



EFFICACY OF KNOWLEDGE MANAGEMENT IN PROJECT'S SUCCESS IN IT COMPANIES

Kripali Bhatodra (Student)
B.Sc (CS) PGDCA (CS)

ABSTRACT-*Knowledge is one of the most vital resources for surviving in the modern business environment. In contemporary society, rapid changes are taking place in the global market, customers' requirements and technology. These advances are challenging managers to forecast and respond in a dynamic environment. Such environment mandates continuous adaptation and change by organizations. Knowledge sharing is critical to survive in such environments. In this research study, the researcher has tried to examine the impact of efficacy of knowledge management in Projects' success in IT Industry so that project work could be carried out effectively. For this study total 100 engineers from software industries were selected in Indore city. The sampling technique was based on purposive and through correlation and regression the impact was measured.*

Keywords: Knowledge Management, Knowledge Sharing, Organizational Culture, Effectiveness.

I. INTRODUCTION

In today's globally competitive environment, knowledge-intensive organizations gain knowledge and wisdom through their business activities. The adherence of organizations to inflexible, ad hoc, and indirect approaches can enable them to build an environment facilitating KM but have limited contribution towards facilitating knowledge as a strategic asset and, thus, is a big corporate challenge.

Thus, we look at KM processes as those that would help us build knowledge as a strategic resource which along with infrastructure capabilities will drive knowledge effectiveness and organizational performance. Distinct knowledge processes are modelled in a life cycle model which permits further analysis of requirements for the support of KM activity in each process. The processes of KM lifecycle approach relate to the fact that organizations utilize internal and external sources of knowledge. This knowledge has to be made available to the concerned people in the organization. Thus, a KM cycle starts with creation and/or acquisition of knowledge which has to be

organized, mapped, and/or formalized to transform it in reusable form. It has to be made accessible to people, or disseminated, and/or shared with everyone in the organization. Finally, it has to be applied, used, reused, and/or exploited for achieving the organizational benefits.

Organizational culture is very important in leveraging KM. It has been considered both as a facilitator and a hurdle/barrier for effective KM. Culture of an organization has key influence on KM, more specifically, on the effectiveness of knowledge argued by Chase, 1997; Demarest, 1997; Holsapple & Joshi, 2000; Pan & Scarbrough, 1998; Mårtensson, 2000 in an organization. Tyler (1871) was the first to provide a formal description of the term 'culture'. He defined the term as: 'that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society'. Steven (1989) notes that organizational culture is akin to the culture of the society in which the organization operates. This view considers organizational culture as a micro culture within the culture of a given society or nation.

Since then many authors have defined organizational culture as the combination of value, core belief, behaviour model, and emblem. It represents the value system of the company and will become the employees' behaviour norm. Yeh et al., (2006) explained that every organization's culture is an independent entity different from any other organization. Lemken, Kahler, & Rittenbruch, (2000) emphasized about these cultural features of an organization may deviate from cultures of their respective societies. Since there is a crucial role of organizational culture in KM, it is imperative to know how to influence and develop knowledge culture in an organization.

Oliver and Kandadi (2006) have defined knowledge culture as: 'A way of organizational life that enables and motivates people to create, share and utilize knowledge for the benefit and enduring success of the organization.' The presence of a 'knowledge culture' is critical to the success of KM within an organization according to the study of De Long & Fahey, (2000); Nahm, Vonderembse, & Koufteros (2004) as it signals a managerial



commitment to KM initiatives and promotes sharing of tacit knowledge for higher quality decision-making.

II. RATIONALE OF THE STUDY

Software development is no longer a homogeneous field. A socio-technical approach and a commitment to project management principles are essential for attaining success in software development projects. But, managing project knowledge is another critical factor that has to be taken into consideration. Managing knowledge in globally distributed teams involves managing software projects' knowledge through the life-cycle of the development of the software project. Thus there is a strong need to extensively study the impact of KM on project success so that success rate of projects can be increased.

In this study, it has been revealed that proper implementation of knowledge management system in companies, then it would be helpful in leading the success of the projects. The success of projects depends upon reduced cost, lesser defects and saving time so that from minimum inputs the maximum output can be achieved. Hence, this study has focused on the various elements to facilitate the success of projects leading to incur lesser time and cost. It is also explained that culture is one of the important attributes in determining the success of projects as if managers are given autonomy in taking decision to put inputs, they can put extra efforts in making the success of projects.

III. LITERATURE REVIEW

Gerald et al., (2006) mentioned that knowledge is recognised as being an important asset in organisations these days. This study investigated the various cultural factors (collaboration, mutual trust, leadership and incentives/rewards) using a multiple case study approach operating within a critical realism research paradigm and found that these factors have impact on the level of knowledge management practice. The study also established that cultural factors do play an important role in facilitating knowledge management practice in these MSC status companies in Malaysia. It was found that collaboration, mutual trust, leadership, and incentives/rewards have significant impact on the level of knowledge management practice. In view of the findings of this study, it is suggested that the relevant authorities pay adequate attention on these cultural factors to ensure that the knowledge management initiatives undertaken by Malaysian companies are effectively deployed.

Nikhil Mehta, N. (2008) in his study developed and evaluated a concise framework to measure how successful knowledge management (KM) programs create KM-enabled value. In global software firms, the success of KM programs is influenced by the evidences of various strategic, technological, and cultural issues. Firms develop typically three specific capabilities with successful KM programs to address these issues. These capabilities, when developed simultaneously, help firms create KM-enabled value namely, Articulating the KM Strategic Intent, Facilitating the Knowledge Flows to Enable Innovation, and Assessing KM Value, when developed simultaneously, help firms create KM-enabled value. The study is suggested that software firms develop specific capabilities to create and also provided practical help in the form of a worksheet for practitioners. The study conducts initial evaluation of the new perspective and provides a roadmap for future research endeavors. Knowledge creation, storage, and transfer were facilitated with the development of human and technological infrastructures.

Paul H.J. Hendriks (2009) assessed that the organization culture affects how knowledge processes, such as knowledge sharing, evolve. Despite the growing attention for aspects of culture, the knowledge management debate has not paid systematic attention to the diagnosis of a knowledge culture. The study has presented, mainly four elements: an identification of cultural elements ordered in knowledge sharing terms, a specification of facets of knowledge sharing as cultural behavior, the specification of different types of relationships between culture and knowledge sharing and a sequence of diagnosis steps connecting the first three elements. The study has examined the relationships between culture and knowledge sharing first and foremost involves exploring and reconstructing the close connections between the two concepts.

Woo-Soon Park (2010) attempted to eloquent the cultural role in knowledge management. For this purpose, discussions focused on the influence of cultural factors on knowledge management at national and organizational levels. In this study two types of culture were explored one was positive and the other one was negative. So positive culture were resulted into creating, sharing knowledge for the organizational benefits but negative culture exerted a bad effect and resulted into higher rate of attrition and job dissatisfaction Thus, some cultural orientations that enhance or hinder knowledge management implementation are discussed with comments on empirical research and possible developments in the future.

Tiwari, A. (2011) examined in her study the effects of organizational climate and structure on



knowledge management from the social interaction perspective in a sample of 146 cases. The findings suggested that when the organizational structure is less formalized, more decentralized and integrated innovative then cooperative climate is positively related to social interaction. The findings supported the process-oriented view and indicated that social interaction plays the mediating role between organizational climate, organizational structure and knowledge management.

Payal et, al., (2016) in their study 'Knowledge Management and Organizational Performance: A Study in the Context of Indian Software Companies' emphasized the need of conceptual and empirical research to develop an enhanced comprehension of the relationships between KM and organizational performance. On the unified model of KM encompassing KM enablers, KM process, KM strategy and organizational performance, holistic research studies are required. This study, in the Indian software companies, therefore, tried to fill this research gap by exploring the effect of KM on organizational performance. The results disclosed that there exists a significant relationship between KM and organizational performance. The results indicated that organizational performance is affected by system strategy, structure, knowledge conversion and knowledge application. The results of the study can be used to search for a profound appreciation of the field of KM by the managers to execute KM programs and also by the researchers.

The aim of this study by Vicente Prado-Gascó, Ismael Quintanilla Pardo and Carlos Pérez-Campos(2017)was to analysis knowledge management and organizational culture at a Spanish software development enterprise. For this purpose, two different tasks were performed: first, analysis of knowledge management levels and organizational culture; and second, analysis of the relationship between organizational culture and knowledge management. The results found that the company is oriented towards a constructive organizational culture. It also seems that the company emphasizes efficient knowledge management practices, especially in regard to teamwork. Finally, the link between organizational culture and knowledge management seems to be proven. As hypothesized, constructive culture is positively related to knowledge management performance, while Passive-Defensive and Aggressive-Defensive cultures are negatively related. All these results are particularly interesting considering that in the scientific literature such relationships have been proposed from a theoretical perspective, but only a few studies have explored these questions at the empirical level.

Prado-Gascó et, al. (2017) analysed the knowledge management and organizational culture at a Spanish software development enterprise. For this purpose, two different tasks were performed: first, analysis of knowledge management levels and organizational culture; and second, analysis of the relationship between organizational culture and knowledge management. It is apparent from the results that the company is oriented towards a constructive organizational culture. It also seems that the company especially in regard to teamwork emphasizes efficient knowledge management practices. Finally, the link between organizational culture and knowledge management seems to be proven. As hypothesized, constructive culture is positively related to knowledge management performance, while Passive-Defensive and Aggressive-Defensive cultures are negatively correlated.

OBJECTIVES OF THE STUDY

To study the impact of Efficacy of Knowledge Management in IT companies in terms of Project's success.

To suggest various measures for increasing the efficacy of Knowledge Management.

IV. HYPOTHESIS OF THE STUDY

H0: There is no significant impact of Efficacy of Knowledge Management on Projects' Success.

V. RESEARCH METHODOLOGY

Research Type: Descriptive Research.

Research Area: The study was carried out in Indore city. The questionnaires were distributed to the Software Engineers of Indore city.

Universe: Population in the study refers to group of Software Engineers of Indore city.

Sampling Method: For the purpose of this research, convenience and purposive sampling have been used. It involves selecting sample elements that are most readily available to participate in the research and who can provide the information required to support the research according to the convenience.

Sample Size: Sample is the subset of the population. Sample size selected for the purpose of this study comprised of 100Software Engineers.

Tools for data collection: Only primary data has been used for the study. The tool used for the primary data collection is a self-designed questionnaire, which has been made after reviewing the previous literature and consulting with experts of educational field. For the collection of reviews, the researcher has studied national and



international journals, articles, books and internet. The secondary data was collected from published National and International Journals. Thereafter the

required data were analysed and inferences/interpretations have been made.

VI. DATA ANALYSIS

TABLE 1: MODEL SUMMARY

Model	R	R Square ^b	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.666 ^a	.443	.442	1.90820	.443	11.789	1	99	.001

a. Predictors: Efficacy of Knowledge Management

Above table shows the correlations and it is evident from this table that Pearson's correlation coefficient between Efficacy of Knowledge Management and Projects' Success is 0.666 which is significant since the significant value (p-value) 0.001 is less than 0.05. Therefore, we may conclude that there is significant association between Efficacy of Knowledge Management and Projects' Success. Furthermore, since the value of correlation coefficient r suggests a positive correlation, we can use a regression analysis to Model the relationship between the variables.

Over all model summary shows the value of multiple correlation coefficient $R=0.666$, it is the linear correlation coefficient between observed and model predicted values of the dependent variable, Its large value indicates a positive relationship. R^2 , the coefficient of determination is the squared value of the multiple correlation coefficients. Adjusted $R^2=0.442$, R^2 change is also 0.443 and these values are insignificant which shows that overall strength of association is noteworthy. The coefficient of determination R^2 is 0.443; therefore, only 44.3% of the variation in Projects' Success is explained by Efficacy of Knowledge Management.

ANOVA is used to exhibit model's ability to explain any variation in the dependent variable. ANOVA table exhibits that the hypothesis that all model coefficients are 0 is rejected at 1% as well as 5% level of significance which means that the model coefficients differ significantly from zero. In other words we can say that there exists enough evidence to conclude that slope of population regression line is not zero and hence, Efficacy of Knowledge Management is useful as predictor of Projects' Success. Hence, in this context, null hypothesis is rejected and alternate hypothesis which mentions that there is a significant impact of

Efficacy of Knowledge Management on Projects' Success is accepted at 5% level of significance.

VII. SUGGESTIONS

The study has given some suggestions on the basis of findings is as follows:

- The companies should create an open culture to make the projects' success.
- Software Engineers should be encouraged to take up new ways of solving problems.
- It should ensure that the job description clearly defines KRA'S software engineers should be involved in the process of goal setting for project.
- Transparency should be there in the MS of the organization. HR can ensure this by sharing comments with faculty members regarding their performances, by letting them know who is appraising them.
- Training should be provided to software engineers after identifying their training needs so that they can overcome their shortcomings.
- Management should encourage performance-based rewards.

VIII. CONCLUSION

The study revealed that culture is a strong pillar for sustaining knowledge management in software companies, It was found that culture is a strong predictor for the success of projects undertaken and help out in minimizing the errors and lead to success in line run. If culture is open in organizations, the employees are free to expose their potentiality and capability and also they have no fear to take decision in the interest of organizations. In the selected companies, the



engineers responded that they have an autonomy in taking decisions for the betterment and also proper reward is given when the performance found satisfactory. So, the engineers agreed on the impact of cultural aspects on knowledge management.

Knowledge Management is important for Organizations due to market competition and also for retaining employees' talent. After this study, it is found that Knowledge Management System is regarded as an important factor for project success and reduces the number of defects and time taken for project completion due to access to lessons learnt and best practices. It is also found that respondents regard Knowledge Management System to be helpful for their search for knowledge.

knowledge management from the social interaction perspective. *Business Review* 9 (1), pp 56-69.

10. Park, W. (2010) The Role of Culture in Knowledge Management. *Journal of Knowledge Management*. ICFAI, 7 (2), pp. 89-94.

IX. REFERENCES

1. Bonavía, T. & Quintanilla, I (1996). Culture in organizations and their effects on employee involvement. [In Spanish]. *Revista de Psicología del Trabajo y las Organizaciones*, 12(1). 7-26.
2. Gerald et al (2006) The Effects of Culture on Knowledge Management Practice in Software Company. *Kajian*. Vol. XXIV, No. 1 & 2, pp. 67-79.
3. Mehta, N. (2008) Successful knowledge management implementation in global software companies. *Journal of Knowledge Management*. Vol. 12 No. 2 pp. 42-56.
4. Payal et, al., (2016) Knowledge Management and Organizational Performance: A Study in the Context of Indian Software Companies. *Journal of Knowledge Management* ., Vol. 14 Issue 4, p53-71.
5. Paul H.J. (2009) Assessing the Role of Culture in Knowledge Sharing. *Journal of Knowledge Review*, vol 2 (4), pp. 60-69.
6. Prado-Gascó et, al. (2017) Knowledge Management and Organizational Culture in a Software Development Enterprise. *Journal of Small Business Strategy*. Vol. 27, No. 1, pp 37-49.
7. Rousseau, D. M. (1990). Normative beliefs in fund-raising organizations: Linking culture to organizational performance and individual responses. *Group and Organization Studies*, 15, 448-460.
8. Schein, E. (1992), "Coming to a new awareness of organizational culture", *Management Review*, **24**(2), pp.3-16.
9. Tiwari, A. (2011) The effects of organizational climate and structure on