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# Investigation of the Effect of Empowering Lead on Accepting Knowledge Management System in P.E.T. Zone (Mahshahr)

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## ABSTRACT

Nowadays, most of managers play an important and essential role in obtaining the competitive advantages, also, they have realized going along with strategic purposes of organization. Moreover, knowledge management became as a competitive obligation in organizations. In spite the fact that a competitive obligation, if leaders cannot provide appropriate infrastructures and necessary prerequisite for the layout of knowledge management system, it will result in human resources repulsion and financial resources loss. This research is based on investigating the effect of empowering on accepting knowledge management system in petrochemical economic special zone in Mahshahr. In this research, Statistic society consists of 250 operation, middle and top managers of PET. Zone which is based on Kukran sampling formula, volume of sample was determined 158 people. The method that was applied in this research is descriptive – measurable. The results which obtained from this study indicate that all four hypotheses have been confirmed.

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## Introduction

Knowledge organization management is one of the most important factors for companies to succeed in competitive conditions and information age. The importance of this subject is so extremely that most of companies, nowadays, measure their information and reflect it as an organizational capital, also as an index to classify companies in their reports. These institutions know well how to be necessary the layout of knowledge management in organization as one part of organization strategy. [1]. It is important to mention that knowledge management includes a wide range of organization ideas including strategic, economic, and behavioral and management innovations as an essential part for organization in being successful. Considering goods production and services offer is based on knowledge, knowledge is an important asset to gain competitive advantage. [2]. Why have organizations interested the layout of knowledge management system? According to researches which have been done in successful organizations, productivity, profitability and rapid reaction to customer needs, decreasing cost and finally ideal quality are not for companies which have more capital, machinery and human resource. As Piter Drkmy says: successful organizations are those which have more knowledgeable human resource and use manpower to overcome competitive environment and business changeability. [6]. successful organizations are those which change their personnel to organization capability.

In spite of too much investing to use created knowledge in companies and organizations, they could not achieve their goals, moreover, shocking software and hardware investments which had been invested for knowledge management layout could not make anticipated result. [7, 8]. But organizations still face this essential question: How do they use their created knowledge to supply needs, requirements and their new goals? In the other words, what is the maturity path of organization in using its knowledge? And what processes are organizations supposed to

invest to use knowledge management in the direction of their goals and needs? [7, 8]. This research is on investigating the effect of empowering lead on accepting knowledge management system in PET. Zone, Mahshahr.

### Subject To state research:

Big companies such as Microsoft have knowledge and information which is very significant and valuable, nothing more. Their economic game is to protect their technical and scientific ownership and to extend their knowledge and proficiency. These experts (specialists) are the people who discover new knowledge, manage new processes and keep machinery and equipments well. Also, they use new tools and processes which are resulted by knowledge development. They give their skills and proficiencies to advance available knowledge, to obtain new specializations and technical skills, and they surely do not waste their time to rediscover. [9]. considering the importance of petrochemical industry in our country which is one of the most significant basic industry in economic and social development and the major part of national income is supplied by petrochemical industries, it is necessary to take into consideration knowledge management seriously and to investigate available barriers to its layout. In these conditions, the importance and value of researches on knowledge management can be determined and a researcher can present research results to the managers of organizations, especially, PET. Zone companies which are dependent on petrochemical industry.

### Knowledge definition

Mayer: organizational knowledge is defined as processed information and placed from ordinary processes and steps which are applicable. Also, obtained knowledge by organizational systems, steps, products, regulations and culture. [3]. Vandr and Skipkrout : knowledge is a collection of attitudes, experiences and steps which are got together correctly and accurately. Therefore, knowledge is an appropriate guide for opinions,

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behaviors and relationships. [3].

### Knowledge management definition

Buckman defined knowledge management as distribution & development of personal and organizational knowledge process in whole organization which leads to increase its output and performance. [10]. Vandro and Skipkrou (1998) stated, believes knowledge management is trying to discover hidden capital in people's mind and to change it to organization capital, so that an extensive collection of people, who make decisions in organization, can have this valuable capital and use it. [11]. Knowledge is a flowing combination of experiences, values, available information and systematic outlooks that makes a great formwork to investigate and to use new experiences. Generally, knowledge is created and used in scientist's mind. In organizations, knowledge is not only applied in documents and information resources, but also in work approach and organizational process, moreover, norms and rules are imagined. In fact, changing data to information and then, to knowledge is a base of knowledge management. [12].

### Explicit & implied statements of knowledge

In Implied knowledge, knowledge and its output (person or organization) cannot be separated and distinguished. As a matter of fact, knowledge was taught by a person, so that it became one part of his / her abilities and specific characteristic. Implied knowledge can be gained just by hiring (recruitment) skilled people or incorporating into other organizations. It is necessary to mention that implied knowledge cannot be transferred or sold in market. Totally, in learner economy, in special conditions which changing steps are gone so quickly, implied elements, i.e. gathering knowledge remains in people's inside. However, explicit knowledge is the knowledge which was compiled and documented. Since compiling usually needs cost, just in cases it is necessary to be done and used that we face problems repeatedly and must solve them. Explicit & implied knowledge complement each other, in the other words, explicit knowledge drives from implied knowledge and it needs its mother (origin) to be useful. [4].

### Knowledge management system cycle

As it is shown in fig. knowledge management processes are placed in sequence during one cycle. Knowledge management cycle includes creation, acquisition, purification (filtration), saving, management and distribution which leads to create new knowledge and close knowledge management cycle, also, to store knowledge finally. [5]. It is not true to think that Creating knowledge is the most important activity for increasing organizational knowledge. The reality is something else. Knowledge cannot be increased just by creating knowledge; in fact, knowledge management cycle makes knowledge accumulation. It is likely that the knowledge, which was created by a researcher or expert, did not play any roles in accumulating knowledge just because it was not recognized and could not achieve knowledge management process, i.e. using and applying



### Knowledge management system cycle [5]

#### - Knowledge creation:

Knowledge is being created when people get new methods in doing duties and tasks or learn any new skills. Sometimes, external knowledge comes into an organization.

#### - Knowledge acquisition:

New knowledge must be construed so valuable and presented logically.

#### - Knowledge purification (filtration):

New knowledge must be matched with conditions in order to be useful and applicable. In this case, human intuitions (implied abilities) must be used along with real facts.

#### - Knowledge saving:

Then, useful knowledge must be saved in knowledge storage logically, so that others can use and achieve it in an organization.

#### - Knowledge management:

Knowledge, which is like a library, must be updated. Necessary investigations in order to confirm being connected and correct, must be always done.

#### - Knowledge distribution:

Knowledge must be available in any forms in order to get it when anybody needs it. (The very same resource).

### Research terms & words definition: (glossary):

- Lead (leadership): lead deals with environmental and strategic process and making decisions in company including values, goals, knowledge requirements, knowledge resources, prioritizing, allocation of resources and knowledge assets in organization. [13].

- Empowering lead: Lawler (1992) believe that necessary conditions in order to empower employees are the leads that have empowering ability and permit inferiors to make decisions. [14]. According to this, Janko (2011) believes that empowering leadership is a special characteristic and behavior that lead allow inferiors and supporters to decide and of course, divides the power among them, also guarantee to do and apply it. [15].

- Work – technology adaption: Lippert and Forman (2006) believe that work – technology adaption is organization technology ability for supporting and applying duties. In the other words, if technology supports undertaken duties, it is used accurately. [16].

- Technology – work adaption: this subject deals with different kinds of technologies, especially, to support and empower knowledge management strategies and its operations. [13].

- Adaptability: based on RYU and others' views (2009), adaptability is an area which knowledge management system according to values, personnel's knowledge, experiences of consumers and their needs match with them. [17].

- Knowledge management system application: according to WU and Wong's point of view (2006), knowledge management application is the quantity and area which knowledge management system is being applied in order to company activities. [18].

Hypothesis 1: empowering lead effects on technology – work adaption.

Hypothesis 2: empowering lead effects on adaptability.

Hypothesis 3: technology – work adaption effects on knowledge management system application.

Hypothesis 4: adaptability – work effects on knowledge management system.

### Research method

Descriptive – measurable method was used in this research. i.e., data was gathered by using measurable methods.

**Table 1: Average, standard deviation and Pierson cooperation coefficients among research variants**

| research variants                          | average | standard deviation | )1(     | )2(     | )3(     | )4( |
|--|---------|--------------------|---------|---------|---------|-----|
| 1. Empowering lead                         | 2/777   | 0/818              | 1       |         |         |     |
| 2. Adaptability                            | 2/805   | 0/777              | **0/402 | 1       |         |     |
| 3. Technology – work adaption              | 2/869   | 0/765              | **0/340 | **0/528 | 1       |     |
| 4. Knowledge management system application | 3/249   | 0/739              | **0/338 | **0/412 | **0/306 | 1   |

**Table 2: Standard, non – standard coefficients, t – value statistic, given coefficient in regression equation**

| foresighted coefficient | coefficients of regression |                  | statistic t | possibility range |
|-------------------------|----------------------------|------------------|-------------|-------------------|
|                         | non - standard $\beta$     | standard $\beta$ |             |                   |
| fixed range             | 1/988                      |                  | 9/657       | 0/001             |
| empowering lead         | 0/318                      | 0/340            | 4/466       | 0/001             |

**Table 3: Standard, non – standard coefficients, t – value statistic, given coefficient in regression equation.**

| foresighted coefficient    | coefficients of regression |                  | statistic t | possibility range |
|----------------------------|----------------------------|------------------|-------------|-------------------|
|                            | non – standard $\beta$     | standard $\beta$ |             |                   |
| fixed range                | 956/0                      |                  | 527/3       | 001/0             |
| technology – work adaption | 152/0                      | 145/0            | 046/2       | 001/0             |
| adaptability               | 560/0                      | 485/0            | 840/6       | 001/0             |

**Table 4 is the summary of hypotheses test results.**

| research hypotheses  | direction coefficient ( $\beta$ ) | statistic t | result    |
|--|-----------------------------------|-------------|-----------|
| empowering lead adaptability                                 | 0/318                             | 4/466**     | confirmed |
| empowering lead adaptability (adaptation)                    | 0/382                             | 5/ 435**    | confirmed |
| adaptability (adaptation) – knowledge management application | 0/560                             | 6/840**     | confirmed |
| adaptability – knowledge management application              | 0/152                             | 2/046*      | confirmed |

By use of different done researches and based on Janko and et al research in 2011, a questionnaire was designed, which consists of 160 main questions on a scale of 5 degree Likert, in order to investigate the effect of empowering lead on accepting knowledge management system. In this research, Statistic society includes managers of PET. Zone in Mahshahr, more than 250 managers, which based on Kukran sampling formula, 158 questionnaires were distributed to the managers and 154 questionnaires were given back, it shows that return rate index is 97 %. In this research, twenty questionnaires as a primary sample were distributed experimentally which its credit rate was obtained by use of SPSS software and  $\alpha$ - Kronebakh formula is 0/901 that shows the high creditability of this questionnaire. Research data were analyzed by using SPSS software, descriptive statistic methods such as average, Pierson cooperation coefficients, standard deviation, also, inferential statistics such as t – value statistics, coefficient of regression, standard and non- standard coefficient.

#### Research model

Significant research model was derived from done research by Janko and et al. [15].



#### Research hypotheses

##### Research results

Table 1 indicates average (mean), standard deviation and Pierson cooperation coefficient among all research variants. Considering gained average (mean) of empowering lead variants, adaptability and technology – work are not in an ideal condition, because gained average (mean) in this sample is lower than scale. (Lower than 3) and shows common (available) society condition in these variants is lower than average range and are not in an ideal condition. However, for knowledge management system application, the average is in a favorable condition. The rest is Pierson cooperation coefficients and investigate the relation among all research variants two by two.

All these coefficients were meant in certainty level, 99 % and determined by this sign (\*\*). (The amount of meaning is less than 0/05). Number 1 is on a main diameter of this table which shows each variant cooperates with itself. According to results, it can be said that empowering lead variant has direct relation with adaptability, technology – work adaption and knowledge management system application in certainty level, 99 %. Adaptability coefficient has direct and significant relation with technology – work adaption coefficients and knowledge management system application in certainty level, 0/099. Technology – work coefficient has direct and significant with knowledge management system application coefficient in certainty level 0/095.

As coefficients of regression table shows; empowering lead coefficient ( $B = 0/318$ ) and in  $P > 0/001$  level affect technology – work adaption. (Less than 0/01). Also, being positive this coefficient shows that technology – work adaption increases by increasing empowering lead. So, technology – work adaption will decrease by decreasing empowering lead. Therefore, the first hypothesis is confirmed.

As coefficients of regression table shows; technology – work adaption coefficient ( $B = 0/152$ ) and in  $P > 0/05$  level have

significant effect on knowledge management system application. (Less than 0/05). Also, being positive this coefficient shows that knowledge management system application increases by increasing technology – work adaption. So, knowledge management system application will decrease by decreasing technology – work adaption. Therefore, the hypothesis that is based on this relation is confirmed and technology – work coefficient remains in regression model.

Also, Work – adaptability coefficient ( $B = 0/560$ ) and in  $P > 0/005$  level have significant effect on knowledge management system. (Less than 1%). Also, being positive this coefficient shows that knowledge management system application increases by increasing work adaptability, and will decrease by decreasing work adaptability. Therefore, the hypothesis that is based on this relation is confirmed and work - adaptability coefficient remains in regression model.

### Research hypotheses results Summary

### Conclusion & Recommendation

Nowadays, knowledge management is one of the newest and most important management matters. In fact, knowledge management defines as a reaction to increasing changes of environment around common institutions. Changes in management performances are necessary and avoidable.

Different organizations need effective knowledge management strategy in order to exist, development and adaptation to around competitive changes. So, this essay suggests that institutions should emphasize and signalize the role and performances of organizational leads instead of using power and lawful authority in order to perform cultural changes to accept knowledge management system among employees

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