International Journal of Economics, Commerce and Management
United Kingdom Vol. III, Issue 10, October 2015
http://ijecm.co.uk/ ISSN 2348 0386

MEASUREMENT OF ORGANIZATIONAL MATURITY IN KNOWLEDGE MANAGEMENT IMPLEMENTATION

A CASE STUDY ON IRAN POWER DEVELOPMENT COMPANY

Mohammad Reza Yavarzadeh
Farabi Institute of Higher Education, Alborz, Iran
m.reza.yavarzadeh@hotmail.com

Yashar Salamzadeh
Farabi Institute of Higher Education, Alborz, Iran
yasharsalamzadeh@gmail.com

Mahmood Dashtbozorg
Farabi Institute of Higher Education, Alborz, Iran
Dashtbozorg.mba92@hotmail.com

Abstract

Organizational maturity is a new field deemed as a preferred strategy in organizations and has been supported by management science experts. In recent decades, many have come to believe that knowledge management in an organization plays a crucial role in the success of a business. On the other hand, for large organizations it is critical to have a knowledge management system and measure the organizational maturity at different times. Determining the organizational maturity level makes organizations to identify their strengths and weaknesses and formulate strategies in consistent with it. The purpose of this study was to investigate the relationship between organizational maturity and knowledge management implementation. Statistical population was 350 including executives, vice presidents, directors and employees of Iran Power Development Company of which 183 were selected by Cochran formula as the sample. This is an applied research design and the methodology is descriptive-survey. The results indicate that there is a significant relationship between organizational maturity and knowledge management maturity and its dimensions in Iran Power Development Company. The

highest correlation coefficient was for the organizational maturity with the leadership reflecting the important role played by leadership in organizational maturity and knowledge management maturity. Therefore, it can be concluded from the findings that as the organizational maturity is at a higher level, a higher level of knowledge management maturity will be achieved.

Keywords: Organizational Maturity, Knowledge Management, Knowledge Management Maturity, Iran Power Development Company

INTRODUCTION

Throughout the history, many organizations have tried to define long-term and short term goals and design strategies to help achieve those (Demir & Kocabaş, 2010). Due to the rapid, widespread and even unbridled developments in all fields of science occurred in recent years, only mature organizations that have competent and experienced workforces as well as creative managers who have trained their minds to fertilize their own organizations are able to adapt (Ghouchani and Ghouchani, 2012). Maturity models have become specifically an essential tool in assessing the current capability of organizations which help them to realize changes and improvement (Jia et al., 2011). The concept of maturity used within an organization refers to the state in which the organization is in perfect condition to achieve its goals. Maturity is known as achieving (or having) maximum development (Andersen and Jessen 2003).

Organizational maturity is a new category deemed to be a superior solution in organizations and has been approved by experts and the management science. Organizational maturity introduces special skills and their relationship with cases such as organizational culture, job satisfaction, leadership style, management, efficiency etc. leading to meet the needs of the organization by providing better organizational models and strategies (Hosseini, Yarmohammadian and Ajami, 2009). Mature organization is the most suitable place where the organization can achieve its goals. In the process of development, maturity is considered of the utmost importance by the organization (Soltani and Bahramnezhad, 2010). Organizational maturity may be measured as a result of organizational structure, organizational culture, technology storage and human resources which in turn can be obtained from the life cycle process of knowledge areas (Jia et al., 2011).

Today, the concept of knowledge is treated systematically as if it is a tangible resource and the exploration in the field of knowledge management is used to improve and strengthen competitiveness (Akbari and Moradi, 2013). In recent decades, many have come to believe that knowledge management in an organization plays a crucial role in the success of a business (Floyde, Lawson et al. 2013). Knowledge management in the new form is a discipline that helps

organizations to change and adapt to new knowledge-based economy (Hasangholipour, Abedi, Jafari and Khatibian, 2009). Knowledge management capabilities in an organization are referred as the main source of innovation (Schmitz, Rebelo, Gracia, & Tomás, 2014). Knowledge management is defined differently from organization to another and knowledge management programs are typically tied to the organizational objectives (Terzieva, 2014).

According to the research purpose, the main question can be stated as is there a significant relationship between organizational maturities with the implementation of knowledge management in Iran Power Development Company? In large organizations, a system of knowledge management and measurement of organizational maturity at different time sections is vital. Therefore, considering that Iran Power Development Company is one of the most important organizations in the power industry, the researcher concluded that the measurement of organizational maturity and its relationship with the implementation of knowledge management in the organization seems necessary.

Knowledge Management

In order to increase their competitive capacity, organizations have to implement a knowledge management system. Knowledge management system is a set of infrastructures and tools that supports knowledge management activities (Calvo-Mora, Navarro-García, & Periañez-Cristobal, 2015). The basic assumption about knowledge management is that organizations their knowledge is managed better are more successful in handling the workplace challenges. Knowledge management promotes an integrated approach in order to identify, acquire, retrieve, share and evaluate all of an enterprise's information assets (Abdi and Safai, 1393).

Knowledge

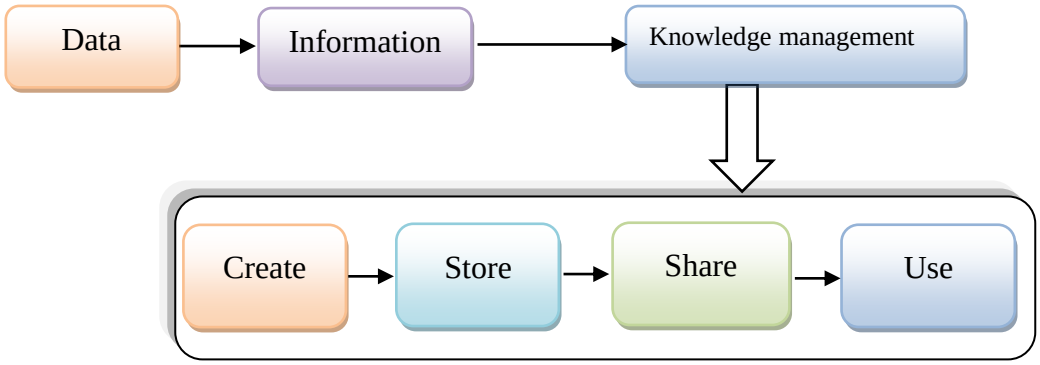
Knowledge is a concept beyond information. Information is the result of organizing data in a meaningful way; however, knowledge is resulted from the interpretation of information based on personal understanding influenced by the character and personality of its owner (Nonaka & Konno, 2009; quoted by Babagheiby, 2011). Knowledge is the information justified and personalized through the system of information adoption (Floyde, Lawson et al. 2013). Knowledge is the combination of information and thinking and in fact is a personal interpretation of information based on experiences, skills and personal capabilities (Davarpanah, 2005).

Definitions of Knowledge Management

As with knowledge, knowledge management is difficult to define (Kahreh, Shirmohammadi, & Kahreh, 2014). The definition of knowledge management differs from one organization to

another. Knowledge Management programs are typically tied to unpredictable objectives and results (Terzieva, 2014). According to Levinson, there is no universal definition of knowledge management (Vasudevan and Chawan, 2014). Anand and Singh pointed out that knowledge management is difficult to understand completely through the study of definitions, as knowledge management is linked with other elements (Anand and Singh, 2011). Knowledge management is the study of strategy, process and technology for acquiring, selecting, organizing, decision-making and using expertise and vital information for business in order to improve the quality and efficiency of the organization (Riches, 2004). Knowledge management refers to a set of knowledge-related measures and activities using special tools and techniques so that the knowledge is available when the organization needs to solve problems or find solutions. Knowledge management framework is shown in Figure 1 (Schmitz et al., 2014). Knowledge management is deeply related with concepts like company learning, company memory, information exchange and collaborative work (Edgar Serna 2012). These frameworks make a significant contribution to the understanding of the advantages of knowledge management and maturity assessment (Chen and Fong 2012).

Figure 1: Knowledge Management Framework (Schmitz et al., 2014**)**



Knowledge management strategy of an organization is planned consistent with the original objectives and learning over time. This strategy continually co-aligns the firm's knowledge-based resources with the environment (Chen and Fong 2015).

Organizational Maturity

Webster (1998) defines maturity as being ripe or having reached the state of full natural or maximum development. Maturity is the quality or state of being mature (Andersen and Jessen 2003). Maturity models are used in a wide range of application domains including cognitive science to business and engineering programs (Pigosso, Rozenfeld et al. 2013). Maturity

models have turned out to be an essential tool for assessing an organization's existing capabilities and helping them to implement changes and improvement (Jia, Chen et al. 2011). Maturity models identify and define different levels of bottom up maturity as well as any level of behavioral maturity institutionalized in the organization (Ngai, Chau et al. 2013). Maturity Model is a (simplified) representation of reality to measure business processes. Maturity level or stage is used to describe different levels of skills obtained (Kluth, Jäger et al. 2014).

The concept of maturity in an organization refers to the state where the organization is in ideal condition for achieving its goals (Andersen and Jessen 2003).

Maturity Models

Capability Maturity Model (CMM)

According to the processes defined in capability maturity model (CMM), there are five levels defined for organizational maturity:

1. Initial: The first possible level for an organization. At this stage there is no legal rule and even a chaos exists, so to get to this stage requires no original process.
2. Repeatable: in this level the organization is partially regulated. In other words, the organization can repeat previous successes in similar circumstances.
3. Defined organization: At this level, based on some regulations governed on the organization, guidelines and procedures and standards are defined and documented across the organization and services provided can be consistently organized and promoted.
4. Managed: At this level the organization is in a position that can detect and improve quantifiable qualitative objectives. In other words, it can assess the quality quantitatively.
5. Optimizing: At this level, organizations can plan short and medium term objectives and set specific goals based on the planning. So the organization can offer new technology or service to have continuous improvement (Armisread, 1999).

Capability Maturity Model Integration (CMMI)

The model focuses on engineering guidelines, software engineering, integrated product and process development processes, and organizing suppliers. In addition, this model provides guidance for process management and project management (Ramanujan, 2003). CMMI contains a framework that is able to develop models and related training and appraisal materials. These models reflect the content of body of knowledge (Paulk & et al, 1998).

People Capability Maturity Model (P-CMM)

People Capability Maturity Model helps organizations to identify the needs of organizational maturity and enhance the maturity of their workforces. This model assists organizations to characterize the maturity degree of their workforce practices, develop a planning for continuous improvement, prioritize activities related to development, integrate the workforce development with the improvement process and create a culture of excellence (Couturiaux, 2005). Organizational Maturity Model of P-CMM is a model of organizational change. The model provides a map of changes for an organization by continuously improving its labor force activities (Yarmohammadian et al., 2008).

Decision Making Capability Maturity Model (DMCMM)

Decision Making Capability Maturity Model deals with two areas: maturity levels related to decision making ability and levels related to knowledge management maturity. Five levels of Decision Making Capability Maturity include: Ad-hoc, planned, defined, sustained decision making, controlled decision-making. The four levels of knowledge maturity linking these levels are: the ability to receive and absorb individual knowledge; to organize and enhance collective knowledge; to measure and evaluate knowledge, to reapply the earlier effective decisions.

Each level is broken into four categories of activities that include knowledge learning, knowledge storing, knowledge assessment and retrieval and reuse of existing knowledge. These models are developed with the aim at improving decision-making ability of the organization through appropriate management of decision system-supporting knowledge (Javedani et al., 2009).

General Knowledge Management Maturity Model (G-KMMM)

It is a general knowledge management maturity model which divides the organization's maturity into five levels of initial, awareness, defined, established/managed and sharing/optimization and defines the extent of development at every level in three dimensions of process, technology and organization. Skipping one step to the next is not allowed without intermediate process as the balance of each step is considered as prerequisite for the higher step (Ping & et al, 2009).

REVIEW OF LITERATURE

Rezaee Manesh and colleagues (2012) examined the application of knowledge management in measurement of organizational maturity among 112 automotive parts makers. The results showed a high correlation between knowledge management activities and organizational maturity (Rezaee Manesh et al., 2012).

Hosseini and colleagues (2009) in a study examined the relationship between organizational culture and organizational maturity of staff in Isfahan University of Medical Sciences hospitals. The results indicated that 5 hospitals had average and 6 hospitals had weak culture. The level of organizational maturity of Isfahan university hospitals was also measured average. The findings showed that there was a significant relationship between organizational culture and organizational maturity (Hosseini, Yarmohammadian and Ajami, 2009).

Hatam Pour et al. (2011) in a study examined and identified the needs of organizational maturity levels of Medical Records Department staff in Isfahan public hospitals and determined their strengths and weaknesses and skills using PCMM model. The findings showed that the mean score of skills and capabilities of Medical Records Department staff in Isfahan public hospitals in the second level of maturity was 35 out of 56. Medical Records Department personnel of Isa Ibn Maryam Hospital with a mean score of 55 had the highest level of maturity at the second level, managed level, of PCMM model and the staff of Medical Records Department of Shariati and Kashani Hospitals with the mean score of 24 were at the lowest level. There was no significant relationship between organizational maturity and the characteristics of Medical Records Department staff of these hospitals. (Hatam Pour, et al., 2011).

Soltani Nejad and Bahrami (2010) in a study measured the impact of organizational maturity on each of the eight achievements of maturity in Mobarakeh Steel Company. The results showed that the impact of individual maturity on the organizational excellence was 47.86%, the impact of process maturity on the organizational excellence was 49.36% and the impact of organizational maturity on the organizational excellence was 49.44% (Soltani Nejad and Bahrami, 2010).

Salavati and Haghnazar (2009) examined the underlying factors of knowledge management, including organizational structure, organizational culture and information technology in the units of National Iranian Oil Company. The results of this study suggested that organizational structure and culture had less preparation than information technology to use Knowledge Management in these units (Salavati and Haghnazar, 2009).

In the other research by Muammar Hur et al. (2011), they explored the feasibility of establishing a knowledge management system in Department of Education in the province of Ardabil. Based on the findings of this study, the establishment of the components of organizational learning, human resources, organizational culture was above average, the establishment of the components of policies and strategies of knowledge management was at average and the establishment of the components of information technology and leadership was lower than average (Muammar Hur et al., 2011).

Abbas Pour et al (2011) examined the impact of different aspects of social capital on establishing knowledge management in the Islamic Republic of Iran Railways Company. The results of this study showed that in this company there is a significant positive relationship between social capital and organizational readiness for the establishment of knowledge management. It means that as social capital within the organization increases, organizational readiness for the establishment of knowledge management in the aspects of organizational culture, structure, organizational infrastructure, change content and support for change increases too (Abbas Pur et al., 2011).

Gressgard (2014) examined the relationship between knowledge management and the safety compliance in high-risk distributed organizational systems. The results indicated that safety compliance is influenced by the use of system of knowledge exchange and degree of knowledge exchange in the organizational system, both within and between groups. System usage can be very predictive and safety compliance seems to be more strongly related to knowledge exchange within groups than between groups (Gressgard, 2014).

Sokhanvar and colleagues (2014) studied the importance of knowledge management processes in project-based organizations. The results showed that knowledge creation and knowledge capturing were the most important processes followed by knowledge transferring and knowledge reusing. Moreover, "knowledge about client" and "project management knowledge" were determined as the most important types of knowledge at this level of maturity. So, the results of this study provide a powerful guidance for project management offices (PMOs) that are at low levels of maturity in terms of knowledge management (Sokhanvar et al. 2014).

Schmitz et al. (2014) examined the relationship between the effectiveness of learning culture and knowledge management. The results showed that there is a positive significant relationship between learning culture and knowledge management methods. Also two dimensions of learning culture and internal integration were two main predictors of knowledge management formal practices, knowledge management informal practices and strategic management of knowledge, whereas the dimension of adaptation predicts only the strategic management of knowledge (Schmitz, 2014).

Ghouchani and Ghouchani (2012) examined the relationships between different levels of organizational maturity from Hersey and Blanchard viewpoints and different leadership styles. The results of this study indicated lack of organizational maturity in employees and applying the benevolent-authoritarian style of leadership in the manufacturing companies (Ghouchani and Ghouchani, 2012).

Lee and Liu (2015) investigated the promotion of entrepreneurial orientation through the accumulation of social capital and knowledge management. The findings of the study

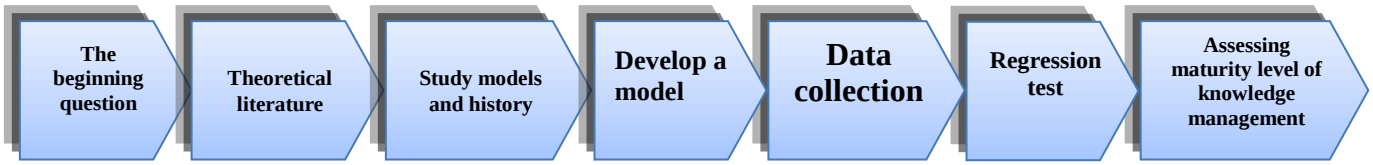
demonstrated different relations between social capital and knowledge management. Based on the results, the dimensions of social capital influence knowledge management. The results further showed that social capital and entrepreneurial orientation are fully adjusted by knowledge management (Liu & Lee, 2015).

Martinez et al. (2015) in a study evaluated the effect of environmental knowledge management on a long-term enabler of tourism development. The results showed that environmental knowledge at any given time is significant in predicting the knowledge management processes that may be successfully implemented at a later point in time (Martínez-Martínez, Cegarra-Navarro, & García- Pérez, 2015).

Procedure

Figure 2 shows the procedure of the research carried out

Figure 2: The Research Procedure



Iran Power Development Company

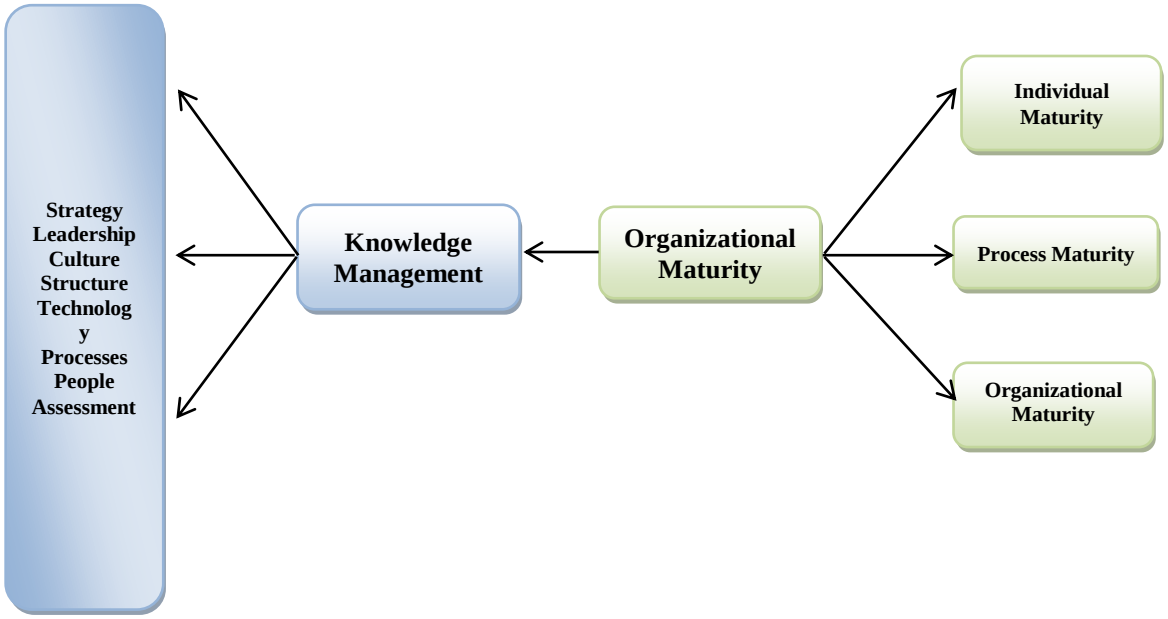
Iran Power Development Company as one of the most important executive organizations of the Ministry of Energy is operating its activities with the aim at implementing projects of electricity industry in the field of construction and development of power plants, increase in the storage capacity of liquid fuel of power plants, domestic construction of spare parts and power plants equipments, construction and development of high voltage lines and substations and associated networks. The organization has been able to achieve self-sufficiency in different sectors of the electricity industry which was completely dependent on foreign countries before Islamic Revolution by obtaining experiences from the past and having a look to the future. Iran Power Development Company in the course of implementation of general policies of the country and the Constitution is an organization that is:

- Leading in developing electricity generation and transmission capacities in Iran
- Leading, innovative, efficient, customer-oriented and inspirational among power industry companies.
- Dynamic in exploitation of the talents for developing technical, industrial and specialized capabilities in the field of thermal electricity.

The organization has sought to develop wisdom, knowledge and technology, customer satisfaction, observe stakeholders rights and respect human rights. The desire of the staff is that the name of Iran Power Development Company be honorable.

Conceptual Model

Figure 3: Conceptual Model



Definition of Variables

Organizational Maturity

Component enabling organizations to achieve stability and success and stay ahead of competitors by employing knowledge, skills, techniques and proper methods of management, (Hosseini, Yarmohammadian and Ajami, 2009).

Individual Maturity

Individual maturity in organizations provides an infrastructure for other developments. Individual maturity of employees starts from subjective assumptions and evolves by changed beliefs and attitudes. The nature of an organization may be transformed through individual maturity. For the maturity of workers turn into practice and product requires mature processes and structures.

Process Maturity

Process maturity can be used to update and simplify structures, methods and processes and it increases organizational adaptability, so organizational maturity indices can be created by process maturity.

Knowledge Management

A special organizational and systematic process for acquiring, organizing, storing, using, distributing and recreating explicit and tacit knowledge for employees to increase organizational performance and value (Hasangholipour et al., 2009).

Strategy

It's a pattern or a plan combining objectives, policies and operational chains of an organization in the form of an interconnected whole (Quinn et al., 1994).

Leadership

It's a process of social influence in which the leader as a volunteer participant in all affairs tries to achieve the organizational objectives. Leaders usually align whatever has as a leader with his/her power and authority to keep the members of the organization moving in a forward direction (Rezaeian, 2012).

Culture

A set of learned behaviors to think, feel and act that are transmitted from one generation to the next including the embodiment of these patterns in material items (Vanderzanden, 1990). Organizational culture implies on values, beliefs, assumptions, legends, norms and goals that are widely accepted within the organization (French, 1990). Changes in organizational culture characterize the success of any activity in the organization (Anna, Igor, & Natalia, 2015).

Structure

Organizational structure is a way by which the organizational activities are divided, organized and coordinated (Arabi, 2003).

Technology

With a management approach, Tarek Khalil defines technology as a systematic process of combining tools, technical knowledge and information necessary to operate the tool, and human skills needed to use technical knowledge and tools (Khalil, 2000). Know-how is a term that is

also used for technology. Technology is a system for converting technical knowledge into commercial products (Maleki and Bagheri Moghaddam, 2003).

Processes

The process is a set of interactive or interrelated activities that transform inputs into outputs using resources (Khatami and Shafi'i, 2011).

People (Human Resources)

All those who work together under different names in an organization in order to achieve goals and strategies set (Saadat, 2004).

Assessment

It's a process in which the results of enterprise activities will be monitored and controlled so that actual performance can be compared with optimal performance. This process gives required feedback to the managers so that they can evaluate the results and take corrective action if necessary (Hunger and violin, 2007).

METHODOLOGY

The methodology was a descriptive research using bivariate correlation technique. Data collection method was library, field work and samples are selected randomly. In the library method, the issues of organizational maturity and knowledge management and knowledge management maturity were addressed and in the field method a questionnaire was used to collect data which is a common tool in the direct method of data acquisition.

The Purpose of the Research

The main purpose of this study was to investigate the relationship between organizational maturity and knowledge management implementation.

Hypotheses

The main hypothesis: There is a significant relationship between organizational maturity and knowledge management maturity in Iran Power Development Company.

Secondary Hypotheses

H1- There is a significant relationship between organizational maturity and strategy in Iran Power Development Company.

H2- There is a significant relationship between organizational maturity and leadership in Iran Power Development Company.
H3- There is a significant relationship between organizational maturity and culture in Iran Power Development Company.
H4- There is a significant relationship between organizational maturity and structure in Iran Power Development Company.
H5- There is a significant relationship between organizational maturity and technology in Iran Power Development Company
H6- There is a significant relationship between organizational maturity and processes in Iran Power Development Company.
H7- There is a significant relationship between organizational maturity and people in Iran Power Development Company.
H8- There is a significant relationship between organizational maturity and assessment in Iran Power Development Company.

Statistical Population

The statistical population studied in this research included all managers and employees of Iran Power Development Organization. The number of population in this research was 350. The statistical sample was calculated by Cochran formula. Cochran formula is one of the methods for determining sample size in which n denotes the size of the population. p is percent of the trait distribution in the population, q is percentage of people who do not have that trait in the population. z is size of the variable in natural distribution and d is The difference between the actual proportion of the trait in the population to the amount the researcher estimated for the attribute for its existence in society. According to Cochran formula, sample size was calculated 183 as follow.

$$n = \frac{N(Z_{a/2})^2 pq}{(N-1)d^2 + pq(Z_{a/2})^2} = \frac{350 \times (1.96)^2 \times 0.25}{349 \times (0.05)^2 + 0.25 \times (1.96)^2} = 183$$

Data Collection Tool

In the field research for measuring organizational maturity, the 25-item questionnaire was used to measure the level of organizational maturity. The questions are based on a 5-point Likert scale 1) not at all true, 2) slightly true, 3) moderately true, 4) very true and 5) completely true. This questionnaire has three subscales of individual maturity (questions 1-8), process maturity (Questions 9-16) and organizational maturity (questions 17-25). To measure the maturity of knowledge management, the 58-item questionnaire of knowledge management maturity

assessment was used. The questions were based on the 5-point Likert scale from 1) very low, 2) low, 3) average, 4) high and 5) very high. This questionnaire has eight subscales of strategy (questions 1-5), leadership (questions 6-13), culture (Questions 14-20), structure (questions 21-28), technology (questions 29-38), processes (questions 39 -44), people (questions 45-52) and assessment (questions 43-58).

Validity and Reliability of Data Collection Method

Reliability and validity of both questionnaires have been proven in many studies. The reliability calculated for the questionnaire of organizational maturity in Soltani and Bahrami Nejad research was 0.921 and in Hosseini and colleagues research was 0.964. The reliability calculated for knowledge management maturity assessment questionnaire in Torkzadeh research was 0.89. In this study, face validity and confirmation by specialists and academics were used to measure the validity and Cronbach's alpha method was used to demonstrate the reliability. Reliabilities obtained for both questionnaires shown in Table 1 indicate high level of reliability of the data collection tool.

Table 1: The Results of Reliabilities of the Questionnaires

Cronbach's Alpha	Number Of Items	Questionnaire
0.923	25	Organizational Maturity
0.990	58	Knowledge Management Maturity

Data Analysis

For analyzing data in descriptive statistics and demographic data, the frequency, frequency percentage, mean, variance and standard deviation were used. Since research data should be normalized in order to use parametric tests, Kolmogorov-Smirnov test was used to ensure normality. For inferential statistics, regression test was used to test the hypotheses. Data was analyzed by SPSS software.

EMPIRICAL RESULTS

Descriptive Statistics

According to the findings, of the respondents 79.8% of were male and 20.2% were female. The results showed that 3.8% of respondents had associate's degrees, 51.4% bachelor's degree and 44.8% master's degree and higher. According to the results, 84.2% of respondents were married and 15.8% were single. Considering the frequency distribution of age, respondents who aged 45 or older (60.7%) comprised the largest age group and for frequency distribution of job

tenure, respondents who worked more than 20 years (62.8%) were the largest group. The results showed that 31.1% of respondents were working in managerial positions, 34.4% as administrative heads and 34.4% in administrative departments.

Normality of Data

The results of Kolmogorov-Smirnov test are shown in Tables 2 and 3. Given the error obtained through the test, it is observed that the variables studied except individual maturity, process maturity (close to the normal distribution), technology and leadership are of a normal distribution. Since the significant level obtained for the questionnaires is greater than accepted level of error, 0.05, so, it is concluded that data are normally distributed.

Table 2: The Results of Kolmogorov-Smirnov Test for Organizational Maturity

Total	Organizational Maturity	Process Maturity	Individual Maturity	
0.217	0.591	0.047	0.019	Significance Level

Table 3: The Results of Kolmogorov-Smirnov Test for Knowledge Management

Total	Assessment	People	Processes	Technology	Structure	Culture	Leadership	Strategy	
0.185	0.062	0.323	0.072	0.029	0.402	0.112	0.043	0.082	Significance level

Testing Hypotheses

The main hypothesis: There is a significant relationship between organizational maturity and knowledge management maturity in Iran Power Development Company.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536[a]	.288	.284	.671

a. Predictors: (Constant), Organizational Maturity

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.946	1	32.946	73.114	.000[b]
	Residual	81.559	181	.451		
	Total	114.504	182			

a. Dependent Variable: Knowledge Management Maturity
b. Predictors: (Constant), Organizational Maturity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.857	.280		3.054	.003
	Organizational Maturity	.637	.075	.536	8.551	.000
a. Dependent Variable: Knowledge Management Maturity						

It can be seen that the correlation coefficient of organizational maturity with knowledge management maturity is R=0.536. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects knowledge management maturity. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.637X + 0.857$$

Accordingly, it can be concluded as organizational maturity increases, knowledge management maturity increases too. On the other hand, coefficient of determination in this hypothesis is 28.8%. It means that the independent variable can predict the dependent variable variations by 28.8%.

H1: There is a significant relationship between organizational maturity and strategy in Iran Power Development Company.

Table 6: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.645[a]	.416	.413	.843
a. Predictors: (Constant), Organizational Maturity				

Table 7: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	91.594	1	91.594	129.005	.000[b]
	Residual	128.510	181	.710		
	Total	220.104	182			
a. Dependent Variable: Strategy						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.312	.352		-.887	.376
	Organizational Maturity	1.063	.094	.645	11.358	.000
a. Dependent Variable: Strategy						

It can be seen that the correlation coefficient of organizational maturity with strategy is R=0.645. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects strategy. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=1.0637X - 0.312$$

Accordingly, it can be concluded as organizational maturity increases strategy increases too. On the other hand, coefficient of determination in this hypothesis is 41.6%. It means that the independent variable can predict the dependent variable variations by 41.6%.

H2: There is a significant relationship between organizational maturity and leadership in Iran Power Development Company.

Table 8: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.858[a]	.737	.735	.424
a. Predictors: (Constant), Organizational Maturity				

Table 9: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	91.275	1	91.275	506.933	.000[b]
	Residual	32.590	181	.180		
	Total	123.865	182			
a. Dependent Variable: Leadership						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.318	.177		-1.796	.074
	Organizational Maturity	1.061	.047	.858	22.515	.000
a. Dependent Variable: Leadership						

It can be seen that the correlation coefficient of organizational maturity with leadership is R=0.858. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects leadership. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=1.061X - 0.318$$

Accordingly, it can be concluded as organizational maturity increases, leadership increases too. On the other hand, coefficient of determination in this hypothesis is 0.737. It means that the independent variable can predict the dependent variable variations by 73.7%.

H3: There is a significant relationship between organizational maturity and culture in Iran Power Development Company.

Table 10: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.469[a]	.220	.215	.860
a. Predictors: (Constant), Organizational Maturity				

Table 11: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	37.634	1	37.634	50.922	.000[b]
	Residual	133.768	181	.739		
	Total	171.401	182			
a. Dependent Variable: Culture						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.144	.359		3.186	.002
	Organizational Maturity	.681	.095	.469	7.136	.000

a. Dependent Variable: Culture

It can be seen that the correlation coefficient of organizational maturity with culture is R=0.469. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects culture. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.681X + 1.144$$

Accordingly, it can be concluded as organizational maturity increases, culture increases too. On the other hand, coefficient of determination in this hypothesis is 0.220. It means that the independent variable can predict the dependent variable variations by 22%.

H4: There is a significant relationship between organizational maturity and structure in Iran Power Development Company.

Table 12: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.454[a]	.206	.202	.829

a. Predictors: (Constant), Organizational Maturity

Table 13: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.298	1	32.298	47.022	.000[b]
	Residual	124.325	181	.687		
	Total	156.623	182			

a. Dependent Variable: Structure b. Predictors: (Constant), Organizational Maturity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.363	.346		3.938	.000
	Organizational Maturity	.631	.092	.454	6.857	.000

a. Dependent Variable: Structure

It can be seen that the correlation coefficient of organizational maturity with culture is R=0.454. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects structure. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.631X + 1.363$$

Accordingly, it can be concluded as organizational maturity increases, structure increases too. On the other hand, coefficient of determination in this hypothesis is 0.206. It means that the independent variable can predict the dependent variable variations by 20.6%.

H5: There is a significant relationship between organizational maturity and technology in Iran Power Development Company.

Table 14: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.456[a]	.208	.204	.806
a. Predictors: (Constant), Organizational Maturity				

Table 15: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30.854	1	30.854	47.544	.000[b]
	Residual	117.461	181	.649		
	Total	148.315	182			
a. Dependent Variable: Technology						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.470	.337		4.367	.000
	Organizational Maturity	.617	.089	.456	6.895	.000
a. Dependent Variable: Technology						

It can be seen that the correlation coefficient of organizational maturity with technology is R=0.456. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two

variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects technology. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.617X + 1.470$$

Accordingly, it can be concluded as organizational maturity increases, technology increases too. On the other hand, coefficient of determination in this hypothesis is 0.208. It means that the independent variable can predict the dependent variable variations by 20.8%.

H6: There is a significant relationship between organizational maturity and processes in Iran Power Development Company.

Table 16: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.470[a]	.221	.217	.872
a. Predictors: (Constant), Organizational Maturity				

Table 17: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	38.966	1	38.966	51.295	.000[b]
	Residual	137.497	181	.760		
	Total	176.463	182			
a. Dependent Variable: Processes						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.044	.364		2.868	.005
	Organizational Maturity	.693	.097	.470	7.162	.000
a. Dependent Variable: Processes						

It can be seen that the correlation coefficient of organizational maturity with processes is R=0.470. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects processes. To quantify this effect with respect to the beta coefficient, it is

observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.693X + 1.044$$

Accordingly, it can be concluded as organizational maturity increases, processes increases too. On the other hand, coefficient of determination in this hypothesis is 0.221. It means that the independent variable can predict the dependent variable variations by 22.1%.

H7: There is a significant relationship between organizational maturity and people in Iran Power Development Company.

Table 18: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.427[a]	.182	.178	.827
a. Predictors: (Constant), Organizational Maturity				

Table 19: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	27.576	1	27.576	40.320	.000[b]
	Residual	123.790	181	.684		
	Total	151.366	182			
a. Dependent Variable: Persons						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.996	.345		2.882	.004
	Organizational Maturity	.583	.092	.427	6.350	.000
a. Dependent Variable: Persons						

It can be seen that the correlation coefficient of organizational maturity with people is R=0.427. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects people. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.583X + 0.996$$

Accordingly, it can be concluded that as organizational maturity increases, people increases too. On the other hand, coefficient of determination in this hypothesis is 0.182. It means that the independent variable can predict the dependent variable variations by 18.2%.

H8: There is a significant relationship between organizational maturity and assessment in Iran Power Development Company.

Table 20: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.460[a]	.211	.207	.993
a. Predictors: (Constant), Organizational Maturity				

Table 21: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	47.755	1	47.755	48.449	.000[b]
	Residual	178.407	181	.986		
	Total	226.162	182			
a. Dependent Variable: Evaluation						
b. Predictors: (Constant), Organizational Maturity						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.696	.415		1.678	.095
	Organizational Maturity	.767	.110	.460	6.961	.000
a. Dependent Variable: Evaluation						

It can be seen that the correlation coefficient of organizational maturity with assessment is R=0.460. Considering that the significant level (acceptable level of error) is less than 5%, the effect is significant, showing that there is a direct and significant correlation between the two variables with 95% probability and the hypothesis is accepted. It means that organizational maturity affects assessment. To quantify this effect with respect to the beta coefficient, it is observed that the effect is direct. So the regression model can be written as follows which is significant at 95% level.

$$Y=0.696X + 0.767$$

Accordingly, it can be concluded that as organizational maturity increases, assessment increases too. On the other hand, coefficient of determination in this hypothesis is 0.211. It means that the independent variable can predict the dependent variable variations by 21.1%.

CONCLUSION AND SUGGESTIONS

Presenting accurate results and suggestions can make the results practicable. The results of the research confirmed that there is a positive significant correlation between organizational maturity and knowledge management. The results also demonstrated that there is a significant relationship between organizational maturity and knowledge management components in Iran Power Development Company. By examining the correlation coefficients between the variables, it could be seen that organizational maturity had the highest correlation with leadership followed by strategy, processes, culture, assessment, technology, structure and people, respectively. Given that in the study, leadership in the organization is detected as the most influential factor between organizational maturity and knowledge management maturity, so in the current complex environment the leadership in an organization should be of required flexibility to confront and solve organizational problems. According to the priorities identified the following suggestions are offered:

- To study and select appropriate style of leadership for knowledge management and organizational maturity.
- Senior managers support of knowledge management and knowledge workers.
- Explain Knowledge management strategy in the organization.
- Set the goals of the organization with regard to knowledge management purposes.
- Strengthen the learning culture within the organization.
- Evaluate and measure intellectual assets of the members of the organization.
- Measure the extent to which knowledge management achieved its goals in the organization.
- Tailor information and information technology with the informational needs of the organization.
- Create authentic and reliable sources of information in an organization to support information technology and decision-making.
- Improve employee participation in corporate decisions to reduce resistance to change.
- Establish communication and feedback channels for communication between employees and managers of the organization.
- Train and develop human resources in order to achieve knowledge-based workers.
- Establish employee performance appraisal units based on their knowledge and intellectual capital and give knowledge performance-based rewards.

REFERENCES

Arabi.SM (2003). ''Designing of Organizational Structure''. Tehran: Office of Cultural Research, 4th Edition.

Akbari.M and Moradi.M (2013). ''Presenting a fuzzy decision support system to assess the organization's readiness for knowledge management adoption''. Quarterly Journal of Technology Development Management, No. 1, pp. 99-131.

Babagheibi Azghandi.AR (2011). "Assessing the establishment of knowledge management in organizations (Deputy of Information and Communication Technology of Law Enforcement Force of Islamic Republic of Iran)". Journal of Police Human Development, No. 39, pp. 73-106.

Torkzadeh, M. (2010). "Evaluation of knowledge management maturity in public organizations in Kerman and its relationship with employee empowerment". Master's thesis, Islamic Azad University of Kerman.

Javdani.N; Jalali. A and Farahi. A. (2009). "Evaluation models of knowledge management maturity levels". Proceedings of the Conference on technology management and innovation.

Hatampour. F, Yarmohammadian.MH, Tavakoli. N and Shams. A (2011). "Identifying the needs of organizational maturity levels based on the employee empowerment development model in the Medical Records Department of public hospitals of Isfahan". Health Information Management, volume VI, No.6, pp. 754-765.

Hosseini. Sh, Yarmohammadian.MH and Ajami.S (2009). "The relationship between organizational culture and organizational maturity of staff of hospitals affiliated with the Isfahan University of Medical Sciences in 2007-2008". Knowledge and research in Educational Sciences-Curriculum, Islamic Azad University of Khorasgan(Isfahan), No. 21, pp. 101-116.

Hasangholipour, T., Abedi Jafari.H and Khatibian.N (2009). "Assessing the maturity level of knowledge management in organizations through a developed maturity model of knowledge management". Iranian Journal of Management Sciences, Issue 14, pp. 121-148.

Khatami Firoozabadi.A and Shafie Nikabadi.M (2011). "Production management". Tehran: Pouran Pajouhesh.

Khadivi.A., Soleimani.MR, Torabinahad.M (2010). "The establishment of knowledge management in Education Department of Marand from the standpoints of school principals". Research-Scientific Journal of Educational Administration Research, No. V, pp. 45-60.

Rezaee Manesh.B, Mohammadnabi.S, Mohammadnabi.S (2012). "Application of knowledge management in the assessment of organizational maturity. Research-Scientific Journal of Information Science and Technology, Volume 27, No.4, pp. 985-1009.

Rezaeian.A. (2012). "Principles of Organizational Behavior Management". Tehran: Samt Publication.

Saadat.E (2014). "Human Resource Management". Tehran: Samt Publication.

Soltani.I, Bahraminejad Junghany.R (2010). "The impact of organizational maturity on organizational excellence in Mobarakeh Steel Company". Quarterly Journal of improvement and progress Management, No. 62, pp. 163-193.

Salvati.A, Haghnazar.F (2009). "Analysis of contextual factors influencing the establishment of a knowledge management system in the units of National Iranian Oil Company". Journal of Management, Vol. III, No. 10, pp. 77-104.

Abbas Pour Esfanden.Q, Moshabaki.A. and Hadian.M (2011). "The impact of social capital dimensions on the implementation of knowledge management (case study: Islamic Republic of Iran Railways), Volume 2, No.a, pp. 23-39.

Abdi.MR, Safaee.S. (2014). "Providing a model for the creation and establishment of the Knowledge Management System in the State Tax Affairs Organization". No. 21, pp. 135-158.

Ghouchani.F. and Ghouchani.R. (2012). "Study the relationship between organizational maturity and leadership style in manufacturing companies". Quarterly Journal of Public Administration Perspective. No. 9, pp. 163-182.

Quinn.JB; Mintzberg.H; James and Robert.M. (1994). "Strategic management". Translated by Mohammad Saebi, Tehran: Public Administration Training Centre.

Muamarhur.J, Satari.S, Kazempour.E and Salamatazar.R (2013)."The feasibility of the establishment of a knowledge management system in Education Department of Ardebil". Training Management Innovations, Issue III, pp. 93-106.

Maleki.A and Bagheri Moghaddam.N. (2003). "Technology acquisition of factors affecting the selection of appropriate style and method". The first Conference on Technology Management.

Momeni.M. (2007). "Statistical analyses using SPSS". Tehran: Ketab-e-No Publication.

Vaziri.Z (2008). "People Capability Maturity Model", coordination training Journal, No. 270.

Hunger.J, David.V and El.T (2005). "Principles of strategic management". Translated by Arabi, Izadi.D and Izadi.M, Tehran: Office of Cultural Research.

Yarmohammadian. MH, HatamPour.F, Shams.A and Tavakoli.N (2008). "Identifying the needs of organizational maturity levels based on employee empowerment development model in the Medical Records Department of public hospitals of Isfahan". Research project, Isfahan University of Medical Sciences, School of Management and Medical Information Sciences.

Anand, A. Singh, M. D. (2011). "Knowledge Management Implementation Steps for Indian Small & Medium Sized Enterprises", International Journal of Engineering Science and Technology (IJEST). 3(12) 8255-8261.

Andersen, E. S., & Jessen, S. A. (2003). Project maturity in organisations. International Journal of Project Management, 21(6), 457-461. doi: http://dx.doi.org/10.1016/S0263-7863(02)00088-1.

Armistead, C. (1999). "knowledge Management and Process Performance." Journal of Knowledge Management, Vol. 3, No. 2, pp. 143-154.

Calvo-Mora, A., Navarro-García, A., & Periañez-Cristobal, R. (2015). Project to improve knowledge management and key business results through the EFQM excellence model. International Journal of Project Management(0). doi: http://dx.doi.org/10.1016/j.ijproman.2015.01.010

Chen, L. and P. S. W. Fong (2012). "Revealing performance heterogeneity through knowledge management maturity evaluation: A capability-based approach." Expert Systems with Applications 39(18): 13523-13539.

Chen, L. and P. S. W. Fong (2015). "Evaluation of knowledge management performance: An organic approach." Information & Management(0).

Couturiaux, S. (2005). "Using the People Capability Maturity Model With CMMI. available at: http://www.sei.cmu.edu/news-at-sei/feature/2005/3/feature.htm.

Dayan, R. Evans, S. (2006). "KM YOUR WAY TO CMMI." Journal of Knowledge Management, Vol. 10, pp. 69-80.

Jia, G., Chen, Y., Xue, X., Chen, J., Cao, J., & Tang, K. (2011 .(Program management organization maturity integrated model for mega construction programs in China. International Journal of Project Management, 29(7), 834-845. doi: http://dx.doi.org/10.1016/j.ijproman.2011.03.003.

Kalil, T.M. (2000), Management of Technology: The Key to Competitivness and Wealth Creation, Mc Graw-Hill.

Kluth, A., et al. (2014). "Method for a Systematic Evaluation of Advanced Complexity Management Maturity." Procedia CIRP 19(0): 69-74.

Martínez-Martínez, A., Cegarra-Navarro, J.-G., & García-Pérez, A. (2015). Environmental knowledge management: A long-term enabler of tourism development. Tourism Management, 50(0), 281-291. doi: http://dx.doi.org/10.1016/j.tourman.2015.03.006.

Ngai, E. W. T., et al. (2013). "Energy and utility management maturity model for sustainable manufacturing process." International Journal of Production Economics 146(2): 453-464.

Nonaka, I. Takeuchi, H., A (1994). Dynamic Theory of Organizational knowledge creation, "Organization Science S, No, 1, PP. 14-37.

Nonaka, I., Toyama, R. & Konno, N. (2000). SECI, ba and leadership: a unified model of dynamic knowledge creation. Long Range Planning, 33, 5-34.

Paulk, M. Weber, C. Curtis, b. Chrissis, M. B. (1998). "the Capability Maturity Model Integration." Addison Wesley.

Pigosso, D. C. A., et al. (2013). "Ecodesign maturity model: a management framework to support ecodesign implementation into manufacturing companies." Journal of Cleaner Production 59(0): 160-173.

Ping, J. H. Binshan, L. Chinho, L. (2009)."the Constuction and Application of Knowledge Navigator Model (KNMTM): an Evaluation of Knowledge Management Maturity, Expert System with Application, 36, 4087-4100.

Schmitz, S., Rebelo, T., Gracia, F. J., & Tomás, I. (2014). Learning culture and knowledge management processes: To what extent are they effectively related? Revista de Psicología del Trabajo y de las Organizaciones, 30(3), 113-121. doi: http://dx.doi.org/10.1016/j.rpto.2014.11.003.

Sokhanvar, S., Matthews, J., & Yarlagadda, P. (2014). Importance of Knowledge Management Processes in a Project-based organization: A Case Study of Research Enterprise. Procedia Engineering, 97(0), 1825-1830. doi: http://dx.doi.org/10.1016/j.proeng.2014.12.336.

Terzieva, M. (2014). Project Knowledge Management: How Organizations Learn from Experience. Procedia Technology, 16(0), 1086-1095. doi: http://dx.doi.org/10.1016/j.protcy.2014.10.123.

Vanderzanden, W. J. 1990, Sociology the core, Irwin, Ine.

Vasudevan, H. and A. Chawan (2014). "Demystifying Knowledge Management in Indian Manufacturing SMEs." Procedia Engineering 97(0): 1724-1734.