



# The Ingredients for the Success of Knowledge Management Application in Supporting Investment in Saudi Universities According to the Vision of the Kingdom of Saudi Arabia 2030

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Paper ID: 13A3T

Volume 13 Issue 3

Received 19 November 2021

Received in revised form 11 March 2022

Accepted 17 March 2022

Available online 24 March 2022

## Keywords:

Intellectual capital investment; Investment planning; Investment decision making; Knowledge investment; Partnership support.

## Abstract

Public sector organizations in Saudi Arabia face a lack of government support for the use of new technologies, a lack of awareness of knowledge, and a lack of leadership support. Accordingly, the current study seeks to verify the ingredients for the success of the application of knowledge management in supporting investment in Saudi universities in accordance with the Kingdom's vision 2030. The study used the descriptive survey method, which depends on reviewing previous literature on the subject of the study, analyzing its results, in addition to reviewing records and documents related to the employment of universities for knowledge management and its impact on its investment, in addition to preparing a questionnaire tool that achieves the objectives of the study and answers its questions. Content analysis was used. The study reached several results, the most important of which are: Many ingredients must be met for the success of the application of knowledge management in supporting investment in Saudi universities according to the vision of the Kingdom of Saudi Arabia 2030. Focusing on efforts to support innovation in Saudi universities through the formation of knowledge experiences that support innovation, emphasizing the provision of products that meet customer expectations, and encouraging and experimenting with new ideas.

**Disciplinary:** Business Management.

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## Cite This Article:

Arif, M.J., Zahrani A.M.A. (2022). The Ingredients for the Success of Knowledge Management Application in Supporting Investment in Saudi Universities According to the Vision of the Kingdom of Saudi Arabia 2030. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 13(3), 13A3T, 1-10. <http://TUENGR.COM/V13/13A3T.pdf> DOI: 10.14456/ITJEMAST.2022.62

# 1 Introduction

Data, information, and knowledge are the main element on which countries are now based, as it is one of the most prominent targeted and contemporary administrative methods to adapt to the requirements and changes of the current time, as knowledge is the most important element in creating wealth and achieving excellence and creativity in the light of the intellectual data that has escalated in its framework. Many intellectual terms such as globalization, privatization, the information and communication revolution, and the expansion of relations between different human societies, as knowledge management and its extraction are among the main requirements for any process or activity in educational institutions and universities, whether directly or indirectly, as knowledge represents the basic building block of organizational processes And the actual driver of many administrative activities in all institutions, with different goals and orientations (Hussain and Al-Rasheed, 2019). Despite the importance of knowledge management in various fields, especially the educational field, previous studies confirm the weakness of knowledge management processes and the lack of the necessary ingredients for knowledge management and utilization in Saudi universities, including the study of Hussein et al (2015), the study of Banga and Saad (2019), and the study of Sheikh (2019).

Lack of government support for the use of new technologies, lack of awareness of knowledge, and lack of leadership support, are among the main challenges of knowledge management in public sector organizations in Saudi Arabia. Knowledge management strategies have a very significant positive impact on improving citizen relations (Algahtani, 2019).

Through the researcher's briefing, it is found that many administrative leaders are not aware of the importance of knowledge management processes in general, in addition to the lack of awareness of human resources leaders of their importance and the importance of activating them in institutions in particular.

These reasons are among the most important factors that lead to a lack of investments in them, as the investor requires the presence of several attractive factors, the most important of which is the strength of the organization and its competitive advantage, in which Saudi universities suffer from weakness, and because of this, finding innovative and effective methods to improve the performance of human resources has become extremely important. Accordingly, the study problem emerged that revolves around the following main question:

What are the ingredients for the success of the application of knowledge management in supporting investment in Saudi universities according to the Kingdom's vision 2030?

# 2 Methodology

According to the nature of the current study and to achieve its objectives, the descriptive survey approach was adopted, in addition to preparing a questionnaire tool that achieves the objectives of the study and answers its questions. Content analysis was used by analyzing all that was written about knowledge management and investment, in addition to reviewing global models in international universities in this overall.

## 2.1 Study Community

The study population was initially chosen, represented in the investment offices in Saudi universities. It was limited to male and female faculty members and leaders working in investment departments in Saudi government universities with different scientific expertise and varying levels.

## 2.2 Study Sample

The current study included two independent samples, which are as follows:

First: The study sample is in the Delphi method

The researcher has chosen an intentional sample of experts and specialists in the field of knowledge management and investment working in some Saudi universities, 16 universities and the Saudi Information Technology Company. The second is from Delphi, and the study sample can be described in Table 1, and was diverse in terms of academic degree, university, years of experience and specialization.

**Table 1: Descriptive of the data sample.**

Adjective	Description	Number	Total
Degree	Mr.	6	16
	Co-professor	4	
	Assistant Professor	2	
	Other	4	
Experience	less than 5 years	5	16
	From 6 to 10 years	5	
	More than 10 years	6	
University	King Abdul-Aziz	12	16
	Jeddah	1	
	Tabuk	1	
	Princess Nora	1	
	Shaqra	1	
Specialization	information Science	4	16
	Education	4	
	Administration and Economics	2	
	Industrial Engineering - Investment Supervisor	1	
	investment experts	4	
	Rights	1	

## 2.3 Second: The Sample of the Field Study

A sample of leaders and workers in investment departments in some Saudi universities was selected, and the sample size was 54 participants. The study sample represented 26 Saudi universities, in addition to one of the Saudi companies that specialized in investment.

- *Study sample in terms of years of experience:*

The study sample came in terms of years of experience as follows:

It is clear that the study sample in terms of years of experience was diverse, as the sample size of the category of fewer than 5 years amounted to about 37% of the total sample, and the proportion of the category of 6 to 10 years reached about (18.5%) of the total sample. The category of more than 10 years is about (44.5%) of the total sample.

- Study sample in terms of degree (or job) variable:

The study sample came in terms of the degree variable (or job) as follows:

It is clear that the study sample was diverse in terms of academic degree, as the category of professor reached (12.9%), the category of assistant professor reached (18.5%), the category of associate professor reached (12.9%), the category of lecturer (3.7%), and the category of director of management (12.9%), the category of financial and administrative advisor reached (3.7%), and the category of administrative employee reached (35.1%).

### 3 Discussion and Analysis

The ingredients for the success of knowledge management application in supporting investment in Saudi universities according to the vision of the Kingdom of Saudi Arabia 2030.

From the experts' responses about the ingredients for the success of the application of knowledge management in supporting investment in Saudi universities according to the vision of the Kingdom of Saudi Arabia 2030, the results are given.

#### 3.1 The First Dimension: the Investment of Intellectual Capital

The results of the experts' responses in the second round of Delphi came about the first dimension: intellectual capital investment, as shown in Table 2.

**Table 2:** investment of intellectual capital

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	A communication system that supports the transfer and sharing of tacit knowledge.	15	93.75%	1	6.25%
2	Existence of a system to develop benefit from the participation of human energies expertise in improving strategic performance.	15	93.75%	1	6.25%
3	Preserving expert human energies.	16	100%	0	0%
4	Attracting the best human elements to work at the university.	16	100%	0	0%
5	Stimulating the human elements.	16	100%	0	0%

Table 2 confirms the experts' agreement on the importance of investing in human capital as one of the components of using knowledge management to support investment in universities. This may be due to the fact that experienced and qualified human resources are considered the cornerstone for launching investment in universities. On the shoulders of these elements are knowledge management processes, Human resources are considered one of the most important and most valuable resources owned by universities. It also develops employees, students and lifelong learners who are able and willing to be innovative and entrepreneurial.

#### 3.2 The Second Dimension: Supporting Innovation

The results of the experts' responses in the second round of Delphi came about the second dimension: innovation support, see Table 3.

**Table 3: Supporting innovation**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Creating a base of knowledge experiences that support innovation.	16	100%	0	0%
2	An innovation path for new products that meet customer needs.	16	100%	0	0%
3	Encourage new innovations.	16	100%	0	0%
4	Promote intellectual property rights.	15	93.75%	1	6.25%
5	Promote exchange of ideas and experiences among employees.	16	100%	0	0%
6	Develop systems and regulations supportive of innovation and update them periodically.	16	100%	0	0%
7	Experimenting with new ideas.	16	100%	0	0%
8	Establishing partnerships and competitions for innovative projects.	15	93.75%	1	6.25%

These results indicate that innovation is a major component of investment in universities, where innovation is the engine of investment in universities, and innovation depends mainly on the university's ability to manage knowledge, give a degree of freedom to distinguished workers, and provide a suitable environment for the emergence of creativity and innovation, where innovation contributes In the emergence of ideas, products and services that bring a lot of returns to universities. This is supported by the reality of the experiences of foreign universities, where innovation is an essential part of the investment philosophy of these universities. For example, two of the three priority focus areas at the University of California are concerned with innovation by stimulating the research and innovation environment and structuring the unified communications system to support innovation and entrepreneurship in a way effective. The University of Birmingham's goal is to accelerate the spread and investment of knowledge and innovation.

### 3.3 The Third Dimension: Developing the Quality of Services It Provides to Support Companies and Institutions

The results of the experts' responses in the second round of Delphi came about the third dimension: developing the quality of services they provide to support companies and institutions, as shown in Table 4.

**Table 4: Developing the quality of services**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Adapting and using technical developments in the provision of services.	15	93.75%	1	6.25%
2	Bridging the gap between the business environment and the academic environment.	16	100%	0	0%
3	Improving the services available.	16	100%	0	0%
4	Providing accurate services to specialized companies.	16	100%	0	0%
5	Providing consulting services based on university knowledge.	16	100%	0	0%
6	Diversifying the services provided by the university according to environmental conditions.	16	100%	0	0%
7	Partnership in projects with companies.	16	100%	0	0%
8	Detailing services directed to specific parties based on needs.	16	100%	0	0%

Table 4 confirms the experts' approval of the paragraphs of this dimension that developing the quality of services they provide to support companies and institutions, as this contributes to linking and strengthening the relationship between the work of universities and the needs of the production sector by exceeding the expectations of productive institutions and contributing to solving the problems they face, and developing assistive technologies Providing the necessary consultations to develop the performance, products and services of productive institutions, and strengthening the partnership that contributes to improving universities' understanding of the needs of these institutions, which will be positively reflected on both parties.

### 3.4 Fourth Dimension: Improving Financial Performance

The results of the experts' responses in the second round of Delphi came about the fourth dimension: improving financial performance, see Table 5.

**Table 5: Improving Financial Performance**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Reducing the financial cost of the overall performance of the university.	16	100%	0	0%
2	Employing financial performance measures strategies.	16	100%	0	0%
3	Cost-benefit assessment of university activities.	16	100%	0	0%
4	Improving financial resource management processes.	16	100%	0	0%
5	Enhancing self-financing resources.	16	100%	0	0%
6	Apply the concepts of financial governance.	15	93.75%	1	6.25%

Table 5 confirms the significant role of financial performance, whether in knowledge management processes, or in directing knowledge capabilities to enhance investment in universities, and if the goal of investing in universities is to improve financial resources, and improve the processes of directing financial resources for research and academic activities, the beginning of these activities is through owning Adequate financial resources.

### 3.5 Fifth Dimension: Investment Planning:

The results of the experts' responses in the second round of Delphi came about the fifth dimension: investment planning, as shown in Table 6.

**Table 6: Investment Planning**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Improving the utilization of university facilities and infrastructure.	16	100%	0	0%
2	Developing the university's vision and mission to support investment.	16	100%	0	0%
3	Creating a supportive organizational culture for investment.	16	100%	0	0%
4	Diversification of investment opportunities.	16	100%	0	0%
5	Investment asset development.	16	100%	0	0%
6	Establishing investment partnerships with parties outside the university.	16	100%	0	0%
7	Presenting the university itself to government sectors as a house of expertise and an investment partner in projects.	16	100%	0	0%

Table 6 confirms the experts' approval of the fifth dimension paragraphs on the necessity of having a clear policy for the university related to investment through good planning of investment

operations, and it is necessary that the investment plan focuses on supporting the culture of investment, diversifying opportunities, partnerships, and improving the university's reputation as an investment partner. This trend confirms the experiences of international universities that start investing through a clear investment plan. The following figure illustrates this result:

### 3.6 Sixth Dimension: Making Investment Decisions

The results of the experts' responses in the second round of Delphi came about the sixth dimension: making investment decisions, as shown in Table 7.

**Table 7: Making Investment Decisions process**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Establishing a department or department for investment research and development.	16	100%	0	0%
2	Developing an information system that supports decision-making.	16	100%	0	0%
3	Developing systems for analyzing the opinions of the beneficiaries of the university's services.	16	100%	0	0%
4	Providing an information base for investment, opportunities and real problems.	15	93.75%	1	6.25%
5	Establishing university companies.	16	100%	0	0%
6	Participation in joint stock companies.	16	100%	0	0%
7	Marketing decision support.	16	100%	0	0%
8	Linking investment decisions to opportunities in the external environment.	16	100%	0	0%

It is clear from Table 7 that the university's investment decision-making is related to its investment plan, resources and knowledge capabilities. Therefore, the experts explained that the university's ability to make a good investment decision is expected to pay attention to investment research operations that are carried out through a specialized center, rely on a strong information system, and develop university companies. And linking the investment decision to the opportunities available in the external environment.

### 3.7 Seventh Dimension: Risk Management

The results of the experts' responses came in the second round of Delphi on the seventh dimension: risk management, as shown in Table 8.

**Table 8: Risk Management**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Develop a strategic investment plan.	15	93.75%	1	6.25%
2	Establish clear investment policies and regulations.	16	100%	0	0%
3	Adaptation to continuous changes.	16	100%	0	0%
4	Prepare for the sudden challenges and problems of the external environment.	16	100%	0	0%
5	University risk management planning.	16	100%	0	0%
6	Improving the university's organizational performance.	16	100%	0	0%
7	Planning for financial sustainability.	16	100%	0	0%
8	Achieving sustainable balanced performance.	16	100%	0	0%

The experts in Table 8 emphasized the importance of risk management in investing in universities, as the process of risk management is necessary for university investment to avoid any challenges or problems that might affect its mission and research and academic capabilities. Therefore, experts stress the need for a clear risk management plan, and regulations a clear policy for investment, attention to preparing for the challenges and problems that may face investment in universities, attention to financial sustainability, and achieving balanced and sustainable performance.

### 3.8 Eighth Dimension: Building Competitive Advantage

The results of the experts' responses in the second round of Delphi came about the eighth dimension: building competitive advantage, as shown in Table 9.

**Table 9: Building Competitive Advantage:**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Achieving a competitive advantage based on knowledge.	16	100%	0	0%
2	Developing the organizational structure to support the achievement of competitive advantage.	16	100%	0	0%
3	Benefit from the results of benchmarking comparisons with advanced universities.	16	100%	0	0%
4	Planning to expand service delivery.	16	100%	0	0%
5	Support efforts to obtain patents.	16	100%	0	0%

Table 9 reflects the importance of employing university knowledge in achieving competitive advantages to support investment in the university, by relying on knowledge, developing an appropriate organizational structure, paying attention to reference comparisons with advanced universities, expanding the scope of service provision, and paying attention to patent registration. In this context, the University of Oxford emphasizes enhancing the innovation capacity, productivity and competitiveness of the business in which the members of the university participate, thus contributing to the promotion of investment.

### 3.9 The Ninth Dimension: Partnership Support

The results of the experts' responses came in the second round of Delphi on the ninth dimension: Partnership support, as shown in Table 10.

**Table 10: Partnership Support.**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Concluding local partnerships in the light of the university's capabilities.	16	100%	0	0%
2	Strengthening cooperation with productive institutions.	16	100%	0	0%
3	Enhancing the university's ability to forge global partnerships.	16	100%	0	0%
4	Maximizing the benefit of university partnerships.	16	100%	0	0%
5	Linking partnerships to the university's strategy.	16	100%	0	0%



Through Table 10, experts confirm that partnership is a key factor in promoting investment, as the partnership contributes to the marketing of knowledge owned by the university and contributes to its employment in activities that serve companies and various productive sectors.

### 3.10 The Tenth Dimension: Entrepreneurship

The results of the experts' responses in the second round of Delphi came about the tenth dimension: entrepreneurship, as shown in Table 11.

**Table 11: Entrepreneurship**

S	Paragraph	Agree		Not agree	
		Number	percent	Number	percent
1	Encouraging an entrepreneurial culture.	16	100%	0	0%
2	Take advantage of the pioneering ideas of employees.	16	100%	0	0%
3	Providing new investment opportunities.	15	93.75%	1	6.25%
4	Developing the capabilities of graduates in line with the requirements of the labor market.	16	100%	0	0%
5	Supporting commercial projects.	16	100%	0	0%
6	Develop entrepreneurial ideas and support their implementation.	16	100%	0	0%
7	Transferring the results of studies to commercial and industrial projects.	16	100%	0	0%
8	Supporting opportunities to implement outstanding ideas.	16	100%	0	0%

Through the results of Table 11, entrepreneurship is one of the most important modern trends in universities. Entrepreneurship is concerned with enhancing the university's opportunities to engage in investment. Experts have stressed the need for the university to work to encourage investment culture, provide investment opportunities through entrepreneurship, and work to the outputs of the university in the labor market, and interest in integrating the results of the knowledge owned by the university in industrial and commercial projects and benefiting from distinctive ideas.

## 4 Conclusion

By analyzing the opinions of experts about the ingredients for the success of the application of knowledge management in supporting investment in Saudi universities in accordance with the vision of the Kingdom of Saudi Arabia 2030, the study reached important results. KSA should pay attention to intellectual capital by benefiting from the tacit knowledge of employees, and the existence of a strategy that allows investing all human energies in the university, and preserves expert resources, in addition to the importance of attracting distinguished human elements and motivating them to survive.

KSA should focus on efforts to support innovation in Saudi universities through the formation of knowledge experiences that support innovation, emphasizing the provision of products that meet customer expectations, encouraging and experimenting with new ideas, improving the processes of sharing and exchanging knowledge among employees, developing systems that support innovation and strengthening partnerships.

KSA should be interested in developing services that meet the needs of various Saudi companies and institutions by enhancing the benefit from technical developments, strengthening the relationship between universities and business institutions, improving available services, developing accurate services for specialized companies, and diversifying services to meet the needs of different authorities.

## 5 Availability of Data and Material

Data can be made available by contacting the corresponding authors.

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