

## **KNOWLEDGE MANAGEMENT IMPLEMENTATION IN THE CONSTRUCTION INDUSTRY: A STUDY IN VISAKHAPATNAM, ANDHRA PRADESH, INDIA**

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### **ABSTRACT**

*The role of Knowledge Management and the process for managing KM in the organizations has become vital for the survival of the organization and has an impact on human capital, teamwork, and overall organizational performance and effectiveness. Infrastructure development through the implementation of various construction projects in India has been given prime importance as strategic measure via various Plans, Policies and Budgetary allocation by the Indian Govt. driven by PM Gatishakti initiative ([www.india.gov.in](http://www.india.gov.in)). Further, construction and infrastructure development has been contributing more than about 5 per cent to our nation's GDP. Under this back drop, an attempt is made to study the role of Knowledge Management Implementation in Solving Problems and improving Organizational Efficiency of the Construction Projects in Visakhapatnam. For this purpose, the quantitative cross-sectional study design approach was adopted, and the data generated from 200 Managers & Employees from various construction organizations, selected for the study, has been analyzed with the help of SPSS 25 to test the hypothesis in order to find out the significance in the implementation of KM Practices in the projects of construction organizations, selected for the study. The study results have revealed that the KM Implementation helps in solving the problems of selected projects and also improves operational efficiency in a significant manner of the organizations selected for the study.*

**KEYWORDS:** *Multimodal Connectivity, Mass Urban Transport, Logistics Synergy, Knowledge Creation, Knowledge Application & Sharing, Knowledge Retention*

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### **INTRODUCTION**

In the modern economy, Knowledge Management has become the organization's competitive advantage which is realized through the full utilization of information and data coupled with the harnessing of people's skills and ideas as well as their commitments and motivations. India was the fourth country in the list of countries by the largest output in construction, with about 40 per cent contribution in the developmental investment in our country for the last 50 years; it is continuously evolving with the advancement in the technology of construction activity. Infrastructure development through the implementation of various construction projects in India has been given prime importance as strategic measure via various Plans, Policies and Budgetary allocation by the Government of India driven by PM Gatishakti initiative in the Budget 2022 via Seven Engines that includes Roads, Railways, Airports, Ports, Mass Transport, Waterways and Logistics Infrastructure, National Master Plan for world class Infrastructure, logistics synergy and formulation of express ways, completing 25,000Km national high ways in 2022-23. Similarly, the govt of India focused on Multimodal Connectivity between Mass

Urban Transport and Railway Stations, National Ropeways Development Plan as sustainable alternative to conventional roads, capacity building for infrastructure projects etc (Budget 2022). Knowledge management processes assist an organization in acquiring, storing, and utilizing knowledge to support problem solving, dynamic learning, strategic planning, and decision-making which is important for improving organizational efficiency and also, the success of the organizations (Hussein Salama Al-Sohaim et al. 2016). The human factor is one of the important factors to be considered as it likewise relies upon aims of employees to share knowledge with others in order to maintaining effective knowledge management practices. Knowledge Management is the way an organization can leverage the tacit and explicit knowledge of its employees, trading partners, and outside experts for the benefit of the organization. The foundation of KM is based knowledge acquisition, knowledge conversion and knowledge application. The main objectives of the present study are review the Implementation of KM systems and practices in the organizations, selected for the study in the construction Industry, to examine the KM implementation in solving the problems of the projects in construction Industry; to study the KM implementation in Improving Operational Efficiency of the projects in construction Industry and also to understand the relation between the above outputs of KM Implementation Variables in the selected organizations via, Solving Problems and Improving Operational Efficiency of the Construction Projects in Visakhapatnam, AP, India.

### **KNOWLEDGE MANAGEMENT: AN OVER VIEW**

Knowledge management is a relatively new discipline which has been developed from the various published work of academics and pioneers such as Peter Drucker, Karl-Erik Sveiby and Nonaka and Takeuchi. Some researchers have defined it as a group of clearly defined process or methods used to search important knowledge among different knowledge management operations and helps organizations to find, select, organize, disseminate, and transfer important information and expertise necessary for activities. Some other researchers have defined it as the broad process of locating, organizing, transferring, and using the information and expertise within an organization. In our view point, Knowledge management is a practice and strategy that process of creating, acquiring, capturing, sharing and using knowledge to enhance learning and performance in organisations by adopting strategic insights and specific experiences.

Knowledge management is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and use the information to improve organizational performance (H. Salama Al-Sohaim et al. 2016). Knowledge is progressively perceived as an organization's most important resources. The management of knowledge is for the most part about making, giving, empowering and supporting reasonable learning conditions in an association, to inspire and empower proficient people to utilize and share their insight and make new knowledge. There are two types of knowledge, tacit and explicit. Tacit knowledge is stored in the brain of a person. Explicit knowledge is contained in documents of storage, other than the human brain, can be produced as a result of interactions or innovations and outcome of relationships or alliances. They permeate the daily functioning of organizations and contribute to the attainment of their objectives. Both tacit and explicit knowledge enable organizations to respond to novel situations and emerging challenges. Construction is a primary and most significant parameter for the onset of development of a country. In a developed country, the construction industry has a share of around 6-8 per cent towards their GDP (Gross Domestic Product). In a developing country, it varies from 3-6 per cent. In the year 2012; India was the fourth country in the list of countries by the largest output in construction. With almost 40 per cent contribution in the developmental investment in our country in last 50 years, it is continuously evolving with the advancement in the technology. Construction and infrastructure development is contributing more than 5 per cent to our nation's GDP. Construction industry, being the back bone of the Infrastructural development, involves various management aspects to be practiced simultaneously to achieve

the successful completion of the project within the scheduled time frame and allotted budget. The application of Knowledge Management can very well achieve the better growth performance in the Project based organizations as concluded by various researchers across the world. Knowledge Management needs to undergo various transformations to suit the construction project environment. The adaptability of construction organizations to the KM is although a cumbersome but very advantageous task. Many European and few Asian countries have implemented the KM practices in various forms. However in India, the implementation of KM has started very recently in its present form.

### **The Knowledge Management Facets**

Knowledge creation, knowledge acquisition, knowledge sharing, knowledge codification and knowledge retention are the main constituents in the Knowledge Management. Knowledge Creation means a formation of new ideas occurs through interactions and includes tacit and explicit forms of knowledge. It is a continuous integration, transfer, and conversion of different knowledge. Knowledge Acquisition is a process that involves in obtaining and creating knowledge. The interaction between the individuals will promote learning and make collaboration between individuals, which will lead to create new knowledge. Knowledge acquisition remains for authoritative practices went for a collecting data from extra-organizational sources. External networks and collaborative arrangements are crucial sources of knowledge for a wide range of Organization. Knowledge acquisition is a continuous and dynamic process. Knowledge acquisition includes the ability to devise original thoughts, bits of knowledge and arrangements and link it inside the organization. The four different modes of conversion of the knowledge are socialization, externalization, combination and internalization (Shih-wei Chou 2004). As Such, Knowledge acquisition deals with the processes of creating, generating, developing, building and constructing knowledge internally. Knowledge application refers to the processes of sharing, transferring, disseminating and distributing knowledge once it has been organized and stored. Knowledge that is kept solely in an individual's domain is of little value to an organization. Applying and sharing knowledge is the key and makes it more active and relevant for the organization in creating values. Knowledge application process refers to the process of sharing the knowledge among the employees in an organization and it can be considered as the core task of knowledge management. Conversion process in KM is an oriented process towards making existing knowledge available at a central location, easily accessible by everyone in the organization. The Knowledge Codification represents the Knowledge in the forms that can be shared, stored, combined and manipulated in a variety of ways (Joanna Paliszkievicz 2009). Knowledge protection is a process or action towards protecting the knowledge from any attack or misuse as the organizational knowledge is vulnerable. Technology infrastructure is the key in KM Process and comprises the hardware, software, middleware, and protocols that allow for the encoding and electronic exchange of knowledge (Adnan Ali Alghail 2020).

### **The Problem Solving Systems**

The Knowledge Management Practices helps the organizations in achieving their goals via problem solving mechanism (Peter H Gray 2001). Problem Solving is the same activity as understanding. The individuals who are engaged in problem solving are attempting to better understand some set of phenomena by creating new knowledge that enables them to recommend a course of action and improves organizational performance (P.H Gray and Y. E. Chan 2000). Problem solving is the act of defining problem, determining the cause of the problem, identifying, prioritizing, and selecting alternatives for a solution and implementing a solution. In this process the leaders in the organization utilize Knowledge Management recourses to generate alternative solutions, evaluate, select and implement the correct alternative source of action with some sort of follow up action ([www.asq.org](http://www.asq.org)).

### **Operational Performance**

There is a strong positive relationship between the KM Process and Operational and organizational performance (B.S. Fugate et al. 2009). Performance is known through the quality of work, effectiveness of employees in decision making, development of processes, relationship of employees with managers, provision of various services and products, innovations, market share, staff skills and also their abilities to solve problems quickly with new methods and modern tools of product development and the actual outputs of the organization as compared with targeted or stated outputs. Organizational performance is a measure to assess the efficiency and effectiveness of an organization that pursues its goals. The organizational performance may be financial and operational. Financial performance is measured using financial indicators such as return on asset, return on investment, return on equities, sales, costs, and growth. On the other hand, the dimension of operational performance which is non-financial in nature, is measured through product quality, customer satisfaction, employee satisfaction, timeliness of delivery, productivity, efficiency, market share, strategic goal accomplishment, workforce development and enhancement (Abusweilem et al. 2019). There is an alignment between KM initiatives and business process objectives based on the KM dimensions in order to improve of decision performance (Mosconi et al. 2013). The ROI, balanced scorecard approach, qualitative case studies, and success case method to aid practitioners in order to identify and develop the evaluation frameworks are the main approaches to evaluate the contributions of knowledge management implementations to organizational performance (Jong-Ae Kim 2006). All elements of knowledge management capabilities have a positive significant relationship with all measures of the performance and infer a great correlation between knowledge management capabilities and organizational performance (A. Nasser et al. 2012).

### **REVIEW OF LITERATURE:**

Katsuro Pension et al. (2013) has opined that Knowledge management has positively impacted on the performance of the organization through improvements in design time, costs reduction, employee flexibility and reduced employee frustration and confusion. The management support for KM practices is an important determinant of organizational effectiveness. The organizations with higher levels of support for KM practices have higher levels of organizational effectiveness, measured across a range of performance measures that include safety, economic, operations, and maintenance indicators (<http://www.iaea.org/books>). Knowledge is considered as an essential asset in any organization. Thus, many organizations are trying to apply Knowledge management in order to improve their organizational performance (Hayfa Y. et al. 2018). Knowledge management tools provide the necessary resources for the management and professional staff to process information in their corporate memory and conduct knowledge sharing and help in recognizing inaccurate and outdated expertise and process the content. Therefore, through reducing costs and employees, increasing marketing knowledge and productivity, and enhancing coherent decision making as such, the organization would become more efficient and effective (Suja Sundram et al. 2020). The study found significant impact of all Knowledge Management dimensions on Organizational Learning (Mouaz Alsabbagh and Abdul Hamid 2017). There is a significant impact for knowledge management dimensions (knowledge acquisition, knowledge storage, application of knowledge, knowledge sharing) on the performance dimensions completion of task, quality of work, a quantity of work and also on the completion of task and quality of work (Saif Isam and Aladwan 2020). Knowledge management capabilities have significant effects and major influences on the project management success (Adnan Ali Alghail<sup>2020</sup>). The role of KM planning and design (KMPD), KM implementation and evaluation (KMIE), Technology in KM (TKM), Culture in KM (CKM), Leadership in KM (LKM) and Structure in KM (SKM) in enhancing organizational performance. Further, improvements in organizational performance

lead to improvements in financial performance (Joshi, H. and Chawla, D 2019). The KM System architecture can enhance Organizational capability to use its knowledge resources in order to leverage knowledge as a vital resource to achieve business objectives (Temtim Desta et al. 2014). The KM success model has three basic dimensions as antecedents to KM success: system quality system of technical infrastructure; knowledge quality, deals with KM strategy for identifying critical knowledge & storage; Management support and allocation of resources. Further, the intense competition, fickle consumers, shorter product life cycles, and globalization are some of the driving forces that have led to the increased inspection of the usage, application and leveraging of knowledge in the organizations (Mei-Hsiang W. and Tarnng Y. 2016).

## METHODOLOGY

### Sample Selection

The 220 usable surveys have been examined for accuracy of data entry, non-response bias, missing values, reliability, and validity. Finally, 20 surveys were deleted due to some factors mentioned above, thus, 200 surveys without missing data have been remained for analysis that includes the Managers and Employees of 20 Organizations of Construction Industry that includes Public and Private Sector Construction organizations (about 50 per cent each) in and around Visakhapatnam which is a fast growing port and steel city having more number of Registered and Unregistered Construction organizations (Table 1).

**Table 1: Sample Selected for the Study**

S. No	Category of Enterprises	No of Units	Respondents	Percent
1	Private Construction Organizations	10	100	50.00
2	Private Construction Organizations	10	100	50.00
<b>Total</b>		20	200	100.00

**Source:** Field Study

### The Research Questions

Main Question: Is there an impact of Knowledge Management Implementation Variables jointly (knowledge acquisition, knowledge storage, application of knowledge, knowledge sharing and others) affect operational performance and problem solving of the construction projects in Visakhapatnam, AP, India?

Sub-questions: 1) Is there an impact of knowledge management implementation variables jointly (knowledge acquisition, knowledge storage, application of knowledge, knowledge sharing and others) on solving the problems in the projects via improving performance vice versa, in the projects of construction organizations selected for the study? 2) Is there any significance and nature of relationship between solving the problems in the projects and improving performance of the Projects in construction Industry, selected for the study?

### Objectives of the Study

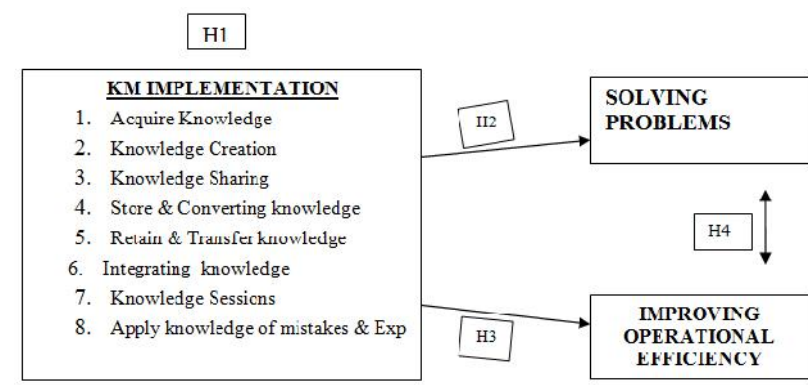
The study is conducted with the following objectives

- To understand the significance of Knowledge Management Implementation in the organizations selected for the study
- To examine the Impact of KM implementation on solving day to day problems at the projects in the construction Industry.
- To understand the impact of KM implementation on operational efficiency of the Projects in the construction Industry

- To find out the mutual relation and dependence between the outcomes via Solving Problem and Improving Operational Efficiency by successful implementation of Knowledge Management Practices

### Hypothesis

- **H<sub>01</sub>**: There is no significance in the variables of Knowledge Management Implementation in the projects of Construction Industry in Visakhapatnam, Andhra Pradesh, India
- **H<sub>11</sub>**: There is significance in the variables of Knowledge Management Implementation in the projects of Construction Industry in Visakhapatnam, Andhra Pradesh, India
- **H<sub>02</sub>**: There is no significant influence of Knowledge Management Implementation on Solving Problems in the projects of Construction Industry in Visakhapatnam, Andhra Pradesh, India
- **H<sub>12</sub>**: There is a significant influence of Knowledge Management Implementation on Solving Problems in the projects of Construction Industry in Visakhapatnam, Andhra Pradesh, India
- **H<sub>03</sub>**: There is no significant influence of Knowledge Management Implementation on Improving Operational Efficiency in the projects of Construction Industry in Andhra Pradesh, India
- **H<sub>13</sub>**: There is no correlation between Knowledge Management Implementation on Improving Operational Efficiency in the projects of Construction Industry in Andhra Pradesh, India
- **H<sub>04</sub>**: There is no correlation between Solving Problems and Improving Operational Efficiency in the projects of Construction Industry in Andhra Pradesh, India
- **H<sub>14</sub>**: There is a correlation between Solving Problems and Improving Operational Efficiency in the projects of Construction Industry in Andhra Pradesh, India



**Figure 1: Research Design.**

### STUDY ANALYSIS

Earlier, the majority of studies were descriptive in nature and interested in the correlation between KM and organizational performance indicators and dominated by conceptual studies. There was an intensive use of SPSS software (about 40 per cent) of the articles in the data analysis technique. A small sample is a limitation of generalizing the findings any study and urge for the need of deploying more sample size to generalize the findings. The excessive investigation of manufacturing and technological sectors has widely studies, while other sectors have received less attention (Mubarak al Rashdi 2019).

Hence, an attempt is made to study the Significance and Impact of Knowledge Management Implementation on Solving Problems and also improving operational efficiency of the Projects in Construction Industry, Visakhapatnam, Andhra Pradesh, India.

The Mean and Standard Deviations (SDs) of Knowledge Implementation Process variables are significant with good scores of Mean and moderate SD values via, Acquire Knowledge about Business Environment, others (Mean 4.2143 & SD 0.70295), Knowledge Creation via, Surveys, Research and Development (Mean 4.2286 & SD 0.77539), Knowledge Sharing through SAP & MIS among Stake holders (Mean 4.1571 & SD.84199) Store & Converting knowledge through Codification (Mean 4.1086 & SD.85032) followed by Retain & Transfer knowledge through common Data Base to all, Apply knowledge of mistakes & Experiences, Integrating different sources of knowledge, Knowledge Sessions through Training and Development (with less than 4 and SD between 6.4 to 8.7) (Table 2). Similarly, Knowledge Sharing through SAP & MIS among Stake holders (Sig.000) found significant at 0.01\*\* level, followed by Acquire Knowledge about Business Environment, others (Sig.048 at 0.05 level \*), Knowledge Creation via, Surveys, Research and Development (Sig.014 at 0.05 level\*), Store & Converting knowledge through Codification (Sig.005 at 0.05 level\*) (Table 3). It infers that there is significance in the variables of Knowledge Management Implementation in the projects of Construction Industry in Andhra Pradesh, India. Hence, Null Hypothesis (H01) is rejected and Alternative Hypothesis (H11) is accepted.

In order to find out the strength of Mean scores & SD and also the significance of the Knowledge Management Implementation variables, the descriptive Statistics and ANOVA method has been applied. Initially, we enter eighth variables of the Knowledge Management Implementation, after analysis through the above measures, the five KM implementation variables via, Acquire Knowledge about Business Environment & others, Knowledge Creation via, Surveys, Research and Development, Knowledge Sharing through SAP & MIS among Stake holders, Store & Converting knowledge through Codification, Retain & Transfer knowledge through common data base to all are found significant at either 0.05\* or 0.01\*\* levels. Hence the above significant variable are only taken in to consideration for the future testing's of Hypothesis and analysis

**Table 2: Descriptive Statistics**

	Mean	SD
KP-Acquire Knowledge about Business Environment, others	4.2143	.70295
KP-Knowledge Creation via, Surveys, Research and Development	4.2286	.77539
KP- Knowledge Sharing through SAP & MIS among Stake holders	4.1571	.84199
KP-Store & Converting knowledge through Codification	4.1086	.85032
KP-Retain & Transfer knowledge through common Data Base to all.	3.9714	.86451
KP-Integrating different sources of knowledge.	3.9429	.64649
KP-Knowledge Sessions through Training and Development	3.8714	.84686
KP-Apply knowledge of mistakes & Experiences	3.9714	.73888

**Source:** Study Analysis

**Table 3: ANOVA**

		<b>F</b>	<b>Sig.</b>
Acquire Knowledge about Business Environment & others	Between Groups	3.366	.048
	Within Groups		
	<b>Total</b>		
Knowledge Creation via, Surveys, Research and Development	Between Groups	4.964	.014
	Within Groups		
	<b>Total</b>		
Knowledge Sharing through SAP & MIS among Stake holders	Between Groups	12.797	.000
	Within Groups		
	<b>Total</b>		
Store & Converting knowledge through Codification	Between Groups	6.365	.005
	Within Groups		
	<b>Total</b>		
Retain & Transfer knowledge through common Data Base to all.	Between Groups	.167	.847
	Within Groups		
	<b>Total</b>		

**Source:** Study Analysis, \*  $p < .05$ , \*\*  $p < .01$ .

## REGRESSION ANALYSIS

The adjusted R square 0.423 reveals that there is about 42 percent combined influences of the five entered Knowledge Management Implementation variables (independent variables) on the dependent variable – Solving Problems of the projects in the construction Industry (Table 4). There is a significant difference that has been found in the influences of such independent variables on the dependent variable (F- 3.224, Sig 0.011) significant at 0.05 level (Table 5).

The t- values and their respective significant levels at 0.05 and 0.01 levels are also derived. Retain & Transfer knowledge through Common Data Base to all (t value 3.781 Sig 0.000\*\*), followed by Acquire Knowledge about Business Environment & Others (t value 3.414 Sig 0.001\*\*), Knowledge Creation via, Surveys, Research and Development (t value 2.713 Sig 0.017\*) have been found to be significant at either 0.05\* or 0.001\*\* levels. Few independent factors via, Knowledge Sharing through SAP & MIS among Stake holders, Store & Converting knowledge through Codification have been found no significance on Solving Problems of the Construction Projects in the study (Table 6). Further, it is inferred that there is a significant influence of Knowledge Management Implementation variables on Solving Problems of the projects in the Construction Industry, Andhra Pradesh, India, Hence, Null Hypothesis (H02) is rejected and Alternative Hypothesis (H12) is accepted.

The adjusted R square 0.711 reveals that there is about 71 percent combined influences of the five entered Knowledge Management Implementation variables (independent variables) on the dependent variable – Improving Operational Efficiency (Table 7). There is a significant difference that has been found in the influences of such independent variables on the dependent variable (F- 15.099, Sig 0.000\*\*) significant at 0.01 level (Table 8). It shows that the statistical significance level is (0.00) which is less than (0.05). *Thus, the null hypothesis (H03) is rejected and the alternative hypothesis (H13) is accepted.* There is an impact for knowledge management Implementation Variables (knowledge acquisition, knowledge storage, application of knowledge, knowledge sharing) at a significance level (a 0.05) on Improving Operational efficiency in the organizations, selected for the study.

The Knowledge Management implementation variables and the derived outcomes in the study via, Solving Problems and Improving Operational Efficiency have been chosen for the further analysis in order to find out the correlation between the specified outcomes of previous testing of hypothesis in the study. There is a significant correlation



(Sig 0.073, at 0.05 level\*) between the outcomes variables via, Solving Problems and Improving Operational Efficiency. Similarly the correlation between Knowledge Management Implementation variables v1(Sig 0.017\*, 0.000\*\*), v2(Sig 0.063\*, at 0.073 \*), v3(Sig 0.000\*\*, at 0.024 \*), v4(Sig 0.057\*, at 0.022\*), v5(Sig 0.009\*, at 0.024\*) have also been significant with their respective outcomes. It infers that there is a correlation between Solving Problems and Improving Operational Efficiency in the projects of Construction Industry in Andhra Pradesh, India (Table 9). Hence, the Null Hypothesis H04 is rejected and Alternative analysis (H14) is accepted.

**Table 4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423 <sup>a</sup>	.179	.123	.59016

Predictors: (Constant), Acquire Knowledge about Business Environment & Others. Knowledge Creation via, Surveys, Research and Development. Knowledge Sharing through SAP & MIS among Stake holders. Store & Converting knowledge through Codification. Retain & Transfer knowledge through Common Data Base to all

**Table 5: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	5.614	5	1.123	3.224	.011 <sup>b</sup>
	Residual	25.773	74	.348		
	<b>Total</b>	<b>31.387</b>	<b>79</b>			

a. Dependent Variable: Organizational Efficiency, p<0.05\*\* level

b. Predictors: (Constant) Acquire Knowledge about Business Environment & Others. Knowledge Creation via, Surveys, Research and Development. Knowledge Sharing through SAP & MIS among Stake holders. Store & Converting knowledge through Codification. Retain & Transfer knowledge through Common Data Base to all

**Table 6: Coefficients<sup>a</sup>**

Model	t	Sig	
1	(Constant)	1.489	.139
	Acquire Knowledge about Business Environment & Others	3.414	.001**
	Knowledge Creation via, Surveys, Research and Development.	2.713	.017*
	Knowledge Sharing through SAP & MIS among Stake holders.	1.052	.158
	Store & Converting knowledge through Codification	-1.077	.284
	Retain & Transfer knowledge through Common Data Base to all	3.781	.000**

Source: Data Analysis, \*p<0.05, \*\*p<0.01

**Table 7: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711 <sup>a</sup>	.505	.472	.45821

a. Predictors: (Constant), Acquire Knowledge about Business Environment & Others. Knowledge Creation via, Surveys, Research and Development. Knowledge Sharing through SAP & MIS among Stake holders. Store & Converting knowledge through Codification. Retain & Transfer knowledge through Common Data Base to all

**Table 8: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	15.851	5	3.170	15.099	.000 <sup>b</sup>
	Residual	15.537	74	.210		
	<b>Total</b>	<b>31.387</b>	<b>79</b>			

a. Dependent Variable: Improving Operational efficiency, Source: Study Analysis, \* p <.05, \*\* p <.01.

b. Predictors: (Constant), Acquire Knowledge about Business Environment & Others. Knowledge Creation via, Surveys, Research and Development. Knowledge Sharing through SAP & MIS among Stake holders. Store & Converting knowledge through Codification. Retain & Transfer knowledge through Common Data Base to all

**Table 9: Correlations**

	Solving Problems	Improving Operational Efficiency
Solving Problems	1	.316
Improving Operational Efficiency	.073	1
	100	100

Source: Study Analysis, \*  $p < .05$ , \*\*  $p < .01$ .

## RECOMMENDATIONS AND CONCLUSIONS

The Implementation KM in the organization will positively impact corporate success. Management support, ICT infrastructure, Budget allocation, Training programmes are very much needed to carry out knowledge-intensive activities. Therefore, the KM sources in the organization have to be maintained efficiently and effectively. Nowadays, knowledge is considered as an essential asset in any organization. Thus, many organizations are trying to apply Knowledge management practices in order to improve their organizational performance. Many studies have concluded that Knowledge Management is the main reason to operational performance by solving problems and business growth. Thus, it is good to invest in KM resources to attain organizational performance and improvement. In order to implement an effective knowledge management system, the support of senior management in consolidation of building knowledge management and in spreading the culture of knowledge sharing need to be taken under consideration. Furthermore, there is a huge need to continuously train and educate the employees & CEOs about the importance of KM through group works and training programs. Further, the research orientation, creative culture and the nature knowledge enjoyment need to be inculcated in the minds of employees and others in the organizations to derive more benefits out of KM implementation. As a future direction for this research, an empirical study may be conducted by starting at point where this study ends by taking in to consideration the other important out comes via, Successful & Effective Completion of the Projects and also Organizational Efficiency and Development. Similarly, the studies can also be considered in other segments as well with similar variables or with few modifications. The study may also be extended users perceptions towards the use and implementation of knowledge management system in different organizations.

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