Research Article

Providing a Model for Implementing Knowledge Management in Supply Chain Companies (Case Study: Sazeh Gostar Saipa Company)

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Abstract: "In the current environment where markets are becoming more competitive and the rate of creativity and innovation is increasing every moment, it is vital for organizations to be aware of their knowledge and able to manage effectively this knowledge".[1] At Sazeh Gostar Saipa Company, due to the lack of collection and keeping experience in Tiba project for making the parts of this automobile by Portuguese Company Simolds, and the efforts made to improve the molds and remove their detects, the need for implementing knowledge management was formed. By providing the knowledge management model for Sazeh Gostar Saipa Company, this study attempts to present main knowledge factors in this company and by examining the required knowledge areas, the company presents the methods of developing, recording and exploiting knowledge in these areas using supervisor ideas and collecting the opinions of managers and main personnel of the company.

Keywords: Knowledge Management, Knowledge Strategy, Information Technology

1. Introduction

Learning is one of the ways of creating a knowledge-based organization. Many consultants believe that knowledge-based organizations are almost similar to the learning organization in organizational learning.

Organizational learning is the process of acquiring knowledge and developing skills that enable us to have a better and more comprehensive understating of our work processes and the environment.

Knowledge management is the process of discovering, acquiring, organizing, processing, summarizing, maintaining, developing and applying the obtainable knowledge in the organization by the right people at the right time and it is performed through making a relation between human resources and information technology and creating an appropriate organizational cultural for achieving the goals of the organization. When the knowledge is available to all the people, it will create more knowledge in the organization. [5].

As it was mentioned, the key elements of knowledge management are human resources, information technology, culture, and organizational processes. The root of knowledge management is obtained from two fundamental evolutions; "technology development" and "downsizing". In the 1980s, the downsizing of companies, which was an appropriate strategy to reduce high costs and increase profits, led to a loss of the organization's applied and used knowledge, because the employees by leaving the organization took the knowledge they had learned over the years and during the work. Over time, organizations adopted a knowledge management strategy to keep their valuable information and experiences and to maintain knowledgeable employees to ensure the survival of the company.

On the other hand, the development of technology and the possibility of access to shared knowledge and information throughout the organization and around the world are the guiding factors of knowledge management. .[5]

In general, it can be said that the knowledge system management is a system that facilitates the knowledge and knowledge capital management and by integrating related activities, objectifies knowledge management of the organization. Such a system is a combination of individuals, processes, and technologies that guide the organization toward a knowledge-based organization by making a balance between the relevant factors.[1]

Knowledge management systems integrate knowledge functions with knowledge management basics to handle knowledge affairs (both explicit and tacit knowledge) across the organization. Knowledge management system presents a set of integrated services for using knowledge management tools in a network of knowledgeable people. The final goal of knowledge management system is to support dynamic learning of organizational learning and increase organizational productivity.[2]

The value of knowledge capital is obtained only through the application and use of knowledge to develop the goals of the organization. Therefore, it is necessary to create a knowledge-based organization.

[1] Dr. Mohsen Rasoulian

Generally, an organization that can implement and improve continuously all knowledge management processes is a knowledge-based organization.

Today, big changes of economic transformation such as enhancement of competition, speed of technology evolution, increase of diversified customers, growth of the Internet and other factors will lead the organization to the dynamic management. Many organizations have turned to knowledge-based companies where knowledge management is essential.

However, it is necessary to design and implement a native model of knowledge management, technology and innovation that is appropriate to the specific circumstances and potentials to create and improve the structure of organizational systems.

Assuming that knowledge management is the basis of dynamic skill acquisition and competitiveness, six key structural factors are needed to implement effectively knowledge management: knowledge resources, knowledge management systems, organizational knowledge, and innovation management, intellectual capital and organizational and organizational settings. Making such a structure requires adaptive study and designs a model that is appropriate to the local conditions and characteristics in knowledge-based enterprise development programs. [3]

After oil and gas industries, automotive industry is the most important industry in the country. Saipa Automotive Group, with about 45.5% of the domestic market share, is one of the major automakers in the country, and Sazeh Gostar as a supplier of non-motor parts needed by Saipa Group Automakers can be said that it plays an important role in its supply chain.

At Sazeh Gostar Saipa Company, due to the lack of collection and keeping the obtained experience in the Tiba project for making the auto parts mold by the Portuguese Company Simolds and the efforts made to improve the molds and their detects , the executive management with a desire to have a dynamic company and holding the organizational excellence and believing that the largest capital of the organization is its human resources, they put the implementation of a software for the knowledge management to record the experience of Tiba project in their work order in the celebration of the beginning of 2008. However, since the scope of work was defined by the executive management of the organization, no action was taken to review the various models and to provide a model consistent with all the demands of the organization by the respective team, and this was delayed by changing the executive management.

In this study, the current needs and status of the company for knowledge management were collected through sending and receiving a questionnaire from the main personnel of the company.

By studying the available models and guidance of the supervisor and needs of the company, a suitable model was chosen for the conditions of the organization. .[4]

1.1. Case Study Introduction

Sazeh Gostar Company was established on July 1, 1985 under No. 55673. In this year, according to the contract with Japanese Nissan Company for the production of Nissan, Petrol and Pick up, Iran Industrial Design Management Company (a company affiliated with the Iranian Industrial Development and Renovation Organization) is responsible for casting and forging activities of the mentioned project.

Due to the change in the scope of company, this company transferred the activities the of Nissan contract to the Sazeh Gostar Saipa Engineering and Consulting Company in October, 1987.

The new era of Sazeh Gostar Saipa's activities as the first engineering and designing company for providing the main automotive parts in the country began in 1994. Nowadays, it has more than 500 machine companies in its supply chain. Human resources of Sazeh Gostar are consisted of 650 individuals, of which more than 75% have university education at different levels and areas.

1.2. The Current Status of Knowledge Management in the Organization

Systems and approaches are now widely dispersed in the management, development, and exploitation of knowledge within the organization, which are mainly information systems.

Table 1. Main Committees of Sazeh Gostar which are related to the Concept of Knowledge Management and Implemented in the Organization:

Team	Team members/organizational level	Responsibility
Cultural committee	Management	Studying cultural and welfare issues
Educational committee	Management/ presidency	Determining educational policy
Educational needs assessment team	Presidency/ expertise	Determining educational needs assessment
Continuous improvement committee	Management/ presidency/ experts	Continuous improvement- review of recommendations
Secretaries council of suggestions systems	Presidency/ expertise	Informing big decisions and continuous improvement of the system
Scientific and research partnerships committee	Management	Policy of scientific and research centers
High-level committee of suggestions	Senior management/ assistants/ management	Big policy in the system of suggestions

1.3. The Problems of the Organization in not Using Knowledge Management

By studying Sazeh Gostar Company strategic plans, it seems necessary to have a tangible knowledge management system. The problems of the company due to the lack of knowledge management system are:

- Low reusability of solutions
- Lack of availability of Best Practice to all and random access; successful methods in operating project.
- Non-regulation of information flow
- Centralization of information flow; the machine makers in the supply group only communicate with each other through Sazeh Gostar and do not have direct access to the exchange of knowledge and information.
- Rework that is resulting from lack of knowledge recording, lack of identification and knowing people with the required proficiency and etc. by the organization.

1.4. Organizational Strategic Plans for Knowledge Management

In the growth and learning perspective of the zero-level strategy map, development of information management/knowledge management systems for the success of the strategy is considered. Furthermore, in the strategic plan of level 1, the development of information management systems is considered for achieving knowledge management in order to get ready-to-use information capital.

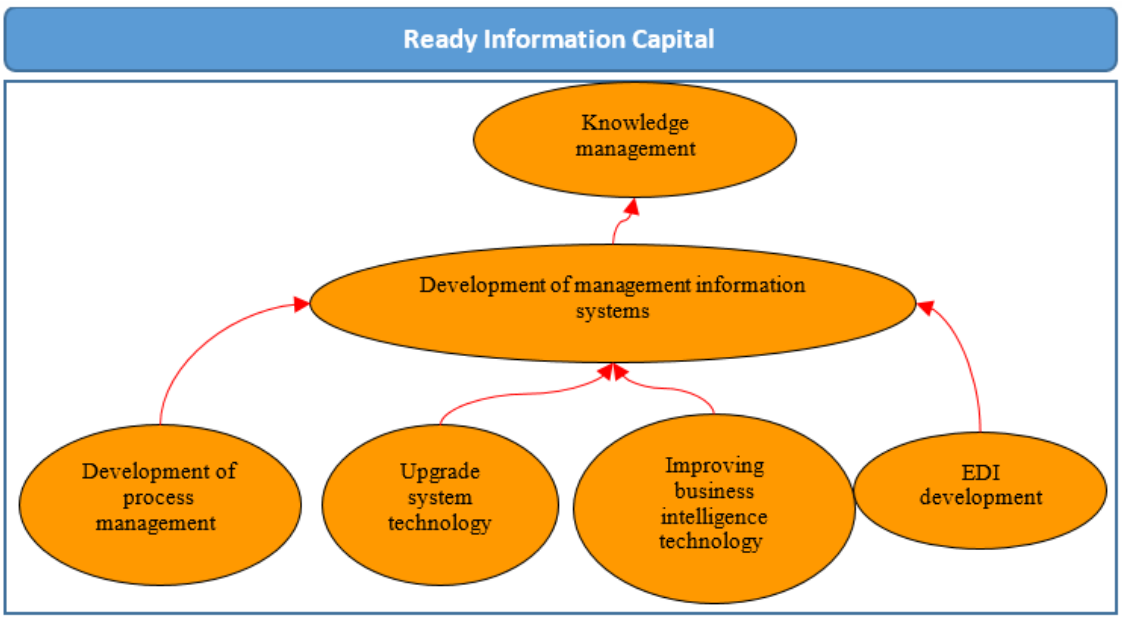

Figure 1: Outline of Learning and Education in Level One Strategy Map

Table 2. The Results of Key Personnel Surveys on the Status of Knowledge Management of the Organization

Row	Question	Answer
1	How much do you know about the knowledge of your colleagues?	Very low 0%, low 13%, average 67.7%, high 19.3%, very high 0%
2	How much do you communicate with personnel of other parts of the organization?	Very low 9.6%, low .45%, average 38.7%, high 3.2%, very high 3.2%
3	To what extent do you know who has the best answer to your question?	Very low 9.8%, low 13%, average 35.4%, high 38.6 %, very high 3.2%
4	To what extent are you interested in doing your daily work as a team?	Very low 6.4%, low 13%, average 41.9%, high 35.5%, very high 3.2%
5	How much do you do your daily work based on your personal experience?	Very low 0%, low 13%, average 13%, high 61%, very high 13%
6	How much do you increase your knowledge and experience by your activity in the organization?	Very low 9.6%, low 16.12%, average 35.4%, high 61.12%, very high 0%
7	To what extent do you feel that your experience can be useful in promoting your organization?	Very low 0%, low 3,2%, average 22.5%, high 64.7%, very high 9.6%very low 3.2%, low 9.6%, average 16.2%, high29%, very high 42%
8	How much is the effectiveness of having a coherent knowledge bank of the organization personnel knowledge in improving the organization's business process?	Very low 3.2%, low 9.6%, average 16.2%, high 29%, very high 42%
9	How much do you know about the produced knowledge in other parts of the organization?	Very low 9.6%, low 51.6%, average 38.8%, high 0%, very high 0%
10	What is the value of the organization to the obtained knowledge during your work processes?	Very low 32.2%, low 38.8%, average 25.8%, high 3.2%, very high 0%
11	How much can you communicate with the organization's expert to find the answers of your question?	Very low 6.4%, low 6.2%, average 48.4%, high 25.8%, very high 3.2%
12	How much is your organization's information about its knowledge weaknesses in its specialized fields?	Very low 9.6%, low 48.6%, average 35.4%, high 6.4%, very high 0%

In the strategic document of the company information technology management, one of the goals and strategies of information technology in Sazeh Gostar Saipa Company is to develop knowledge management system that one of the strategic actions of this goal is to establish organizational portal and create knowledge banks.

1.5. Steps of Project Implementation

In this study, the current needs and status of the company for knowledge management were collected by sending and receiving a questionnaire from the main personnel of the company.

By studying the available models and using supervisor guidance and also the needs of the company, a suitable model the conditions of the organization was selected.

Identification and explanation of the components of this model was performed by sending and receiving questionnaires (in two stages, totally 10 questionnaires) that were collected from the managers and stakeholders of the company. Finally, the results of these questionnaires were extracted by statistical analysis.

1.6. Explaining the Needs of the Company in the Field of Knowledge Management

The need assessment of the company in the field of knowledge management based on the opinion of the personnel and heads of the company is as follows:

- Transforming organization problems into knowledge management
- Using operational and knowledge-based tools to solve organizational problems
- Formulating information or make it explicit in order to create a common knowledge base and prevent information loss
- Knowledge valuation and its impact on solving organizational problems

• Institutionalizing explicit knowledge developed by experts in knowledge users and its adapting to the daily activities of the organization
• Criteria for measuring success
• Using an incentive system that allocates financial rewards to encourage students
• Possibility of determining accreditation policy by distinguishing the type of knowledge content in the system and eliminating expired knowledge

1.7. Choosing Model

According the studies and surveys, it was concluded that the complement implementation of the existing models does not comply with the current conditions of the company, and instead the models were simplified and the commonality of the models was chosen as the basis of the project that are summarized in the following table:

Table 3. Comparison of Current Knowledge Management Models[1]

knowledge management steps / Knowledge management patterns	Determining knowledge goals	Identification of knowledge	Acquiring knowledge	Development of knowledge	Keeping knowledge	Sharing and using knowledge	Knowledge assessment
7C		*	*	*		*	
Marc McElroie		*		*			
Hessig		*		*	*	*	
Pac-Man		*	*	*	*	*	
Nonaka/Takeuchi		*		*	*		
Bokowitz and Williams		*	*		*	*	*
Prabast and Romhardet	*	*	*	*	*	*	*

Therefore, the extracted subscriptions are as follows:
□ Identification of knowledge
□ Development and acquisition of knowledge
□ Registration and exploitation of knowledge
□ Necessity of knowledge exploitation units to use knowledge

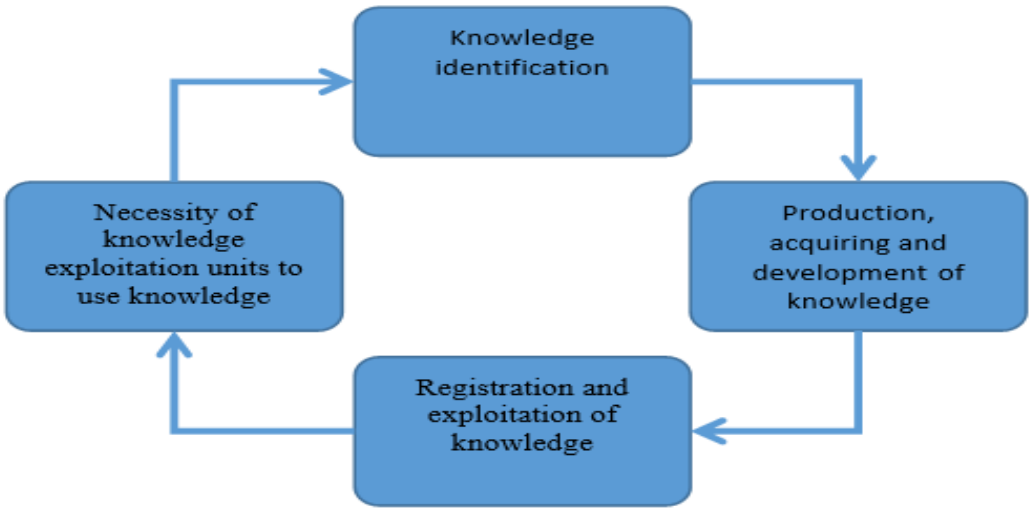

Figure 2: Knowledge Management Model of Sazeh Gostar Saipa Company

This model is validated by a survey of company executives.

1.8. Knowledge Identification

Managers were asked to state the importance of each of the areas of knowledge for Sazeh Gostar Saipa Company. According to the results of the data description, it is seen from the perspective of the managers of the company that supply chain management knowledge with the average of 4.79 is the most important and marketing knowledge with the average of 2.95 is the least important among the knowledge domain.

Table 4. Indicators of Tendency to the Center and dispersion of the Importance of Knowledge Domains

Knowledge domains	Number	Mean	Standard deviation
Design knowledge	19	4.26	0.872
Manufacturing knowledge	19	4.37	0.895
IT knowledge	19	4.16	0.958
Supply chain management knowledge	19	4.79	0.419
Knowledge of human resources management	19	3.84	1.015
Knowledge of financial resources management	19	4	0.816
Knowledge of quality control and assurance	18	3.78	1.060
Marketing knowledge	19	2.95	1.129

In this question, the company's managers were asked to express the importance of each method and mechanism in the development and acquisition of marketing knowledge, the results of the data description showed that with regard to the managers' opinions, among the mentioned methods, modeling of successful organizations and training all the personnel and managers have the highest importance and creation/development of marketing unit in the company's organizational chart ha the least important.

1.9. Registration and exploitation of Knowledge

At this stage, the strategies of registering and exploiting knowledge for each field of knowledge were determined through a survey of 15 individuals of the organization managers.

Table 5. The Survey Results of Knowledge Recording and Exploitation Strategies

The most important areas of knowledge based on their priority	The priority of knowledge recording and exploitation strategies			
	Creating and developing integrated knowledge management software	Having a dedicated portal to separate areas of knowledge	Manual method (Zonken and File)	Transfer of knowledge through human resources
Knowledge of supply chain management	4	4	4	3
Manufacturing knowledge	5	4	4	2
Design knowledge	4	4	2	5
IT knowledge	5	3	4	3

1.9. Forcing Operating (Exploiting) Units to Use Knowledge:

At this stage, the way of forcing operating (exploiting) units to use knowledge for using it in different fields of knowledge was determined through a survey of 11 managers of the organization and managers of manufacturer companies and customers.

Table 6. The Survey Results of Forcing Exploiting Units to Use Knowledge

The most important areas of knowledge based on their priority	Forcing exploiting units to use knowledge		
	Optional	Preferential	Complete
Knowledge of supply chain management		4	7
Manufacturing knowledge		2	9
Design knowledge		1	10
IT knowledge	2	5	4

2. Results and Findings

2.1. Inferential Statistics

2.1.1. Prioritizing of the Importance of Knowledge Areas from the Perspective of Managers

Table 7. The Significance of Friedman Test in Examining the Importance of Knowledge Fields from the Perspective of Managers

Statistical indicators	Calculated values
Number	18
x^2	46.411
Freedom degree	7
Significance level	0.000

With regard to the significance level of the Table which is equal to 0.000 and its comparison with the permissible error rate of 0.05 with 95% confidence, the H_0 hypothesis is rejected, so it can be said that none of the fields of knowledge have the same ranking

Table 8. The Significance of Friedman Test in Examining the Importance of Knowledge Fields from the Perspective of Managers

Areas of knowledge	Average of rating (weighting)
Knowledge of supply chain management	6.31
Manufacturing knowledge	5.56
Design knowledge	4.89
IT knowledge	4.72
Knowledge of financial resources management	4.72
Knowledge of human resources management	4
Knowledge of quality control and assurance	3.92
Marketing knowledge	1.89

According to the results of data analysis, it was found that among the fields of knowledge, knowledge of supply chain management has the highest importance and marketing knowledge has the lowest importance.

2.2.2. Methods and Mechanisms of Knowledge Acquisition and Development

1. Prioritizng the importance of development methods and acquiring design knowledge from the perspective of managers: according to the given level of significance which is 0.20, and by comparing it to the permissible error rate of 0.05 with 95% confidence level, the H_0 hypothesis is rejected, so it can be said that from the perspective of managers, development methods and acquiring design knowledge do not have the equal importance.

Table 9. The Significance of Friedman Test in Examining the Importance of Development Methods and Acquiring Design Knowledge from the Perspective of Managers

Mechanism	Average of rating (weighting)

Attraction of highly skilled staff	3.62
Research and development	3.44
Take a certificate with the support of abroad reputable companies	3.09
Involve company designers in advanced training courses	2.72
Buying design packages by exploitation method	2.12

According to the results of data analysis, from the perspective 0f managers, it was found that among the methods of development and acquiring design knowledge, attracting highly specialized employees had the highest importance and buying design packages with the exploitation method had the lowest importance.

2. Prioritization of the importance of development methods and acquisition of manufacturing knowledge from the perspective of managers: with regard to the significance level of the above Table which is 0.037 and its comparison with permissible error rate of 0.05 with a 95% confidence, the H_0 hypothesis is rejected, so it can be said that from the perspective of the company managers, development methods and acquisition of manufacturing knowledge are not equally important.

Table 10: The significance of Friedman Test in Examining the Importance of Development Methods and Acquiring Manufacturing Knowledge from the Perspective of Managers

Mechanisms	Average rating (weighting)
Attracting highly skilled staff	5.37
Involve designers in advanced training courses	4.5
Research and Development	3.62
Take a certificate with the support of reputable companies abroad	3.12
Buy design packages with exploitation method	2.25
Experience registration and management (using the documentation of the company's previous projects)	2.12

According to the results of data analysis, from the perspective of company managers, among the methods of development and acquisition of construction knowledge, attracting employees with high expertise has the highest rank, and registration and management of experiences (using documents of previous company projects) have the lowest rank.

3- Prioritizing the importance of development methods and acquiring knowledge of information technology from the perspective of managers: Considering the significant level which is equal to 0.004 and comparing it with the permissible error rate of 0.05 with 95% confidence, the H_0 theory is rejected, that is to say, from the perspective of company managers, methods of developing and acquiring knowledge of information technology are not equally important.

Table 11: The Significance of Friedman Test in Examining the Importance of Development Methods and Acquiring Information Technology Knowledge from the Perspective of Managers

Mechanisms	Average rating (weighting)
Hiring a specialist (Master of Science)	4.09
Pay attention to acquiring the necessary knowledge to exploit the purchased technologies (software & hardware) when buying software and hardware	4.03
Training of all personnel and managers	3.84
Gain knowledge through the experiences of successful organizations	3.69
Purchase of high-level managerial and specialized knowledge from knowledge-producing organizations / companies	3.34
transfer of IT to external companies (outsourcing) in order to meet the need in the field of acquiring specialized knowledge and high level of IT	2

According to the results of the data analysis, it is observed from the viewpoint of the company managers, among the methods of development and acquisition of information technology knowledge, expert recruitment has the

highest importance and the registration and transfer of IT to external companies (outsourcing) in order to meet the need in the field of acquiring specialized knowledge and high level of IT have the lowest importance.

4- Prioritizing the importance of development methods and acquiring knowledge of supply chain management from the perspective of managers: Considering the significant level which is equal to 0.772 and comparing it with the permissible error rate of 0.05 with 95% confidence, the H_0 theory is accepted, that is to say, from the perspective of company managers, methods of developing and acquiring knowledge of supply chain management are almost equally important.

Table 12: Center-oriented Indicators and Distribution Rate of Importance of Methods in Development and Acquisition of Supply Chain Management Knowledge

Methods and mechanisms	Number	Mean	Standard deviation
Experimental modeling of successful organizations	18	4/28	0/669
Implementation of one of the world-class standards of supply chain management	17	4.29	0.686
Identifying, explaining and modifying the company's native and empirical knowledge	18	4.22	0.732
Integrated thinking with view of key organizations in the supply and sales chain of the company	17	4.12	0.600

5- Prioritizing the importance of the methods of development and acquisition of human resource management knowledge from managers' point of view

Considering the significant level which is equal to 0.498 and comparing it with the permissible error rate of 0.05 with 95% confidence, the H_0 theory is accepted, that is to say, from the perspective of company managers, the methods of developing and acquiring the knowledge of human resource management are of almost equal importance.

Table 13: Center-oriented Indicators and Distribution Rate of Importance of Methods in Development and Acquisition of Human Resource Management Knowledge

Methods and mechanisms	Number	Mean	Standard deviation
Development of the Human Resources Department in the Organizational Structure of the Company - To Develop Thinking About Human Resources	17	3.35	1.169
Periodic studies and use of their results in human resource management	18	3.94	0.802
Outsourcing the company's core business	17	3.18	1.237

6- Prioritization of the importance of development methods and acquiring knowledge of financial resource management from the perspective of managers: Considering the significant level of 0.040 and comparing it with the permissible error level of 0.05 with 95% confidence, the H_0 theory is not accepted, that is to say, from the perspective of company managers, the methods of developing and acquiring the knowledge of financial resources management are not of equal importance.

Table 14: Significance of the Friedman Test in Investigating the Importance of Developing and Acquiring Financial Resources Management Knowledge from Managers' Viewpoints

Mechanisms	Average rating (weighting)
Training of relevant personnel and managers	3
Using the services of consulting companies	1.5
Outsourcing of financial management and accounting	1.5

According to the results of the data analysis, it is observed that from the perspective of company managers, among the methods of developing and acquiring knowledge of financial management, training of personnel and

relevant managers is of the highest importance and outsourcing of financial management and accounting is of the least importance.

7- Prioritization of the importance of development methods and acquiring the knowledge of control and quality assurance from the perspective of managers: Considering the significant level which is equal to 0.014 and comparing it with the permissible error level of 0.05 with 95% confidence, the H_0 theory is rejected, that is to say, from the perspective of company managers, methods of development and acquisition of knowledge control and quality assurance are not of equal importance.

Table 15: Significance of Friedman Test in Examining the Importance of Development Methods and Gaining Control Knowledge and Quality assurance from the Perspective of Managers

Mechanisms	Average rating (weighting)
Establishing one of the world standard quality control systems in the company	2.31
A review of quality control processes based on internal company experiences	2.25
Outsourcing	1.44

According to the results of data analysis, it is observed that from the perspective of company managers, among the methods of development, acquiring control knowledge and quality assurance, establishment of one of the world standard quality control systems in the company has the highest rank of importance and outsourcing has the lowest rank of importance.

8- Prioritizing the importance of developing and acquiring marketing knowledge from the perspective of managers: Considering the significant level which is equal to 0.251 and comparing it with the permissible error level of 0.05 with 95% confidence, the H_0 theory is accepted, that is to say, from the point of view of company managers, the methods of developing and acquiring marketing knowledge are of equal importance.

Table 16: Center-oriented indicators and the Prevalence of the Importance of Methods in the Development and Acquisition of Marketing Knowledge

Methods and mechanisms	Number	Mean	Standard deviation
Training of all personnel and managers	15	3.60	1.183
Hire a consultant / marketer	16	3.56	1.094
Creating / developing a marketing unit in a company chart	16	3.06	1.340
Utilizing the services of organizations / consulting companies	15	3.47	1.187
Following the successful organizations	16	3.75	0.931
Customer feedback (creating feedback system and using customer feedback)	15	3.47	1.060

3. Conclusion

Today, achieving a sustainable competitive advantage is only possible if organizations move toward knowledge creation. On the other hand, focusing on knowledge has led to increasing attention to information technology as one of the most important sources of competitive advantage, which plays a very important role in the success or failure of the establishment of a knowledge management system. By presenting a conceptual framework, Tsang examines knowledge management gaps when implementing relevant systems and studies the impact of information technology on them, this means the gap between the current capabilities and the capabilities required to manage the organization's knowledge.

Implementation of knowledge management system, monitoring tools and system control, knowledge measurement system, providing appropriate collaboration and communication space and continuous updating of knowledge are among the functions of information technology.

According to the results of the data analysis, it is observed that among the knowledge domains, supply chain management knowledge has the highest importance and marketing knowledge has the lowest importance. The areas of knowledge identified as important in the model are the supply chain management knowledge, manufacturing knowledge, design knowledge, and information technology knowledge, respectively.

It can be said that from the company manager's point of view, development methods and acquiring knowledge of human resource management are almost equally important.

Also from the company manager's viewpoint, among the methods of development and acquisition of design knowledge, attracting highly specialized staff has the highest importance and purchasing design packages with the utilization method has the least importance.

From the point of view of company managers, among the methods of development and acquisition of construction knowledge, attracting highly specialized staff has the highest rank of importance and recording and managing experiences (using the documentation of previous projects of the company) has the lowest rank.

According to the results of the data analysis, it is observed from the viewpoint of the company managers, among the methods of development and acquisition of information technology knowledge, expert recruitment has the highest importance and the registration and transfer of IT to external companies (outsourcing) in order to meet the need in the field of acquiring specialized knowledge and high level of IT have the lowest importance.

Table 17: Results Extracted from the Proposed Solutions for each Stage of the Knowledge Management Model in each Field of Knowledge

The most important areas of knowledge based of their priorities	Priority of knowledge production, acquisition and development strategies	Priority of knowledge registration and exploitation strategies	Required to use for relevant units
	Research and Development		
	Attracting highly skilled staff		
	Involving designers in advanced training courses		
	Get a certification with the support of reputable companies abroad		
	Buy design packages with exploitation method		
	Training of all personnel and managers		
	Hiring a specialist (expert)		
	Pay attention to acquiring the necessary knowledge to exploit the purchased technologies (software & hardware) when buying software and hardware		
	Gain knowledge through the experiences of successful organizations		
	Purchase of high-level managerial and specialized knowledge from knowledge-producing organizations / companies		
	Empirical Modeling of Successful Organizations		
	Identify, explain and improve the company's indigenous and experimental knowledge		
	Integrated thinking with view of key organizations in the supply and sales chain of the company		
	Transfer of knowledge through human resources		
	Manual method (Classeur and file)		
	Having a dedicated portal to separate areas of knowledge		
	Creating and developing integrated knowledge management software		
		Complete	
		Preferential	
		Optional	

Supply chain management knowledge											√	√	√		√	√	√	√					
Manufacturing knowledge	√	√	√	√	√										√	√	√	√					
Design knowledge														√		√	√	√					
IT knowledge						√	√	√	√	√					√		√		√				

The mentioned model can be used for companies with the size and function of Sazeh Gostar Saipa Company.

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