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Investigating and Identifying Barriers and Organizational Limitations of Establishing Knowledge Management in Municipality) Case Study: Tehran Municipality)

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ABSTRACT

The success of organizations depends more on knowledge assets than physical assets. Knowledge management transforms the organization into a knowledge-oriented organization and thus institutionalizes the importance of knowledge in all the processes of the organization. Organizations challenge many barriers and limitations in establishing knowledge management. Identifying, prioritizing, and analyzing barriers and limitations provides the basis for providing solutions to facilitate knowledge management in the organization. Tehran Municipality, as the largest urban management complex in Iran and one of the largest in the world, by acquiring knowledge related to the limitations and barriers of establishing knowledge management, can take a simpler and faster path to establishing knowledge management. In this way, according to the organizational scale of Tehran Municipality, which has organizational levels, both line and headquarters (22 urban areas, organizations, subsidiaries, specialized vice-presidents) in its strategic and functional area, the establishment of knowledge management is very important. Therefore, this research aims to identify the barriers and organizational limitations of the establishment of knowledge management (acquisition, sharing, and application of knowledge) in Tehran municipality. This research used a mixed methodology including thematic analysis and survey method. Finally, knowledge management barriers are divided into eight sections: technological barriers, cultural barriers, managerial barriers, organizational/structural barriers, human barriers, content barriers, operational barriers, and legal barriers. ©authors

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1. Introduction

In the turbulent environmental conditions governing organizations and the intensification of competitive trends, achieving new strategic advantages and creating premium competencies is the primary condition to overtake competitors, and this is important above all, depending on the quality of the management of knowledge resources and the Social and intellectual capital of organizations. Undoubtedly, in the contemporary knowledge-based economy, knowledge is recognized as a critical strategic resource in the organization. Any change in the competitive environment provides an opportunity and destroys another option, and creates a challenge or a danger, creates a challenge and removes another threat. In general, in this environment, gaining and promoting competitive advantage is the concern of managers. Today, organizations have realized that nothing can put them in the real world as well as knowledge. They consider the sustainability of competitive advantage dependent on innovation and innovation as a consequence of using knowledge resources. Therefore, the employees of the organization, who are the owners of knowledge and the most critical asset of the organization, have been given more attention than before (Haqnia, 2022).

The success of organizations depends more on their knowledge assets than their physical assets. Knowledge is vital for the survival and competitive advantage of organizations (Lee and Lee 2022). To optimally use the knowledge capital in organizations, a new field of management called knowledge management has emerged to improve the knowledge processes and establish a link between the organization's strategy and the knowledge management strategy, by providing the right knowledge, at the proper time, to the right person to help maintain the organization's competitive advantage. Knowledge management transforms the organization into a knowledge-oriented organization and thus institutionalizes the valuable element of knowledge in all organization's processes. In particular, the importance and complexity of knowledge management increases in organizations with

cross-border activities and presence in heterogeneous global markets (Zhao et al. 2022).

In this regard, it is necessary to pay attention to the cardinal success factors of knowledge management; One of the cardinal success factors of knowledge management is linking it to other management systems, which should be one of the gears of the organization's management. Knowledge management shouldn't be designed as an island and have input and output in exchange with all possible management. Management can have synergy in the case of convergence and logical communication. Connecting the knowledge management with other management systems, especially performance evaluation systems and improving management, is considered one of the factual and efficient management supports of this system. The communication of the knowledge management with other management is proof of the correctness of this point of view that in the scheme of the application of the knowledge management, one should avoid copying and using the principle of the brigade and sketching the special regulation of the organization.

On the other hand, With the emergence of the knowledge driven economy, firms are becoming more and more aware of the fact that knowledge is a resource requiring explicit and specific management policies and practices to be processed efficiently (Otsupius, 2015). For this reason, the acquisition, development, exploitation, and correct management of knowledge is considered one of the primary responsibilities and challenges facing organizations. Knowledge-based organization, meaning the acquisition of knowledge; The monitoring of processes, procedures, policies, and executive programs with technology tools, is based on continuous learning and based on the constant improvement of organizational knowledge.

The Lack of identification of strengths and weaknesses to create a connection between different sources of knowledge and its logical and accessible flow, between organizational

resources and goals, managers, politicians, and other urban factors will cause many problems and incorrect decision-making in this field. The most essential harm the failure to identify knowledge nodes by emphasizing information integration brings to urban management is the creation of inter-generational, inter-process, and inter-program disconnection. For example, the intergenerational discontinuity of knowledge causes the disintegration of the knowledge accumulated in the city over many years to the following managers. The inter-process disconnection causes the gap and inefficiency of the emerging systems in connection with the exploitation of previous experiences it increases the probability of repeating failures and leaving previous experiences unused, causing parallelism, and waste of financial-economic and social capital.

Knowledge management in the organization is one of the management requirements, without which it would not be possible to benefit from accumulated knowledge and experience. Organizations rely on effective management and knowledge at every stage of the business cycle (Mia & Chowdhury, 2021). A knowledge management effort can fail for countless reasons, but the breakdown usually starts with a “people problem.” According to APQC’s research, the biggest barriers that hurt knowledge management implementations are awareness, time, and culture (Trees,2021). In the same way that the best practices, methods, and tools foster the success of knowledge management in organizations, barriers may also arise that prevent knowledge management from finding out its fullness (Oliva & Kotabe, 2019). Identifying, prioritizing, and analyzing existing barriers and regulations provides the basis for providing solutions to facilitate knowledge management in the organization. figure 1 shows the percentage of particular barriers to knowledge management in companies.

Tehran Municipality, as the most extensive urban management complex in Iran and one of the largest in the world by, acquiring knowledge about the limitations and barriers of establishing knowledge management, can

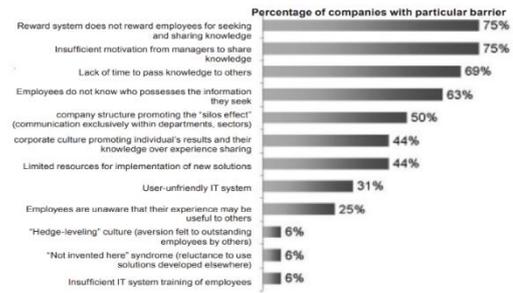


Figure 1. Barriers to knowledge management (Ujwary-Gil,2011)

take a more straightforward and faster path to establishing knowledge management. Without identifying the barriers and limitations of knowledge management deployment, the possibility of actions leading to harmful errors increases. In the absence of sufficient and efficient classified information in the context of structural and human limitations and the challenges facing the establishment of knowledge management, it will be complicated to achieve the goals of knowledge management.

Knowledge management is a multi-faceted issue that requires attention from different dimensions. For this reason, a detailed analysis of the existing barriers and limitations must be provided before any action, including the launch of the system and the like, to increase the confidence factor of future proceedings.

In this regard, along with the process of scientific development in Iran, knowledge management has found an essential place in today's organizations, as far as paragraph 16 of the policies of the entire country's administrative system, which was announced in 2009, as well as the fifth and sixth development plans. Considering that accurate identification and categorization of limitations and barriers is necessary as an essential tool for better understanding the establishment of knowledge management in organizations. Therefore, this research aims to identify the barriers and organizational limitations of the establishment of knowledge management (acquisition, sharing, and application of knowledge) in Tehran municipality. Questions of this research are:

1. What are the organizational barriers and limitations of establishing

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a knowledge management system (acquisition, sharing, and application of knowledge) in Tehran Municipality?

2. What are the weaknesses of the current situation of Tehran municipality regarding knowledge management?

2. Literature Review

Despite the many studies conducted in the field of knowledge management and its application in organizations, the implementation of knowledge management still considered a complex issue. One of the main reasons for this is that in some organizations, establishing knowledge management is considered equivalent to specifying knowledge management. However, that not all knowledge management projects succeed. Some studies report that about 84% of knowledge management projects fail (BenMoussa, 2009). Therefore, identifying knowledge management barriers can be useful in increasing the success percentage of knowledge management in organizations. According to this Naghiyan and Abedini (2016) prioritized the barriers to the implementation of knowledge management. Based on research findings, organizational, individual, technical, and technological barriers and environmental barriers have been identified as five main factors. Pereira et al. (2017) mentioned the factors inhibiting the creation of knowledge management: informal communication model from top to bottom, Lack of inter-organizational dissemination of the strategic plan of knowledge management, undefined policies of knowledge preservation, Lack of organizational culture in Lack of information and knowledge recording, Lack of communication and exchange of experiences between different operational areas. Also, Mofidian and Imamgholizadeh (2018) claimed that there are structural, behavioral, and environmental (contextual) barriers to the implementation of knowledge management in infrastructure communication in the company. Yapa (2019) mentioned the barriers to the implementation of knowledge management can classified into two categories: personal and organizational.

The personal barriers identified a Lack of enthusiasm for conducting research, a heavy workload, and considering research as a tool for promotion and organizational barriers. Weakness in recruitment and promotion plans and Lack of planning for knowledge management have mentioned. Also, the results of Oliva & Kotabe (2019) showed that organizational, staff, and environmental barriers were essential barriers to knowledge management in startups. Vahidi and Danesh (2022) investigated the barriers to knowledge management implementation in organizations divided into five categories: individual, organizational, technological, contextual, and inter-project. Al Dhanhani and Al Naqbi (2022) indicated that there are five crucial barriers to the establishment of knowledge management: the structures of effective regulations to create incentives for knowledge management, using hierarchical power against leadership to intimidate people and deny them terms of reference and management knowledge, Lack of time to interact and manage knowledge with friends who are interested in and related to the project, Lack of explanation or internal drive to share information, Lack of motivation of institutional culture and the opportunity to manage and share knowledge.

The conducted research has considered structural barriers, human resources, laws and regulations, interdepartmental coordination, and other such things as barriers to the establishment of knowledge management and Lack of systematic support for knowledge management implementation, including the Lack of financial resources and structures and organizations have counted efficient as the limitations of establishing knowledge management in organizations. Therefore, identifying and providing solutions to solve these barriers can be beneficial for the establishment of knowledge management in organizations.

3. Method

This research used a mixed methodology including thematic analysis and survey method. In this research:

- The first phase, qualitative method: using a thematic analysis method,

referring to the existing literature, tried to examine the articles that investigated the barriers to establishing knowledge management in the last 10 years (2012-2022). The researchers also used theoretical saturation. Therefore, the study of the texts continued until no new data was obtained from the existing data. Based on it, the barriers to establishing knowledge management were determined and categorized. Appropriately to determine validity and reliability, the Goba and Lincoln (1980) evaluation method was used. To achieve validity and reliability, the following works were done:

establishment of knowledge management were identified. Therefore, a questionnaire was prepared. This questionnaire has 45 questions. A five-point Likert scale used to design the questionnaires. The reliability of the questionnaires was calculated with the SPSS statistical software. Cronbach's alpha coefficient of the questionnaire questions was 0.826, which shows that the questionnaire has validity and reliability. The statistical population in the above research includes managers and experts in the municipality of Tehran. The researcher-made questionnaire is distributed and completed among the research community. Finally, 22 questionnaires received as research samples from the statistical research community. Because the number of questionnaires received was less

Table 1. One-Sample Kolmogorov-Smirnov Test

	Technological	Cultural	Management	Structural	Human	Content	Implementation	Legal
Kolmogorov-Smirnov Z ^a	.681	.932	1.575	1.447	.963	1.661	.612	2.112
Asymp. Sig. (2-tailed)	.743	.350	.014	.030	.311	.008	.848	.000

a. Test distribution is Normal.

1. Credibility: spending enough time on research and verifying the obtained data
2. Transferability: the use of special coding and code analysis procedures in the data analysis stage, which helps to ensure transferability.
3. Reliability: note-taking in all the steps of content analysis and then for reliability, interpretations and analysis were checked by an expert.
4. Verifiability: documenting and maintaining all research steps and documentation in order to objectify the research data and avoid misuse.

The second phase, quantitative method: Based on the results from the qualitative method, the components of the barriers to the

than 30, it is better to check the normality of the data, and therefore Kolmogorov–Smirnov test can be used, Kolmogorov-Smirnov test is mostly used when the statistical population of the research is small. If Z- statistic was greater than or equal to 0.05, data has a normal distribution (Keller, G. ,2015). Therefore, we used this test and the results showed the data were normal (table 1).

4. Findings

By using the method of thematic analysis, barriers and organizational limitations of establishing knowledge management identified. The table below shows the results of the findings of this section:

Table 2. Extracted themes (barriers and organizational limitations of establishing a knowledge management in Tehran municipality)

level	Barrier type	Identified barriers
Technological barriers		the Inefficiency of new systems

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	Limiting access to information networks	Limited access of employees to the internet and web networks
		Lack of integration of IT systems and processes
	Resistance to new technology	Dealing with the introduction of new technology
	Incompatibility between systems and processes	Incompatibility of information technology systems with existing processes in the organization
		Incompatibility of technology systems with user requirements
		Lack of alignment between the needs of employees and the information technology system
	Lack of knowledge management technical infrastructure	Lack of technology-based evaluation system
		Lack of integration and compatibility of existing systems with new systems
		Lack of knowledge management technical infrastructure
	The existence of scattered systems in the organization	Access to information technology systems for a few
		The existence of legacy systems
Limiting access to information networks	Lack of familiarity with employees using the technology system	
Cultural barriers	Weakness of knowledge sharing culture	valuing organizational culture on individual achievements over group achievements
		Inducing a hostile atmosphere toward knowledge sharing
	Lack of awareness of knowledge reuse	Lack of knowledge-sharing culture
		Organizational culture values security and confidentiality
	Inadequacy of employees' knowledge of assigned tasks	Lack of culture of participation
		Absence of a culture based on joint efforts and organizational Co-operation
		Having unrealistic expectations from employees and not matching people's abilities
	Lack of awareness of knowledge reuse	Misbelief about knowledge reuse
	Lack of a dynamic space to strengthen the mutual interaction of employees	Lack of an occupied space to support employees' thinking
	Distrust in using knowledge resources outside the organization	fear of failure
Distrust in using knowledge and experiences obtained from external sources		
Management barriers	Lack of communication between different units of the organization	Inefficient leadership or Lack of leadership spirit
		Short-sightedness and partiality of managers

		Using inappropriate leadership styles
	Lack of management style support of managers for knowledge and innovation	Lack of support of senior managers for knowledge management programs
		Fear of losing power among managers
		Political factors at the time
		Weakness in the use of creative techniques
		High organizational focus
		Weakness of transformational leadership
	Neglect of new ideas by managers	Neglect of new ideas
	Fear of losing power among managers	Lack of targeted support
	Weakness in the succession of managers	Weakness in succession
Organizational/structural barriers	Lack of agility of public and government organizations	The isolated nature of government organizations
		Lack of trust and organizational commitment
		Lack of trust and confidence among employees to share knowledge and teamwork
	Lack of organizational incentives for knowledge sharing	Lack of organizational incentives for knowledge sharing
	Inflexible and hierarchical structures	Inflexible and hierarchical structures
		Ambiguous and repetitive everyday jobs
	Lack of the required space for knowledge sharing	Absence of formal and informal space necessary for knowledge sharing
	Lack of alignment of business strategy with knowledge management strategy	Lack of alignment of business strategy with knowledge management strategy
	Lack of strategic knowledge management map	Lack of strategic plan
	Lack of separate financial resources to implement knowledge management projects	Lack of separate financial resources to implement knowledge management projects
	Lack of suitable job descriptions for knowledge management	Description of inappropriate jobs
	Existence of bureaucracy of the organization	structural limitations
Limitation of internal budget for knowledge management		
Bureaucracy of the organization		
Human resources barriers	Lack of knowledge management specialist	Human limitations
		Unaware or skeptical employees of knowledge management
		Person-centered experience

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		Weakness in the use of creative techniques
		Knowledge accumulation by employees for job security
	Employees view knowledge as a source of energy in the workplace	Employees view knowledge as a source of power
	Lack of incentive mechanisms to motivate employees	Lack of incentive mechanisms to motivate employees
	Weak verbal and written skills of employees	Poor verbal and written communication between individuals
	Lack of teamwork spirit among human resources	Lack of teamwork spirit among human resources
	The resistance of personnel to knowledge sharing	The resistance of personnel to knowledge sharing
		Lack of awareness among personnel about the benefits of knowledge management
content barriers	Lack of critical view of knowledge management	Lack of business resources
	Limitation of access to knowledge resources of the organization	Leaving previous experiences unused
	Poor knowledge documentation	Not enough classified information
	Poor organization of the organization's knowledge content	Resource limitations
		Poor documentation
		Unvalidated knowledge
	Lack of updating the knowledge content of the systems	Ambiguous definition of knowledge management issue
		Poor organization of the organization's knowledge content
		Lack of updating the content of the knowledge management
		Lack of data and information related to indicators and criteria
Lack of knowledge acquisition and validation		
	Lack of business resources	
Lack of relationship between knowledge management and organizational performance	Lack of relationship between knowledge management and organizational performance	
Implementation barriers	Lack of time at work and activities	Lack of time for communication and interaction between people
		Lack of available time for knowledge management
	Weakness of the flow of knowledge due to the large size of the organization	Lack of delegation for knowledge sharing
		Reduction of knowledge flows due to the increase in the size of the organization.
Lack of continuous assessment of knowledge	Lack of continuous evaluation	

	The gap between knowledge management program and knowledge management actions in the organization	The gap between the knowledge management programs and the progress of the implemented program
	Overemphasis on formal learning	Lack of indicators to evaluate the performance
		The benefits are immeasurable
		Improper planning
		Overemphasis on formal learning
		Loss of knowledge through retirement and withdrawal of employees
Failure to transfer experiences to newcomers	Failure to transfer experiences to newcomers	
Legal barriers	Lack of specific guidelines and frameworks for knowledge management in the organization	Lack of rules or standards for knowledge sharing
		Existence of inflexible organizational rules
	Absence of specific policies to preserve and value the creation of knowledge	Undefined policies of knowledge preservation

The questionnaire provided demographic characteristics of the electronically to the employees. The respondents are as follows:

Table 3. Demographic characteristics of respondents

Demographic characteristics		Frequency	Percentage Frequency	Demographic characteristics		Frequency	Percentage Frequency
Gender	female	10	48	Grade	diploma	-	-
	male	11	52		bachelor	-	-
age	under 25 years	-	-		Masters	10	48
	25-35	1	4		PhD	11	52
	35-45	13	59	position	Employee	11	55
	45-55	7	32		manager	9	45
	upper 55 years	1	5	Knowledge management level	very low	-	-
work experience	Years1-5	1	5		Low	-	-
	Year5-10	1	5		medium	6	27
	Year10-15	8	38		Much	13	59
	Year15-20	5	24		very much	3	14
	upper 20 years	6	28				

In the inferential analysis, to check the significance of the average statements of the respondents, the one-variable t-test was

used. According to the results of Table 5, all eight groups, are barriers to the

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Table 5. significance of the average statements of the respondents

Barriers to the establishment of knowledge management	t	significance level	mean
Technological barriers	28.401	.000	3.70175
Cultural barriers	15.206	.000	4.15873
Management barriers	9.846	.000	4.66667
Organizational/structural barriers	5.706	.000	6.81250
Human resource barriers	16.424	.000	4.23333
Content barriers	9.391	.000	4.88636
Implementation barriers	31.564	.000	3.68254
Legal barriers	5.414	.000	4.95455

The table below shows the prioritization of barriers to establishing

knowledge management in Tehran Municipality with Friedman test.

Table 6. Prioritization of barriers to the establishment of knowledge management in Tehran municipality

Ranking	Type of barriers	Ranking average	Components	ranking of Components
1	Organizational/structural barriers	7.47	Lack of organizational incentives for knowledge sharing	5.14
			Lack of strategic knowledge management map	5.09
			Lack of agility of public and government organizations	4.75
			Lack of independent financial resources to implement knowledge management projects	4.68
			Lack of suitable job descriptions for knowledge management	4.27
			Inflexible and hierarchical structures	4.23
			Lack of necessary space for knowledge sharing	4.00
			Existence of bureaucracy in the organization	3.84
2	Management barrier	5.09	Weakness in the succession of managers	3.64
			Neglect of new ideas by managers	3.14

			Managers' management style does not support knowledge and innovation	3.12
			Fear of losing power among managers	2.76
			Lack of communication between different units of the organization	2.33
3	Legal barriers	4.91	Absence of specific policies to preserve and value the creation of knowledge	1.59
			Lack of specific guidelines and frameworks for knowledge management in the organization	1.41
4	Content barriers	4.76	Poor knowledge documentation	4.05
			Limitation of access to knowledge resources of the organization	3.64
			Lack of relationship between knowledge management and organizational performance	3.59
			Lack of economic view of knowledge management	3.41
			Lack of updating the knowledge content of the systems	3.43
			Poor organization of the organization's knowledge content	2.89
5	Human resource barriers	3.97	Lack of teamwork spirit among human resources	3.95
			Lack of incentive mechanisms to motivate employees	3.90
			Personnel resistance to knowledge sharing	3.80
			Lack of human resources specialized in knowledge management	3.43
			Employees view knowledge as a source of power in the workplace	3.15
			Weak verbal and written skills of employees	2.78
6	Cultural barriers	3.79	Weakness of knowledge sharing culture	4.55
			Having a negative attitude toward knowledge sharing	4.05
			Lack of a dynamic space to strengthen the interaction and Co-operation of employees	3.67
			Lack of awareness of knowledge reuse	3.40
			Inadequacy of employees' knowledge of assigned tasks	2.90
			Distrust in using knowledge resources outside the organization	2.43
7	Implementation barriers	3.29	The gap between knowledge management programs and knowledge management actions in the organization	4.21
			Lack of continuous assessment of knowledge	3.93

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			Failure to transfer experiences to newcomers	3.86
			Weak knowledge flow due to the large size of the organization	3.26
			Overemphasis on formal learning	3.17
			Lack of time at work and activities	2.57
8	Technological barriers	2.71	The presence of distributed systems	4.18
			Lack of knowledge management technical infrastructure	4.00
			Lack of familiarity of employees with how to work with systems	3.87
			Incompatibility between systems and processes	3.45
			Resistance to new technology	2.89
			Limitation of access to information networks	2.61

5. Discussion

According to the research findings, the most critical barriers to the establishment of knowledge management in Tehran municipality are the organizational/structural barriers. The results of other study, such as Yapa (2019), Vahidi and Danesh (2022), Mofidian and Imamgholizadeh (2018), and Naghiyan and Abedini (2016), confirmed that the components related to the organizational process and structure. It creates crucial barriers to the establishment of knowledge management in the organization. The report of the Organization for Economic Co-operation and Development (2003) showed that almost half of the organizations that have implemented knowledge management have units to coordinate knowledge and information management. According to the perspective and the emphasis of the upstream documents on establishing the knowledge management in Iran, it is necessary to have a step-by-step operational plan in Tehran municipality. In this regard, the report of the Organization for Economic Co-operation and Development (2001) showed that one of the problems of the Government in this way, is a strategy for establishing and implementing knowledge management. Therefore, organizational/structural barriers are related to the Lack definition of knowledge management in the mission, vision, strategy,

and description of the duties of the executive body.

managerial barriers are the second barriers to establishing knowledge management in the Tehran municipality. The results of other study, such as Vahidi and Danesh (2022), confirmed that the components related to management create important barriers to the establishment of knowledge management in the organization. As previously stated, a common definition of knowledge management is needs for implementing this management system in the organization. If senior managers and employees of the organization at different levels do not have a correct understanding of the definition of knowledge management and its goals, the implementation of knowledge management tools and techniques will not be very practical. Having a common definition of knowledge management will help developing of the organization's knowledge management strategy. The senior managers of the organization should define the strategies and goals of knowledge management based on their mature status and help it to flow in the body of the organization. Employees' common understanding of knowledge management concepts, tools and techniques increases the speed of knowledge management implementation. Legal barriers are the third barrier to establishing knowledge management in Tehran municipality. The

results of other study, such as Al Dhanhani and Al Naqbi (2022), confirmed that the law-related components create important barriers to establishing knowledge management in the organization. The existence of rules and guidelines based on the knowledge management model to create alignment and unity in the implementation of knowledge management, which includes the goals, principles, values, strategies, and implementation processes of knowledge management, taking into account the tools and techniques of knowledge management in the field of knowledge processes. The duties of administrative units, the knowledge management maturity measurement model, and the framework of motivational mechanisms for the participation of employees and managers are important in this regard. Content barriers are the fourth barrier to establishing knowledge management in Tehran Municipality. The results of other study, such as Pereira et al. (2017), confirmed that the components related to knowledge content create important barrier to establishing knowledge management in the organization. Therefore, the processes in knowledge management, which include collecting, organizing, accessing, sharing the organization's knowledge, and exploiting and protecting these knowledge assets, which are components related to knowledge content, are most important. Human resource barriers are the fifth barrier to establishing knowledge management in Tehran municipality. The results of other study, such as Pereira et al. (2017) and Oliva & Kotabe (2019), confirmed that the components related to human resources create important barriers to establishing knowledge management in the organization. In the age of knowledge, most organizations have realized that their success is not due to their physical assets but to the experiences and skills of their employees. In the field of knowledge management, there are three important and main components: human, process, and technology. Among these dimensions, human power is the most important input of the organization and the factor that is ultimately the factor of using other inputs and turning them into the organization's outputs. The successful

implementation of each of the implementation stages of knowledge management in organizations requires the identification of the most important resource in the organization, i.e., human resources. Knowledge creates in human minds, and comes into existence without anyone knowing how to create it. Further knowledge acquires by the minds of people, and it transfers and spreads, then, it uses by people who have accepted it. Therefore, human resources and related components are important for establishing knowledge management. Cultural barriers are the sixth barrier to establishing knowledge management in Tehran municipality. The results of other study, such as Vahidi and Danesh (2022), confirmed that the components related to organizational culture create important barriers to the establishment of knowledge management in the organization. Research shows that organizational culture can be effective both in setting the foundation for knowledge sharing. Many organizations must make fundamental changes in their organizational culture to support the realization of management and knowledge sharing, thus culture is the most important factor that affects knowledge sharing and intellectual capital. Any knowledge-sharing model will face failure regardless of organizational culture and national culture. Therefore, knowledge sharing is among the most important factors in knowledge management. It is only by examining, changing, and creating a suitable and flexible organizational culture that one can gradually change the pattern of interaction between people in the organization and benefit from knowledge management as a competitive advantage. Therefore, organizational culture is one of the main factors that are very effective in sharing knowledge and implementing knowledge management projects (Bammad Sufi and Taheri2017). Implementation barriers are the seventh barrier to establishing knowledge management in Tehran municipality. The results of other study, such as Al Dhanhani and Al Naqbi (2022) and Vahidi and Danesh (2022), confirmed that the components related to the executive field create important

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barriers to the establishment of knowledge management in the organization. The gap between the knowledge management program and knowledge management measures in the organization, Lack of continuous knowledge evaluation, Lack of success in transferring experiences to newcomers, weak knowledge flow due to the large size of the organization, excessive emphasis on formal learning, Lack of time at work can consider as one of the implementation barriers in the field of establishing knowledge management in the organization. Technological barriers are the eighth barrier to establishing knowledge management in Tehran Municipality. The results of other study, such as Vahidi and Danesh (2022) and Naghiyan and Abedini (2016), confirmed that the components related to Technology create important barriers to the establishment of knowledge management in the organization. Technology and information technologies provide two major capabilities for knowledge management, First, by revealing knowledge, they can create a kind of expert system or decision support; Second, it helps employees with special expertise to be informed about each other's activities and to enable them to communicate quickly. Managers of leading and knowledge-oriented organizations use technology as a driving force and effective factor in the progress and success of knowledge management. In other words, technology is one of the crucial factors in knowledge management. In addition to hardware and software requirements, the proper use of these facilities is essential and inevitable (Rukni Jo et al., 2017).

management. Identifying, prioritizing, and analyzing barriers and limitations provides the basis for providing solutions to facilitate knowledge management in the organization. In order to establish knowledge management in its organizational field, Tehran Municipality should examine the mentioned barriers respectively make efforts to eliminate them (figure 2).

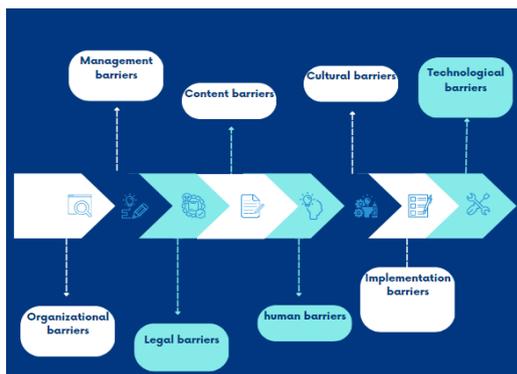
figure 2. Barriers of establishing knowledge management in Tehran municipality

There are barriers to knowledge management, but there are ways to overcome them. The following recommendations are some of them:

- ❖ Establishing appropriate incentive and reward systems for employees to share knowledge to motivate them. Using the usual procedures of almost equal payment of bonuses in executive bodies will demotivate people.
- ❖ Drawing the strategic map of organizational knowledge management in Tehran municipality
- ❖ Tehran Municipality should use an agility index in the organization. This index is a tool for multi-faceted feedback to achieve the goals of organizational development. The Agile Index helps manage the transition of agile ways of working and thinking.
- ❖ Determining the specific budget line for knowledge management in the annual budget of Tehran Municipality to provide the basic facilities for setting up and supporting the knowledge management, holding training courses related to knowledge management, providing the necessary incentives to encourage employees to cooperate in knowledge management activities and such matters.
- ❖ Compilation of job descriptions for knowledge management
- ❖ Improving the organizational structure and environment and increasing social and professional interactions among employees at different levels

6. Conclusion

Organizations challenge many barriers and limitations in establishing knowledge



- ❖ Setting the mission and succession policies in the organization.
- ❖ Creating a creative space; The space that stimulates creativity means that the management should always be ready to hear new ideas from everyone in the organization.
- ❖ Formal and informal training courses should hold to strengthen innovation in the organization.
- ❖ Designing and using an integrated knowledge management with the assurance of availability and usability for all employees of Tehran Municipality
- ❖ Focusing on key areas of knowledge and growing clusters with specific knowledge topics and launching and developing "Knowledge-Based Parks," "Knowledge-Based Companies," and "Knowledge-Based Regions" by Tehran Municipality.
- ❖ Periodic updating of the knowledge content of Tehran municipality systems
- ❖ Removing old knowledge content that has less value and replacing it with up-to-date knowledge content
- ❖ Organizing periodic gatherings and celebrations to increase the honesty, sincerity, trust, and morale of the working group of Tehran Municipality employees.
- ❖ Formation of scientific and professional associations and working groups to share knowledge
- ❖ Taking advantage of job aptitude tests and job compatibility questionnaires by managers to help people to place in appropriate job positions according to their interests, abilities, skills, and knowledge.
- ❖ Preparing and compiling a clear vision for knowledge management programs and necessary measures for its establishment in Tehran Municipality
- ❖ Improving training and learning methods through non-attendance like online methods, such as E-Learning
- ❖ Using e-mail, internet, and intranet, electronic communication tools (such as virtual chat rooms), participation

tools (such as video conferencing system)

Also, the following research recommendation can be fruitful in the process of establishment and fundamental success of knowledge management in Tehran Municipality:

- ❖ Evaluate the maturity of Tehran municipality's knowledge management, which shows how is organization successful in collecting, creating, storing, sharing, retrieving and applying knowledge. Assessing the maturity of knowledge management provides the organization with an opportunity to plan and create a roadmap. This evaluation will base on recognizing the strengths, weaknesses, challenges, and opportunities ahead.

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Declaration of Competing Interest

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