

## RESEARCH ARTICLE

# Knowledge Management, Promoter of the Internal Competitiveness in the Municipal Administration

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## Abstract

Currently, the competitiveness has become a requirement in all areas and the municipal administration does not escape from it, having constituted the municipality the base of the local government and of the political and administrative organization of the states. From the quality of services that offers the municipal administration, conditions are derived that frame the quality of life of his inhabitants. In search of the competitiveness the organizations every time are interested in managing more the knowledge, nevertheless the literature and research are focused more to the companies of the private sector. In this context, the municipal administration constitutes an area of particular interest for this study; it is fundamental to do research tending to know its reality and propose strategies to raise its levels of competitiveness and socioeconomic development. The aim is to identify elements of knowledge management that could constitute potential tools to stimulate the internal competitiveness of the municipal administration, taking as a base 12 municipalities of the State of Mexico that integrate the Toluca region. The methodology corresponds to an exploratory, descriptive study and co relational, based on review of literature and application of a survey performed to 369 workers and 353 users of services of the researched town halls. Concluding that there are elements inherent in the knowledge management that can increase the efficiency or competitiveness of the municipal administration emphasizing in the results the following ones: training courses to keep the workers updated; managing and automation of information, improvement of paperwork and disposition of manuals.

**Keywords:** *Knowledge management, Internal competitiveness, Municipal management.*

## Introduction

Currently, the competitiveness has become a requirement in all areas and the municipal administration does not escape from it, on having constituted the municipality the base of the local government organization and of the political and administrative organization of the states. From the quality of services that offers the municipal administration, conditions are derived that frame the quality of life of his inhabitants and the possibility of improving the levels of development and competitiveness, which it makes necessary to realize studies tending to strengthen the above mentioned administration.

The municipalities currently have big problems and inequalities on the economic and social level. The town halls administration is irregular and with it high levels of inefficiency in the assignment of resources and services for the population. In

this investigation official numbers and statistics are presented giving a sample of big levels of backwardness and inequality in the analyzed municipalities.

This situation is latent when changes in the world economy confirm that knowledge is a fundamental intangible, because of this the different levels of governmental administration (municipal, state and federal) should be interested in measuring it, to value it, to control it and to manage it [1].

Nevertheless, it is frequent that the management in the public municipal sector adopts with slowness the new theories that allow it to raise its competitiveness unlike what it can happen in the private initiative. In any case, the modern administration of the municipal sector is directed (or it should

be) to look for major levels of competitiveness, which are translated in attention and services of high quality that affect in good living conditions for his inhabitants.

Therefore the present investigation was realized in twelve municipalities that integrate the Toluca region of the State of Mexico, with the purpose of identifying elements of the knowledge management that can help to stimulate the internal competitiveness in the municipal administration.

The work consists of four principal paragraphs: the first one corresponds to the foundation frame that presents with base in official numbers **sociodemographic** information of the municipalities that integrate the Toluca region and a theoretical approach on the knowledge management and the municipal competitiveness; the second one describes the methodology of the investigation; the third section presents the results emphasizing the principal correlations found between indicators of knowledge management and internal municipal competitiveness and the quarter and last, it groups the principal conclusions and recommendations derived from the study.

### **Foundation Frame**

The importance of the municipalities has been clearly expressed in the Organic Municipal Law of the State of Mexico (1992) that indicates that the municipality is the basic political society, the first step of democracy, the most immediate institutional expression of the Mexican state to the population. It is the form of political association of small, medium and, in occasions, big communities of the nation, which are governed themselves through the town halls, which members know and attend to the solution of the matters nearest to them, for this reason, they can solve them in the most suitable form.

In the municipality we have the relationship of the inhabitant with his authorities and the setup of the interaction between the society and the public organization.

López [2] recognizes that under the administrative frame, the municipality acquires relevancy and is capable of fortifying politically and economically, as well as being a driver and generator of his own development. It raises besides the fact that today the municipalities in a frame of competitions have the opportunity to design his own plans, to execute them and to evaluate them, to propose targets and goals of development, validating his programs and projects; based on the knowledge of his problematics, of his political, social and economic environment.

The municipalities in Mexico, they present particular situations that make necessary to focus the attention towards them. In agreement to what is stated in the Political Constitution, the leaders of the town halls change every three years derived from popular election, which implies a high percentage of personnel rotation including the municipal president and the members of the cabinet, operative staff from the triumphant political party and the dismissal of personnel of the previous administration, which implies the entrance of people without experience and the loss of valuable elements for his experience and knowledge.

For the briefness of the period of management of the municipal authorities, in few cases the knowledge is recorded in written manuals, instructive or procedures that contribute his successors in the efficient development of functions.

### **Information of the Toluca Region**

As in other regions of Mexico, the municipalities of the Toluca region present big differences at the socioeconomic level. As an example, it can be observed in the table 1, presents information about the number of inhabitants, gross domestic product (GDP) per capita, human development index (HDI) and rate of literacy (RL). See Table 1.

Scrutiny of the previous table there stands out the fact, of which in spite that Toluca is the capital of the State of Mexico, Metepec's municipality, has better indicators of the quality of life, overcoming with 31.06 % the GDP .0304 Index of human development and 2.09 percentage points the rate of literacy.

**Table 1: Socio demographics information of the Toluca region**

Municipality	Inhabitants number (2010) <sup>1</sup>	Year GDP per capita 2010 <sup>2</sup>	HDI <sup>2</sup> 2010	RL <sup>2</sup> 2010
Almoloya de Juarez	147 653	11,875	0.8168	90.25
Almoloya del Río	10 886	13,374	0.8505	94.66
Calimaya	47 033	11,937	0.8466	94.21
Chapultepec	9 676	12,490	0.8740	97.46
Metepec	214 162	22,873	0.8924	97.58
Mexicaltzingo	11 712	13,279	0.8660	95.89
Rayón	12 748	13,314	0.8630	94.67
San Antonio la Isla	22 152	11,218	0.8650	96.48
Tenango del Valle	77 965	11,678	0.8107	91.38
Texcalyacac	5 111	12,874	0.8483	96.10
Toluca	819 561	17,451	0.8620	95.49
Zinacantepec	167 759	9,352	0.8114	93.15

<sup>1</sup>INEGI. Census of Population and Housing 2010. Mexico [3]  
<sup>2</sup>Programmes of the United Nations for the Development.PNUD. (Dollars PPC, prices 2010)

One more evidence of the inequality is the great difference in the GDP per capita annual between Metepec and Zinacantepec of 22,873 dollars to 9,352 (40.88 %) respectively, here it is required to indicate that both municipalities are adjacent to Toluca's city.

For what it concerns to Almoloya de Juárez's municipality, his RL of 90.25 % is 7.33 percentage points less than Metepec. This means that approximately 10 % of the population of Almoloya de Juárez cannot even read or write.

### Knowledge Management and Municipal Competitiveness

Knowledge is equivalent to the information that the human beings we are capable of elaborating by using of our thinking, is information elaborated by means of the learning processes and solution of problems [4].

According to Nonaka and Takeuchi, two types of knowledge exist: the explicit, that is conceptualized as the objective and rational knowledge that can be expressed by words, numbers, formulae, etc.; and the tacit, that a person, community, organization or country, has built-in or stored in his mind, in his culture and is difficult to explain [5].

The knowledge management is a topic that comes out increasingly in the organizations on having linked itself with the innovation and the competitiveness. It arises on having

recognized the importance that has the knowledge in the organization. For which there arises the need to create it, to apply it, to share it and to use it in an effective way [6].

In literature multiple definitions of knowledge management exist, and some authors name it knowledge management, in the present work we refer to those that contain pertinent elements to the municipal administration.

Alavi and Leidner [7] define the knowledge management as the "systemic and specific process of an organization, which purpose is to acquire, organize and to report both the tacit knowledge and the explicit one of the employees, in order that other employees could use it and to be more productive in his work ". These authors think that the knowledge has little value for the organization if it is not shared and the skill to integrate and to apply the specialized one is fundamental in order that an organization is capable of creating and supporting competitive advantages.

Escorsa and Maspons [6] say that "the knowledge management is orientated in practice towards the classification and storage of knowledge that the employees of the company have accumulated in the past so that it could be shared".

Sainz [8] affirms that the knowledge management can be defined like: " The set of

processes and activities directed to searching, creating and spreading the intellectual capital to improve globally, adding intelligence, value and flexibility, but the characteristic of the new age of the knowledge is that already it is not only in the individual, but it has to be transferred to the organization".

Carrión [9] specifies: "The knowledge management is, definitively, the management of the intangible assets that generate value for the organization. The majority of them are linked with processes related one way or another with the capture, structure and transmission of knowledge". He says that already some time ago the organizations realized that his physical and financial assets do not have the aptitude to generate competitive sustainable advantages over time, so they discover that the intangible assets are those that contribute real value to the organizations. It refers with the term active intangible to a series of resources that belong to the organization, not valued from a countable point of view. Also, intangible assets are the capacities that are generated in the organization when the human resources start being employed at group, some authors instead of capacities speak about processes, or organizational routines. Definitively intangible assets are all that that an organization uses to create value, but that it does not account for and that is summarized in knowledge.

Vogel [10] Defines the knowledge management as the " set of processes and activities directed to: search, create, spread and to protect the utilization of the knowledge. It is individual and collective knowledge - tacitly and explicitly - to the service of the activity of the company across his components: strategy, people, processes and technology, for the contribution of better results ".

Taking as base the definitions here presented it is manifested that the knowledge management can constitute a determinant factor of the competitiveness in an organization of any area; be public, private or social. Particularly, in the municipal administration it implies managing, devoting and transmitting the

knowledge from different perspectives: with base in the theory; the experience; the innovation; the creativity; the use of the technology; the managing of the information seeing that it should be recorded in manuals and instruments of support to the labor of the workers and the users of services. All of these processes require a deep involvement of the authorities and of the handling and good use of managing technologies and techniques those results in a enthusiast participation and cooperation of all involved areas.

## Municipal Competitiveness

The competitiveness is defined as the advantages that allow the organization to improve increasingly the levels of performance reaching the proposed targets; for the public sector it must be translated in increased quality in the services and efficient use of resources to propitiate the social and economic development.

Rubio and Baz [11] contemplate two dimensions in the competitiveness: one built for the internal area of the organizations and other one for the environment in which they work. The first one depends on his own action and on the efficiency of his internal processes. Regarding the environment, the government contributes in an indirect way with marginal impact (quality of the education that can be reflected in the personnel), and to influence strongly the external part; it establishes regulations in labor matter, of use of energy and fixes the juridical frame that propitiates or discourages the installation and operation of the same.

In Quijano's opinion, et.al [12], to activate the virtuous circle between competitiveness and development is indispensable that companies and regions look for the efficient use of his resources, to take advantage of a better way of the productive vocation of the environment and the experience of the local parties and is here that the municipal administration acquires a preponderant paper.

The competitiveness of a municipality resides in the aptitude to increase the productive activity and services that

generate major presence on the state, national and international markets, increasing the educational level, the income and the health of his inhabitants improving this way their quality of life.

The competitiveness of the most developed countries is increasingly based not in the intensive use of material resources, but in the use of knowledge, of immaterial nature, and that is found in urban environments [13].

The conversion of an economy of diminishing performances to an economy of increasing performances is based on the developing of sectors based on the knowledge, which is superposed to the traditional sectors based on the process [14].

For other authors like Michael Porter the competitiveness is a process of generation and diffusion of competitions which depends not only on microeconomic factors but also on the capacities that the territory offers to facilitate the economic activities. Meaning, it is a question of generating in the space a physical, technological, social, environmental and institutional propitious environment to attract and to develop economic generating activities of wealth and employment. In this respect, the cities or municipalities can promote or generate the creation of these conditions [15].

This implies that the governmental, economic, social and political actors of the local area who act, principally, in an associate way or in networks on certain territory, can fulfill an important role to mobilize or to attract the investment, the advanced services and the qualified workforce, to obtain public funds, to propitiate the development of sectors of high technology, the tourism, international events or other productive generating activities of wealth, employment and better living conditions for those who live in the cities.

According to the area in which it is generated, the competitiveness can be considered internal or external. The internal refers to the achievement of the targets raised across the optimization of resources and design of administrative strategies and

the external with factors from the environment where it develops (geographical, economic, social, etc.) generating the competitive advantages that have been described previously.

From here, if one wants to accede to a municipal competitiveness in both levels that it pays to benefits of all the inhabitants of the municipality, the first goal to achieve is the internal competitiveness (for effects of this study we name it also an institutional competitiveness) since once reached it will allow to consolidate major levels of competitiveness and development to an external level with major impact.

Porter [15], has affirmed that the competitiveness supposes a strongly located process that promotes the specialization and the local efficiency. The cities or municipalities are spaces that can offer competitive advantages, as long as they possess different factors of attraction.

In this context, we can identify two types of competitive advantages:

- Statics: derived from the agglomeration or geographical concentration and from the vertical disintegration.
- Dynamics: come from the innovative capacity and are advantages constructed or created by companies or local governments, associations [15].

### **The Knowledge Management: An Option to Increase the Municipal Competitiveness**

Nowadays the organizations have begun to value the importance of the knowledge and to realize a better use of the it, from here this factor is being considered to be the most significant resource of the organizations, which has stimulated the executives to make efforts to elaborate programs that allow to define how to capture it, to represent it, to retain it and to administer it. From this perspective, it is possible to affirm that in an economy with changeable rules, the only source of competitive advantages is the knowledge. The organizations that have the capacity to generate new knowledge, to spread it and to transfer it inside, to

incorporate it into the goods and offered services and realize a process of constant innovation they will be the only ones that will be in aptitude to create competitive potential advantages [16].

The foundation for the constitution of innovative and competitive organizations is found in the knowledge management a challenge for the public workers of the municipalities consists of managing efficiently and effectively the intangible assets, with the purpose to transfer the explicit, technical and tacit existing knowledge for both persons and equipment's as in the organizational structure, in the culture, in the working systems of and in external relations, in order to reach every day major levels of development in benefit of the own workers but especially to the population in general [16].

### Methodology

At the time of the literature review, it was detected there are constructs of the knowledge management concept in which authors and researchers agree and that the application of these can lead to increase the internal competitiveness.

The problem on which this research is based is the difference in the level of competitiveness of the municipalities of the Toluca Region in the State of Mexico,

reflected in the different socio-economic indicators presented in the table 1. Considering that the knowledge management can become a mean to address it.

The municipalities that constitute the Toluca region are: Almoloya de Juárez, Almoloya del Río, Calimaya, Chapultepec, Metepec, Mexicaltzingo, Rayon, San Antonio la Isla, Tenango del Valle, Texcalyacac, Toluca and Zinacantepec.

The research question that broke is: is there a relationship between the application of techniques knowledge management and the internal competitiveness of the municipality?

The main objective was to identify the main elements related to knowledge management

with internal competition in the municipalities of Toluca region in order to identify elements of knowledge management that help to increase internal competition within the municipalities.

The variables that were incorporated into the research are knowledge management (independent) and municipal competitiveness (dependent) as follows (see Table. 2):

**Table 2: Study variables and dimensions**

Variable	Dimensions	Indicators
Knowledge management	Organizational learning	Openness to innovation Teamwork
	Knowledge management	Database access Available manuals Periodic training courses
	Intellectual capital	Regular training courses Education degree Seniority
Competitiveness of municipalities	Institutional or internal	Getting information Improved public services Enhanced services Good use of resources Simple and quick procedures Quality assessment

**Source: Own elaboration**

The research corresponds to a qualitative study, transactional, exploratory, not experimental, descriptive and correlational.

The sample was probability for public workers and was calculated according to the formula proposed by Ernesto Ángeles and

Lourdes Munch Galindo in his book: methods and techniques of research) based on the total of public workers who work in the region, resulting in a valid sample of 342 public workers, applying to 369 workers.

As users of services in the municipalities due to limitations of resources and the unwillingness of people to respond was established a sampling for fee of 30 users on average in each municipality, with a total of 360 questionnaires.

The instruments used were built from the literature review and validated for 7 knowledgeable scholars of the subject and research aspects of construct validity and three experts in municipal administration officials for content validity. Likewise, pilot test conducted to determine the reliability index, using questionnaires to 28 civil servants and 22 users in the town of Almoloya de Juarez, the responses obtained were analyzed in SPSS in order to determine Cronbach's alpha obtaining in both questionnaires, bigger results than 0.9, a highly significant result. Similarly, to determine if the instrument applied to public workers coincides with the established dimensions of knowledge management from the review of literature, with the support of the aforementioned statistical package factorial analysis techniques were applied through the determination of major components, resulting in related elements with the considered theoretical bases.

As for the handling of the information, to be able to analyze relationships between factors (variables) it was determined the correlation coefficient of Pearson, which is a statistical index that measures the linear relationship between two quantitative variables and descriptive data was obtained.

## Results

From the responses obtained in the survey it were determined rates of Pearson correlation shown in the Table 3, 4, 5 and 6, where are presented the most significant correlations found<sup>1</sup>.

<sup>1</sup> For all results presented here it is considered that:

\* The correlation is significant at the 0.05 level (bilateral).

\*\* Correlation is significant at the 0.01 level (bilateral).

**Table 3: Openness to innovation**

Dimension	Correlation Index
Periodicity of updating courses	.684(*)
Provide user information	.680(*)
Improving customer service	.643(*)
Good use of resources	.675(*)
Simple and quick procedures	.710(**)
<b>Source: Gómez [17]</b>	

The openness to innovation leads strongly in that the user will provide the information necessary for the conduct of its proceedings; in better care for the public, in the good use of resources but mainly in that the procedures are fast and simple, which, in addition to benefiting the internal competitiveness may have an impact on increased external competitiveness (opening a business, construction permits, etc).

It is relevant to comment that while correlation was found between the courses of upgrade of public workers, and the openness to innovation, the 21.7% of the workers surveyed reported not receiving courses and 28.2% very rarely.

Another aspect worth highlighting is faced with the question: do you believe that resources are applied to achieve the institutional objectives? 17.2% of workers responded no, and a 24.1% chose the option neither agree nor disagree.

**Table 4: Availability of manuals**

Dimension	Correlation Index
Improvement in public attention	..588(*)
Quality survey	..597(*)
<b>Source: Gómez [17]</b>	

The fact that the public workers have manuals that facilitate their work, resulting in better care to the users and that they consider to be of better quality services that they receive. However, in the survey, 26.3% reported having no manuals or instructions for their operation, and 12.5% chose the option neither agree nor disagree. Situation that allows us to see the need of developing this type of instruments that support public workers in the performance of their functions and increase their efficiency.

**Table 5: Providing user information**

Dimension	Correlation Index
Improvement in public attention	.913(**)
Improving customer service	.888(**)
Good use of resources	.856(**)
Simple and quick procedures	.846(**)
Quality survey	.679(*)
Source: Gómez [17]	

When the user receives the information required is of high priority for him and has a relationship with perceived better care; better service; good use of resources; that the procedures appear to him to be simple and quick and with high quality. It is worth noting the high significance levels of the first four dimensions. A key element in the assessment of internal competitiveness in public bodies is by the quality of service perceived by the users so that in the following table presents the main correlations obtained in the research.

**Table 6: Evaluation of the quality of the services**

Indicators	Correlation Index
Availability of manuals for public workers	.597(*)
Providing user information	.679(*)
Improving customer service	.739(**)
Good use of resources	.578(*)
Simple and quick procedures	.718(**)
Source: Gómez [17]	

Among the factors that the respondents consider most likely to influence the quality is in the first term a better care to the public; second, the simplicity and rapidity in the procedures; third is to provide them with the required information, followed by the availability of manuals by public workers and concern for the good use of resources.

It is worth mentioning that a strong indicator of internal competitiveness in the administration of the municipalities is measured by the opinion about the quality of services for users and in the survey, only 41.6% agreed that the quality of service has improved.

In addition to the correlation indexes already submitted, below is presented on Table 7. containing information on a descriptive level (frequency) derived from the opinion of 353 users of services related to domestic competitiveness of the councils of the municipalities studied.

**Table 7: Suggestions of public workers in relation to knowledge management to improve internal competitiveness of municipalities**

Suggestion	Frequency	Percentage
No answer	145	39,3
More training and professional preparation of public workers	84	22,8
Improved information systems and communication	32	8,7
Take users into account to build trust	29	7,9
Quality of service	19	5,1
Teamwork and participation	18	4,9
More resources and better facilities	14	3,8
Increased supervision and control	10	2,7
Planning activities and avoid duplication of functions	8	2,2
Staff motivation and equitable working	8	2,2
Everything is fine	2	,5
Total	369	100,0
Source: Gómez [17]		

The analysis of the results presented in the above table highlights the fact that training appears as the suggestion with the highest frequency, followed by the improvement in the systems of information and communication, then the request to consider the users to build trust, stressing the importance of strengthening the intellectual capital with courses on both practical aspects related to their work as human relations and conduction of groups, as well as the value of the information in the search for higher levels of internal competitiveness [18,19].

## Conclusions and Recommendations

The present work shows that the application of elements related to knowledge management may constitute a contributory factor to increase the internal competitiveness in the municipal administration.

The results shown by the investigation indicate that openness to innovation accompanied by a regular staff training; provision of manuals and administrative tools that enable them to perform their work more efficiently, can affect to provide users with timely and sufficient information; providing good attention and guidance to make their procedure quickly and easily.

It is considered that the municipal authorities must focus their efforts towards achieving higher levels of efficiency in the services that are provided to the interior of the offices of the city council, use the resources for the achievement of goals and seek to increase the satisfaction of users. The task is not simple and involves the commitment and constant effort from both authorities as well as of all public workers and the participation and involvement of citizens through good attitude, respectful, and offering suggestions.

In the pursuit of greater levels of competitiveness on the municipalities, it is required to strengthen the administration of the councils. Supported in the knowledge management the local authorities can improve efficiency in their doing, to know and to optimize the potentialities of the public workers employed in the offices of the local councils and implement strategies to achieve an adequate performance of tasks through the use of resources. Faced with the challenge to achieve greater competitiveness to streamline the municipal administration, and to improve the quality of services through knowledge management, it is proposed:

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Apply techniques aimed to create, disseminate, apply, and evaluate knowledge within the municipal administration, developing synergic processes through shared knowledge and efficient organizational learning that will add value and competitiveness to the organization.

Encourage permanent human resources, valuing the knowledge and experience gained in earlier municipal administrations.

Evaluate and recognize good performance and the innovation of practices that promote efficiency and quality in the service. Design and implement eclectic models according to the characteristics of each municipality, to identify, develop and enhance the knowledge of its staff.

Search for automation in administrative procedures, considering that it is a determining factor in the efficiency.

Develop manuals and procedural guidelines, putting them at the disposal of users and workers.

The information derived from this research highlights the imperative need to assume that internal competitiveness in the municipalities depends largely on the knowledge management, which constitutes a valuable element in any organization, recognizing the value of employees and the importance of the support of the Technologies of Information and Communication (TIC).

## Future Research

This study brought together two key concepts: knowledge management and the municipal competitiveness in its inner level by opening the door to further studies that continue to deepen in the field of study in topics such as organizational learning and intellectual capital. The horizon is wide and the research can and should aim to achieve higher levels of development and competitiveness.

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