Impact of Knowledge Management on the Performance of Manufacturing Companies in Guilan Province

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ABSTRACT

Complexity, Diversity and Increasingly rapid changes is characteristics of today's environment organizations, it made a situation that Neglect. Laxity and lack of attention to it can remove every organization from Dial competition.
In this research, researchers are upon to measure the Impact of knowledge management on the performance of manufacturing companies in Guilan.
This is a descriptive research, Correlation analysis with emphasis. The under research social are selected from 57 companies that have research development unit. In this research, for collecting data we are using random sampling, and 39 companies of 57 companies are compared, the tool of collecting data was Questionnaire and its reflect are approved, for the data analysis used Descriptive statistics, inferential method by spss19 software and visual pals 1.4 Information are showing us that there is meaningful relation between capacity of knowledge management and companies performance.
KEYWORDS: knowledge management – capacity of knowledge management – organize performance – manufacture companies, Performance evaluation, empowerment of knowledge managers organizations

INTRODUCTION

In current century the speed of changes are increased and competition environment got so broad and complicate because of that the companies which cannot Conformity with conditions soon or late will disappeared from business circle, in this situation Opportunities and threats are the front of organizations, and every move without attention to opportunities and threats will have Irreparable damage on organizations (Talebi & Koohestani, 2007).

The point of every organization is to collect profit or convenient place with client’s satisfaction Factors just like: low quality and value of services, increase in organization Disbursement, increase in Production time, Failure to handle complaints, and failure of Timely notification, and they will don’t care about costumer needs, and it will be the reason of failure in reaching to the organize points (Barghi, 2008). Therefore the point is which factor would be the cause of successfully in organization.

Same features between organizations with hard competition and bad economy situation they will act successful, this is the Excellency reason of organizations and that why they called as good functional organizations, excellent organization is a organization which find the adaptation way with occurring fast changes Create a coherent management structure and purposeful, Features continuous improvement and good behavior with employee is a major result in same organization (Esakhani, 2008).

Trend can be seen by examining the performance of companies in Iran, Volatile and controversial trend rate of growth and investment returns over the past ten years however experts says the potential of current companies in Iran’s fund bazaar In terms of performance is more better than it appear (Malekakhlagh & Rajabzade, 2011).

Statistical results in the industrial workshops in 2004 and 2006 that Released from Statistical Center of Iran shows that the companies in term of performance are not that much convenient, according this reports number of employee of this manufacture companies are decreased Surplus Value and value of products are decreased too, and it shows the unsuccessfully of these companies (Guilan organization of industries and mines). Iran between 14 countries that are under study include (Iran, Armenia, Azerbaijan, Georgia, Jordan, Kazakhstan, Kyrgyzstan, Lebanon, Oman, Pakistan, Arabia, Syria, turkey, Emaret) Iran

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is in the middle innovation and this is not a good place from the constant goals in future 20 years Iran is too far from approach to the stage of economy, Scientific and technology in Asia area, and one of most important topic is the result stage for Iran’s country, however some of the area countries (specially Arabians) they have no complete plan for innovation, then they have a normal stage and not so convenient as Iran’s and it’s because of their weak political ways (Bakhshi et al, 2011).

Which scholars talk about the factors affecting performance are not less, Peter Darker in his book says: we are entering to the age of knowledge economy In which intangible assets constitute the main economic source and other traditional functions in produce like: earth, work force and fund that are the next level of importance, And in such condition intangible assets The most obvious non-tangible capital assets is human asset

For the key factor it counts as development of organization performance (Beygi & Fetras, 2009).

Sufi and Lyon told that the mission statement of the strategy is an integral member, because both of them have a significant impact on performance (Sufi and Lyons, 2003). argon Civilization treatment go an organization known as the person Optional behavior and it express that this kind of behaviors are not in direct focus of Formal reward system but it will be develop organization performance (Norman & Blakely, 1995) kingies and his partners believes that the features of an organization workplace which perception by people, (organization environment) it known as effective rules in organization performance (Kangis et al., 2003)

Drucker Considers five factors affecting in organization performance on 1- Competitive. 2- Innovation 3- Productivity 4- Liquidity situation 5- Profitability (Drucker, 1995).

The results and findings of a survey conducted by Hoda ali elahi shows that knowledge management KM also have has positive effect on organization’s performance (Alielahi, 2010).

Wig believes that KM can make organizations to perform better with acting intelligent and within innovation.

KM in Improve the quality of work, increasing performance, being update, Increase the effectiveness Customer satisfaction and Improve decision making (Abotorabi, 2008).

Liyao with his partners according their research receive this result that companies can increase their actions by knowledge management and innovation (Liao et al, 2010).

Since the companies have important effect on economy Financial crisis and bankruptcy of this companies provide damage to the Shareholders and managers of the economy, therefore this companies can acting good their rules in economy that have convenient performance, by the case goal of the research effects of knowledge management on performance of manufacturers companies, so the researchers are follow to answer of this question that can explain their performs?

**TOPIC LITERATURE: DEFINITION OF KNOWLEDGE MANAGEMENT**

There are so many definition about KM in texts that known KM as a process which help organizations to identity, select, Organizing, distribution, moving information that are without structures (Turban & Mclean, 2002).

KM are a bunch of performance that the result will be collect knowledge, making new values, increasing capacity of competition (Hammer & Stanton, 2004).

There flexible definitions about KM but According to the experts and the viewing angle And the cost of a specific element type definitions to distinguish them from each other (O’dell, 1996).

**Table (1) definition of knowledge management (Ghasemi and Ansari, 2009).**

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jones (2005)</td>
<td>Integrated and systematic approach to diagnosis management and Sharing of intellectual property includes all databases.</td>
</tr>
<tr>
<td>Danrom (2005)</td>
<td>Applicant the systematic and purposes to guide and control Tangible knowledge assets and intangible with the goal of using knowledge inside of organization and outside to create new values creativity and improving.</td>
</tr>
<tr>
<td>O’dell (2000)</td>
<td>KM is a systematic Approach to find perception and using that knowledge to create value.</td>
</tr>
<tr>
<td>Smith (2003)</td>
<td>Mechanism for creating a work environment in which knowledge and expertise to be distributed easily and create conditions that enable knowledge and information Can be placed at the right time.</td>
</tr>
<tr>
<td>Choo (2005)</td>
<td>Management framework structure for their actions and process in which individual, group, an organization that the organization of what he knows he can learn and when they new education they will collect for the costumer make deals this kind of Management framework will integrates process of developments</td>
</tr>
<tr>
<td>Beckman (2004)</td>
<td>Mechanism for reaching to proficiency and knowledge and Experience and new capacity will have better performance for innovation and value makers.</td>
</tr>
</tbody>
</table>
In other definition that belongs to management major “knowledge management “try of organization strategy that are trying to control property of minds in side of employee and supporters to save and distribution of knowledge = KM that make employee smarter and in result, below notices This is a knowledge management site covering the theories, frameworks, models, tools, and supporting disciplines that are relevant to both the student and the practitioner. The goal of this site is to provide a comprehensive overview of knowledge management by examining its objectives, scope, best practices, knowledge management mind tools, (Afsharzanjani & Nozari, 2004). Dimensions of knowledge management:Knowledge management is having the following dimensions (Afraze, 2005).

Knowledge discovery:
Process of finding necessary knowledge inside of your organization and appearing your needs to special knowledge discovering knowledge is to identity the source of inside and outside knowledge .

Creating knowledge: The end result of a well-designed KM program is that everyone wins. In this case, caddies get bigger tips and deals on merchandise that can have knowledge in business part and sale by supporters can discover it.

Gaining knowledge: processes that can show the knowledge that organization have for example a organ hiring some expert people in design in fact it gain their knowledge

Saving knowledge: comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizations as processes or practices even libraries that save it all.

Knowledge sharing and exchange: knowledge should shares easily in organizations when it be complicate that a huge part of knowledge from view of experts they receive the special process and sharing process in interviews question and answers with experts or even sending email to the members of organization.

Application and developing of knowledge: Process of receiving knowledge from others and they will develop their works and use it in broad since that should make improving in profit making should increase the effectiveness or efficiency of the work on the show.

Analysis of knowledge: At the end of each cycle of knowledge must be obtained in terms of growth rates that exist in the organization to be assessed. Knowledge assessment process is different for each type of cost analysis and income goals. Deals with qualitative and quantitative results Base and situation to create a organization

Create infrastructure for knowledge management
Management of knowledge is a dynamic base and need to construct very well from factors like humans Knowledge may be accessed at three stages: before, during, or after KM-related activities. Different organizations have tried various knowledge capture incentives, including making content submission mandatory and incorporating rewards into performance measurement plans. Considerable controversy exists over whether incentives work or not in this field and no consensus has emerged.

One strategy to KM involves actively managing knowledge (push strategy). In such an instance, individuals strive to explicitly encode their knowledge into a shared knowledge repository, such as a database, as well as retrieving knowledge they need that other individuals have provided to the repository. This is also commonly known as the Codification approach to K (Golchinpor, 2007).

Factors in the success of the project:
1. The combination of technical skills. Economic and human
2. Joining in knowledge strategy
3. using of effective KM instruments
4. knowledge-based culture in the organization
5. Benefit from the technology infrastructure necessary
6. Convenient organize structure
7. Support of MA management
8. Benefit from the technology infrastructure necessary
9. Process-oriented
10. Clearing of view and expression
11. Motivate tools
12. Layer of knowledge structure
Researchers foundation Hasanzade(2006) shows that there is a relationship between different organizations to provide understructures (technology and cultural) there is a different meaningful Monavarin (2005) results show that organization culture and IT and employee power and education on management have so much effect on management factors for performing Study of Naghib(2003) shows that most important factor for performing KM is Participation is the right combination of human and technological tools for knowledge management attitude to various aspects of knowledge management is an important prerequisite Research findings Pauleen & mason (2003), Bhatt(2001) shows it that most important block for performing KM in organizations is factors of cultural and managements (Niazzazari & Amooyi, 2007).

From the broad since we can say 4 important factors (human source based on knowledge, culture based on knowledge, structures based on knowledge, technology based on knowledge are the empowerment of KM.

- **The first factor of knowledge-based human resources:** Capability of human power for work in new conditions and using of knowledge and information there is a real factor in application KM (Liao et al, 2010).

We focus on building effective and state of the art technology solutions to the exact specifications of our customers and delivering them on time and budget. Knowledge management is the name of a concept in which an enterprise consciously and comprehensively gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills, it was believed that few enterprises actually had a comprehensive knowledge management practice (by any name) in operation. Advances in technology and the way we access and share information has changed that; many enterprises now have some kind of knowledge management framework in place. Knowledge management involves data mining and some method of operation to push information to users for KM and proficiency (Broomand & Ranjbar, 2009). Within the basic Theoretical have more important effect in Manpower Bergern (2005) Holowetzkli (2002) Drucker (1995) and Danishifar (2006) They all believe that manpower is the important understructure in KM research of Niazzazari Amoyee (2007) shows that our systematic education are not powerful and are not Applied and this is possible Some vendors are offering products to help an enterprise inventory and access knowledge resources., for example, are products advertised as providing the ability to organize and locate relevant content and expertise required to address specific business tasks and projects. They are said to be able to analyze the relationships between content, people, topics, and activity, and produce knowledge (Niazzazari & Amooyi, 2007).

- **Second factor, culture based on knowledge:** other effective factor in management are is Organization cultural treatment with KM that theoretical factors are on the focus (Liao et al, 2010).

Darami from 1997 to 2005 evaluate eleven factors of successes in knowledge management the one of them was culture. Akhvan and Jafari (2006) known cultural factors as the factor of failure KM we determined that we had created too many combinations and decided to reduce the number. Since our first phase is customer-facing, we selected Topics/Categories that the customers would recognize and understand. Initially, I expect most people to use keywords to search; however, as the number of articles grows, I anticipate an increased. Bozbora (2007) will show that the managers afraid of exchange between themselves and their employees and lose the knowledge control of company Suzan and her partners (2004) in their work as knowledge management had a relation circle in culture and organize learning under impact of social condition learning and education happening , (Jenson & Almen 2004)

In successful models of KM The culture refers to sharing and using knowledge-based support from senior managers, resource allocation, support of leadership and resources, this kind of organize culture and involvement of employees is the essential factors in updating knowledge management which Hong (2005) told about them According to government’s focus to The knowledge-based economy in the future of country development The benefits of knowledge management and a better understanding of the particular cultural factors and their relation to knowledge management (produce and exchange) made a base and powerful foundation for performing KM successfully (Goodarzi et al, 2009).


- **Third factor. Structure based on knowledge:** Knowledge Management is the collection of processes that govern the creation, dissemination, and utilization of knowledge. In one form or
another, knowledge management has been around for a very long time. Practitioners have included philosophers, priests, teachers, politicians, scribes, Liberians, (Liao et al, 2010).

So if Knowledge Management is such an ageless and broad topic what role does it serves in today's Information Age? These processes exist whether we acknowledge them or not and they have a profound effect on the decisions we make and the actions we take, both of which are enabled by knowledge of some type. If this is the case, and we agree that many of our decisions and actions have profound and long lasting effects, it makes sense to recognize and understand the processes that effect or actions and decision and, where possible, take steps to improve the quality these processes and in turn improve the quality of those actions and decisions for which we are responsible make is easier (Ebert and Griffin, 2005). According to the research of Jafari and his partners there is a meaningful relationship between Organizational structure and knowledge management. They recognize that if the complexity and formality of a organization be less, Instead, the communication is open and flowing. Knowledge management in organization can be implemented with minimal problems from this point in order to promote growth and increase the organization's service quality. These findings have been confirmed in another study, Arbabhshirazi was shown in his study, including the effective component in the development of knowledge are Processes, structures and infrastructure, and also The results of Practical studies showed that the processes and structures to improve knowledge creation and development of knowledge that have been effective. Baltazard and his research partners in America have been as clear structures and procedures that are flexible and work teams can consist of interest rate to increase organizational learning and knowledge management process. And also both a point out that has structural organization with a focus on low and open communication; knowledge management strategy is having more success (Jafari et al, 2011).

- Fourth factor, structure based on knowledge: Is the process that of an institute That specifies how knowledge is distributed throughout the organization and how knowledge can be achieved that include IT technology and its capacity (Liao et al, 2010)

An appropriate and supportive, allowing the application of information technology in one or more stages of the knowledge management cycle provides. Knowledge base include the Type of computer equipment and information systems manually archive in automatic systems The information storage capacity speed access and trace information affected and the type of security system used to determine. For example storage of all information in a unit database it make increase possibility of eliminate information in cause of a sudden like fire or corrupt hardware it case we should attention on capacity of system software include technically capability usage of network rate of easiness for use. the technology that are using in KM circle include Communicative technology And enhanced participation, such as Intranet and other local networks A set of tools needed to acquire, change and transfer of information and data bases that have capability of storage and Fast tracking, else of this technology there is special tools for make easier and faster the cycle of information, for example: the security systems have the possibility of coding on data and information and identify users and the software analysis the Accuracy and detail required due to usage in different levels of KM cycle. One of the other primary technologies that are use in KM cycle can refer to support software's that help to the managers and Officials for their decisions Technology expert system help to the employees of the staff and the special circuit knowledge for making complex professional decisions. Reserve equipment information must have access to easy and convenient transportation and storage capacity and enjoy high (Zaferian et al, 2008). Theoretical and numerous studies have pointed to the importance of information technology Downport (1998), Malhotra (2002), Adli(2005), they all believe that speed of information processing in KM is structure of KM, monavarin research (2005) And livotiz (1991) shows that IT is a important factor to Establishment of KM and research of yahya and goe( 2002) show that KM is completing knowledge that mixed with management of manpower and information technology IT (Niaazazari & Amoe, 2007).

**MATERIALS AND METHODS**

This research made of according description way of research and Analytical Branches based on solidarity and purpose of practical. The statistical population of Guilan manufacturing companies that are Research & Developing unit which are including 57 companies in Guilan province with care about social content Sample through the following formula:

\[
 n = \frac{Z^2 \cdot S^2 \cdot N}{\pi} \left( e^2 N - e^2 + \left( Z^2 - S^2 \right) \right)
\]

10639
Following the above formula, the study sample needed at least 35 companies that are considering the possibility of returning question forms 42 of this companies are used of randomize sampling and finally dates of 39 companies are using in final analysis. In current research for collecting data from the companies managers that had research and develop unit of Guilan province Questionnaire has been used, for this purpose we use lieu questionnaires that have equal like ret from complete agree and complete disagree. this questionnaire have two part: general questions and specialization questions, the first part is (General questions) refer to company properties and second part include 30 questions which made according lieu standard questionnaire, Validity of the questionnaire from a group of experts and skilled professionals has been approved. Questions to measure each variable reliability using Cranach’s alpha coefficients are as follows.

Table (2) Summary of Cranach’s alpha coefficient of research variables

<table>
<thead>
<tr>
<th>variable</th>
<th>Questions</th>
<th>Cranach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge based Technology</td>
<td>1-6</td>
<td>85/5</td>
</tr>
<tr>
<td>Knowledge based Structure</td>
<td>7-9</td>
<td>84/3</td>
</tr>
<tr>
<td>Knowledge based Culture</td>
<td>10-12</td>
<td>90</td>
</tr>
<tr>
<td>Knowledge based Human Resource</td>
<td>13-15</td>
<td>84/4</td>
</tr>
<tr>
<td>Knowledge management Capability</td>
<td>16-25</td>
<td>91</td>
</tr>
<tr>
<td>Firm Performance</td>
<td>26-30</td>
<td>89</td>
</tr>
</tbody>
</table>

Then after fix questions with research variables final question form that include 30 questions and disturbed between Statistical Society.

In this research for analysis we are using software spss19 and visual pls 1.4

**FINDINGS**

Descriptive statistical results show that the impact of technology and knowledge-based variable Knowledge management capability that is equal to +3.1% on the T value that have 0/ 317 and in Interval (196 & -196). Therefore the hypothesis of research are not acceptable and other hypothesis with t interval are accepted.

<table>
<thead>
<tr>
<th>Row</th>
<th>Hypothesis</th>
<th>Efficacy%</th>
<th>t</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge based Technology and knowledge management Capability</td>
<td>3/1</td>
<td>0/317</td>
<td>rejection</td>
</tr>
<tr>
<td>2</td>
<td>Knowledge based Structure and knowledge management Capability</td>
<td>25/9</td>
<td>1/969</td>
<td>Accepted</td>
</tr>
<tr>
<td>3</td>
<td>Knowledge based Culture and knowledge management Capability</td>
<td>0/33</td>
<td>2/299</td>
<td>Accepted</td>
</tr>
<tr>
<td>4</td>
<td>Knowledge based Human Resource and knowledge management Capability</td>
<td>32/1</td>
<td>1/981</td>
<td>Accepted</td>
</tr>
<tr>
<td>5</td>
<td>knowledge management Capability and Firm Performance</td>
<td>59/2</td>
<td>4/465</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**DISCUSSION AND CONCLUSION**

1. First hypothesis: Technology based on knowledge have positive impact on capacity of KM. According to the model in meaningful condition consists of activities focused on the organization gaining knowledge from its own experience and from the experience of others, and on the judicious application of that knowledge to fulfill the mission of the organization. These activities are executed by marrying technology capability that is equal to 3.1% on the T value that have and are not acceptable, organizational structures (Downport 1998) Mahotra (2002) Adli (2005) they believes that IT can make fast the process, research of yahya and goe 2002 show that KM is completing knowledge that mixed with management of manpower and information technology IT and cognitive based strategies to raise the yield of manpower and IT (Niazzari & Amooyi, 2007).

2. Second hypothesis: examine of second management based on knowledge has a positive effect on the ability of KM according to the model in meaningful condition. This suggests that the structure of knowledge based on knowledge management capability is equal to 29% and second hypothesis are acceptable and otherwise in other researches this topic is proved, including: Jafari and his partners researches (2011) shows that there is a meaningful relationship between organization structure and knowledge management. in Arbashirazi study's appear that effective references in creating knowledge development count as: processes, structures and under structures and also results of Field Studies are effective in improve of level of knowledge it means
creation of knowledge development Balthazar and his partners in America is their research express that structure can Interest rates for organizational learning and knowledge management processes to be increase and also both refers that in organizations which have structure by less focus and open relation, knowledge management strategy have more successfully (Jafari et al, 2011).

3. Third hypothesis: Knowledge-based culture Knowledge management has a positive effect on the ability according to the model in meaningful condition. This suggests that the impact of knowledge-based technology on knowledge management capability equal to 33% therefore third hypothesis is acceptable. Darmi from 1997 to 2005 identify eleven factor of successfully and one of them is culture. Suzan et al (2004 ) they had a circle in their works that called learning of social condition. Jens and Alfenman (2004) in successful models of KM use of transmission and use of knowledge and support from MA managers Including resource allocation. Leadership and Learning Support Godarzi and partners (2009 ) Lopez (2004) , Downport (1999 ) Liorbortz (1991), they all believe that successfully in KM Requires a strong organizational culture to support knowledge management Adli (2005 ), Hasanzadeh (2006) they know the organize culture as important infrastructure for knowledge management, Pawling and mason(2002) show that the main obstacle in implementing knowledge management. is Organizational culture( Niazaazari & Amooyi, 2007)


5. Fifth hypothesis: Capacities of knowledge management have positive impact on performance of company. according to the model in meaningful condition .This suggests that the impact of knowledge-based technology on knowledge management capability equal to 59/2 % therefore forth hypothesis is acceptable .The results and findings of a survey conducted by Hoda ali elahi shows that knowledge management KM has positive effect on organization’s performance. Liao and his partners due to their research take the result which shows companies Can increase performance through knowledge management and innovation

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