3.1 Measurement

#### 3.1.1 Knowledge Management Practices

In this study, the scale of knowledge management practices is measured with nine items, such as “knowledge management,” “knowledge discovery,” “knowledge collection,” “knowledge refinement and verification,” “knowledge acquisition,” “knowledge store,” “knowledge dissemination and exchange,” “knowledge transfer,” and “knowledge reuse” developed by, [46].

#### 3.1.2 Firm Performance

To measure the firm performance, there are four items, “sales growth,” “return on investment after tax,” “earning growth” and “market share” developed by, [47].

#### 3.1.3 Resource Commitment

Resource commitment is measured with three items developed by, [48], such as “improving information systems,” “improving IT and its application to business operations” and “improving the IT skills of employees with the help of training.”

### 3.2 Data Analysis

This study used SmartPLS 4 statistical software for data analysis. Smart PLS is important because it allows researchers to analyze complex data sets with multiple variables, providing a more comprehensive understanding of the relationships between variables, as well as it is used in many disciplines and predictive research, [49], [50]. This study primarily conducted measurement model tests to check the reliability and validity of the variables. Moreover, the theoretical model was analyzed by testing the discriminant validity (DV) and correlation. At the end of this study, SEM was performed on the data to test the proposed hypothesis.

## 4 Results

### 4.1 Assessment of the Measurement Model

For the measurement of construct reliability, this study examined Cronbach's Alpha as well as composite reliability. In Table 2, values of Cronbach's Alpha are explained at the 0.70 threshold level, [51]. Therefore, the proposed model is acceptable based on values. Further, this study measures the convergent validity, where the limit of average variance extracted (AVE) should be greater than 0.50, [52] and values in Table 2 indicate that AVE has ranged from 0.695 to 0.864, which is greater than the threshold level, [53].

Table 2. Measurement model

Latent variable	Items	Loadings	CA	AVE	CR
Firm Performance (FP)	FP1	0.788	0.856	0.695	0.901
	FP2	0.892			
	FP3	0.902			
	FP4	0.742			
Knowledge Management Practices (KMP)	KMP1	0.898	0.961	0.762	0.966
	KMP2	0.889			
	KMP3	0.919			
	KMP4	0.762			
	KMP5	0.836			
	KMP6	0.863			
	KMP7	0.876			
	KMP8	0.888			
	KMP9	0.913			
Resource Commitment (RC)	RC1	0.953	0.920	0.864	0.950
	RC2	0.968			
	RC3	0.865			

Note(s): AVE = Average Variance Extracted, CR= Composite Reliability, CA = Cronbach's Alpha.

Table 3. Discriminant validity (Fornell-Larcker criterion)

	FP	KMP	RC
FP	0.834		
KMP	0.248	0.873	
RC	0.333	0.403	0.830

Note(s): FP= Firm performance, KMP= Knowledge management practice, RC= Resource commitment.

Table 4. Heterotrait-Monotrait Ratio (HTMT) criterion

	FP	KMP	RC
FP			
KMP	0.257		
RC	0.351	0.426	

Note(s): FP= Firm performance, KMP= Knowledge management practice, RC= Resource commitment.

Table 5. Saturated model results

Construct	R <sup>2</sup>	F <sup>2</sup>	Q <sup>2</sup>
FP	0.126	0.025	0.123

Table 6. Hypothesis constructs

Hypothesis	Relationship	Beta	Standard error	T-values	P-values	Decision
H1	KMP -> FP	0.157	0.067	2.335	0.020	Supported
H2	RC x KMP -> FP	0.143	0.055	2.606	0.009	Supported

To examine the discriminant validity, Fornell-Larcker, and heterotrait-monotrait (HTMT) ratio are measured, [54]. The discriminant validity results are elaborated in Table 3 which elucidated that the variables have significant and positive correlations. Furthermore, the current study analyzed the Heterotrait-Monotrait (HTMT) ratio to disapprove the benchmark of discriminant validity measurement, [53]. This ratio is used to see the multicollinearity among the variables with a threshold level of 0.9, [55], and greater values than the specific threshold level indicate multicollinearity. In the current analysis, the values of HTMT encountered the threshold and found no multicollinearity. The results are illustrated in Table 4.

Further, some tests, are applied before analyzing the hypotheses (Table 5). The value of the coefficient of determination for the firm performance is 0.126 ( $Q^2 = 0.123$ ), which postulates that predictors can describe 12.6% of the variance in the respective constructs. Further, a  $Q^2$  value of more than 0 indicated the adequate predictive significance of the model. In the same table, the  $F^2$  value of the data elucidates the strength of the effect. For illustration, a 0.02 value indicates a small effect, 0.15 signifies a medium effect, a value of 0.35 describes a strong effect, [56]. So, the  $F^2$  value elaborated the medium effect of FP with a value of 0.25.

#### 4.2 Assessment of Structural Model

This section explains the hypotheses tested by SmartPLS, [49]. Table 6 shows that H1 is supported, which indicates that KMP has a significant relationship with a firm performance at the value of  $\beta = 0.157$ ,  $t = 2.335$ , and  $p < 0.020$ . H2 is also supported, which indicates resource commitment has a significant moderating effect between KMP and firm performance at the value of  $\beta = 0.143$ ,  $t = 2.606$ , and  $p < 0.009$ .

Further, Figure 2 explains the moderating effect of resource commitment and shows the positive and significant relationship between KMP and firm performance. The resource commitment helps to ensure strategic alignment in the firm. It is essential for a firm because it enables effective planning, promotes accountability and innovation, and helps to ensure strategic alignment, [7], [25]. Without resource commitment, a firm may struggle to achieve its goals or may be unable to compete effectively in its industry.

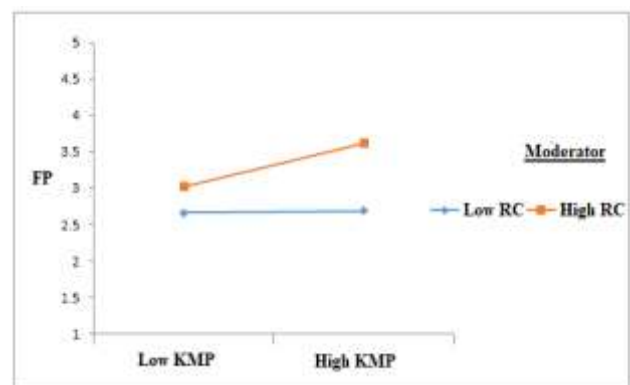


Fig. 2: Resource commitment strengthens the relationship between KMP and FP

## 5 Discussion and Conclusion

This study aims to develop the link between the KMP and firm performance where resource commitment is used as a moderator. This study found KMP is essential for organizations to enhance their firm performance and achieve their strategic goals, [31]. Organizations can foster innovation, improve decision-making, and enhance their overall performance by leveraging their collective knowledge and expertise. Firms can enhance their comprehension of customers' preferences and requirements by implementing knowledge management practices. Through the acquisition and evaluation of customer data, firms can create offerings that fulfill customer needs and enhance their customer service. Therefore, organizations use effective KMP to stay competitive and achieve long-term sustainability and growth, [57].

This study also found resource commitment has positive moderating effects of strengthening the relationship between KMP and firm performance. Resource reallocation, knowledge sharing, and utilization are important factors for firm performance, [7]. An effective resource commitment critically becomes a success factor that supports knowledge management and enhances the firm's activities. Therefore, resource commitment helps in KMP and also makes the firm more active in performance, [35]. The resource commitment moderates the role between the KMP and firm performance and helps the organization when it needs to consider its strategic priorities and goals, as well as the availability and cost of resources for making resource allocation decisions, [26].

### 5.1 Theoretical Implications

This current study has empirical as well as theoretical implications. Reviews of current studies enhance the ability to develop the theoretical

framework that gives the foundation for the current study. This study has used two theories based on variables. The knowledge-based theory relates to the KMP and explains that knowledge sharing, application, and acquisition enable the firm to enhance its performance, [14]. In contrast, the resource-based view theory clarifies the resource commitments; these commitments use available resources to improve firm performance. Further, this study used resource commitment as a moderator between KMP and firm performance to provide the theoretical importance of these variables for making the IT sector successful. Further, this study has explained the theoretical foundation in Saudi Arabia and provides the best concept to policymakers, researchers, and administrative bodies for the implication of Vision 2030.

## 5.2 Practical Implications

This study has strong practical implications in the services sector as well as other sectors. The finding of this study explains that KMP can help organizations to better understand their needs and preferences, leading to more effective products and services. In addition, KMP can improve employee satisfaction and retention by providing employees with opportunities to learn and develop new skills, [3]. Overall, effective KMP can provide organizations with a competitive advantage by enabling them to leverage their knowledge assets to drive performance and growth, [58], [59], [60]. However, implementing the analysis for the IT sector requires a strategic and systematic approach, as well as a commitment to ongoing learning.

This study explains that KMP in the service sector will involve a range of strategies and techniques that enable organizations to capture, store, and distribute information and expertise that increase their performance, [61]. On the other hand, these practices require allocating resources, such as personnel, technology, and training, to support knowledge management activities, which can be achieved by resource commitment. Resource commitment is an important determinant of firm performance. Organizations that effectively allocate resources to support their goals and objectives are more likely to achieve better performance outcomes. However, the impact of resource commitment on firm performance is contingent on effective resource management and utilization, [62].

Further, the finding explains that firms can ensure the capacity and capability to deliver on their commitments by allocating the necessary resources. For example, a company may commit resources to research and development to develop new products

or services and stay ahead of its competitors. Similarly, a non-profit organization may commit resources to fundraising activities to support its programs and services. So, this study is the best framework for policymakers, society, and government to show how firm performance can increase with the help of KMP and resource commitment.

## 6 Limitations and Future Research

The success of any firm depends on its performance, whereas resource commitment and KMP are closely linked to the firm's performance. The administration should try to invest in appropriate resources to support effective knowledge management, including personnel, technology, and training. Through effectively allocating resources to support KMP, organizations can enhance their ability to innovate, adapt to change, and achieve their goals and objectives.

Despite the great contribution of this study in the service sector, it has some limitations. This study selected specific areas of Saudi Arabia, and as an Islamic country, it has different cultures, resources abundances, and working environments. Therefore, the same model can be tested in Western countries. Secondly, this study used resource commitment as a moderator, but future studies can use it as a mediator or select innovation capabilities to investigate the relationship between KMP and firm performance. Thirdly, a future study can also use strategic leadership as a moderator because an organization may need to invest in technology platforms, such as intranets, databases, or collaboration tools, to enable knowledge sharing and collaboration among employees. Similarly, an organization may need to dedicate personnel, such as knowledge managers or subject matter experts, to support knowledge management activities and ensure that knowledge is effectively captured, shared, and utilized across the organization. Fourth, for the data analysis, the IT service sector of Saudi Arabia has been selected, but future studies can use SMEs, industrial or health sectors for the conformity of findings.

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The author has no conflict of interest to declare that is relevant to the content of this article.

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