

“THE ROLE OF KNOWLEDGE MANAGEMENT OUTCOMES IN SUCCESSFUL COMPLETION OF THE CONSTRUCTION PROJECTS, ANDHRA PRADESH, INDIA”

ABSTRACT

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Knowledge Management is a relatively new discipline and provides the organizations a capability to increase productivity and responsiveness, better coordination, decision making and better problem solving among the employees. The role of knowledge management 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 Government of India driven by PM Gatishakti initiative in the Budget 2022 via Seven Engines that includes Roads, Railways, Airports, Ports, Mass Transport, Waterways & Logistics infrastructure, National Master Plan, Multimodal Connectivity, National Ropeways Development Plan etc (www.india.gov.in). Further, Construction and infrastructure development is 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 on successful completion of the projects in construction Industry across Andhra Pradesh. For this purpose, the quantitative cross-sectional study design approach was adopted, and data generated from 200 Managers & Employees from various construction organizations across major cities in Andhra Pradesh, India and analyzed the data with the help of SPSS 25. The study results have revealed that the KM Implementation helps in solving the problems in the Projects of Construction Industry, followed by improving operational efficiency in a significant manner. Further, these KM implantation outcomes solving the problems improving operational efficiency, specified in the study carry their significant influences on the Successful completion of construction projects, selected for the study.

Key Words: *Solving Problems, Improved operational efficiency, Multimodal connectivity, KM Implementation Variables, Mass Urban Transport, Logistics Synergy, Knowledge Creation,*

Knowledge Acquisition, Knowledge Codification & Conversion, Knowledge Application & Sharing, Knowledge Retention, KM Source, Knowledge Pleasure.

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THE ROLE OF KNOWLEDGE MANAGEMENT IMPLEMENTATION ON SUCCESSFUL COMPLETION OF THE PROJECTS: A STUDY ON CONSTRUCTION INDUSTRY

I. INTRODUCTION:

Knowledge is increasingly being recognized as the new strategic imperative of organizations. India was the fourth country in the list of countries by the largest output in construction (about 40 per cent) in the developmental investment in our country for the last 50 years; it is continuously evolving with the advancement in the technology. 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 & Logistics infrastructure, National Master Plan, Multimodal Connectivity, National Ropeways Development Plan etc 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 (www.india.gov.in). The main objectives of the present study are to understand the significance of knowledge management implementation in the construction organizations selected for the study; to examine the Impact of KM implementation in solving day to day problems of projects in the Construction Industry; to understand the impact of KM implementation on operational efficiency of Projects in the Construction Industry; to find out the Impact of above outcomes via, Solving Problem and Improving Operational Efficiency on the Successful Completion of Projects in the Construction Industry.

II. KNOWLEDGE MANAGEMENT- AN OVERVIEW:

Knowledge management is a relatively new discipline which has been developed from various published works of academics and pioneers such as Peter Drucker, Karl-Erik Sveiby and Nonaka and Takeuchi. It is a group of clearly defined process or methods used to search important knowledge among different knowledge management operations. Knowledge Management (KM) involves processes via, data capturing, acquisition and processing from within the project or at inter-project or inter-organizational level, knowledge transfer and sharing, storing, updating of the data and reusing the knowledge. KM provides a tool the organization to harness the knowledge from their projects and use them to their competitive advantage over other organizations. Furthermore, KM also provides the capability to increase productivity and responsiveness among the employees, better coordination, decision making and better problem solving. Knowledge management is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share the information into action in ways that strive to improve organizational performance (Hussein Salama Al-Sohaim et al 2016). 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. Knowledge is progressively perceived as an organization's most important resources. In the modern economy, it is able to harness the organization's competitive advantage that is realized through the full utilization of information and data coupled with the harnessing of people's skills and ideas

III. THE ELEMENTS OF KNOWLEDGE MANAGEMENT:

Knowledge creation, Knowledge acquisition, Knowledge codification, Knowledge sharing 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. The four different modes of conversion of the knowledge are socialization, externalization, combination and internalization (Shih-wei Chou 2004). 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. Knowledge application refers to the processes of sharing, transferring, disseminating and distributing knowledge once it has been organized and stored. 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 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 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).

IV. THE KM INITIATIVES AND OPERATIONAL PERFORMANCE

The organizational performance may be financial and operational. Financial performance is measured using financial indicators such as return on asset, return on investment, and 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).

V. THE KM INITIATIVES AND PROBLEM SOLVING

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).

VI. THE REVIEW OF LITERATURE:

The Knowledge Management Index for awareness of intellectual property in IT companies was found to be too low, which is an area of concern, but the same was high for information technology. It was also revealed that HR professionals have to realize that true competitive advantage lies in the people and the best HR practices should be aligned to strengthen knowledge management (Singh & Soltani, E 2010).The status of knowledge management was totally dependent on the experience of the companies in the market. The middle level management of these companies were well aware of the pros of knowledge management but were negligent towards the proper implementation of knowledge management (Arun Kumar & Vatsala. 2017). The growth of knowledge management practices in India has been limited mainly in the service industries like IT, Consultancy and some of the electronics and communication industries. The success of KM is also based on implicit culture of the organization, the philosophy and belief of trust, giving people the continuous learning opportunities (Sant wana Chaudhuri 2011).

Katsuro Pension et al (2013) has tested hypothesis and concluded 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). 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). This study identifies the existing practice of knowledge sharing practice in the organizations and proposes a KM System architecture that 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; and 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 Tarng-Y 2016).

VII. METHODOLOGY:

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 5.1).

Table-7.1: SAMPLE SELECTED FOR THE STUDY

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

Source: Study Analysis

VIIa. The Research Questions

1. Is there any significance of Knowledge Management Implementation (knowledge acquisition, knowledge storage, application of knowledge, knowledge sharing and others) in the projects of Construction Industry?
2. 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?
3. 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?
4. Is there an impact of the study outcomes via, solving the problems and improving performance derived from various knowledge management initiations jointly on the successful completion projects with good quantity & quality of work in the construction organizations selected for the study?

Objectives of the study:

The study is conducted with the following objectives

1. To understand the significance of knowledge management implementation in the construction organizations selected for the study
2. To examine the Impact of KM implementation on solving day to day problems of the projects in the Construction Industry
3. To understand the impact of KM implementation on operational efficiency of the Projects in the Construction Industry
4. To find out the Impact of the above outcomes via, Solving Problem and Improving Operational Efficiency on the Successful Completion of the Projects in the Construction Industry.

Hypothesis:

H₀₁ - There is no significance in Knowledge Management Implementation variables of the projects in Construction Industry

H₁₁ - There is no significance in Knowledge Management Implementation variables of the projects in Construction Industry

H₀₂ – There is no correlation between Knowledge Management Implementation and Solving Problems in the projects of Construction Industry

H₁₂ - There is a correlation between Knowledge Management Implementation and Solving Problems in the projects of Construction Industry

H₀₃ - There is no correlation between Knowledge Management Implementation and Improving Operational Efficiency in the projects of Construction

H₁₃ - There is no correlation between Knowledge Management Implementation and Improving Operational Efficiency in the projects of Construction Industry

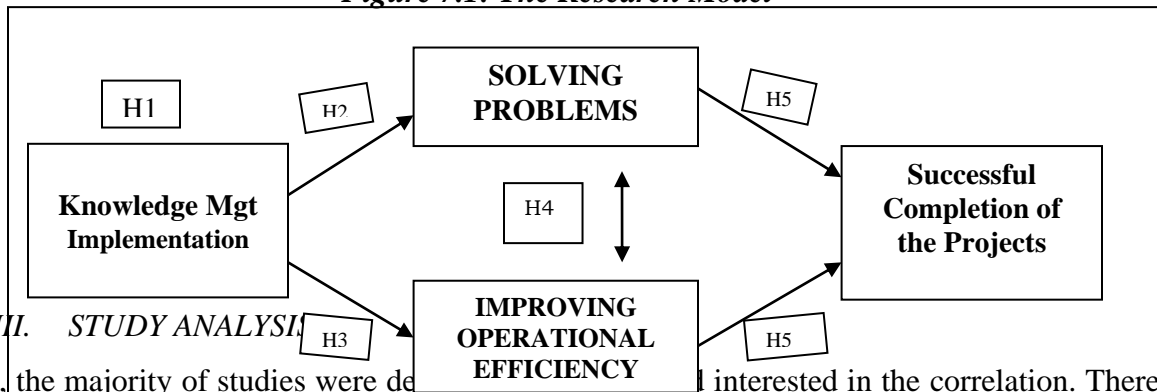
H₀₄ - There is no correlation between Solving Problems and Improving Operational Efficiency in the projects of Construction Industry

H₁₄ - There is a correlation between Solving Problems and Improving Operational Efficiency in the projects of Construction Industry

H₀₅ - There is no Impact of the study outcomes via, Solving Problems and Improving Operational Efficiency on Successful Completion of the Projects in Construction Industry

H15 - There is an Impact of the study outcomes via, Solving Problems and Improving Operational Efficiency on Successful Completion of the Projects of Construction Industry

Figure 7.1: The Research Model



VIII. STUDY ANALYSIS

Earlier, the majority of studies were de interested in the correlation. There was an intensive use of SPSS software (about 40 per cent) of the articles in the data analysis technique. The excessive investigation of manufacturing and technological sectors has been conducted, while other sectors have received less attention (Mubarak al Rashdi 2019). Hence, an attempt is made to study the Impact of Knowledge Management Implementation on Successful Completion of the Projects in Construction Industry, Andhra Pradesh, India

Table 8.1: 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

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 8.1). 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 8.1a). 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.

Table 8.1a: ANOVA

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

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

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

REGRESSION ANALYSIS:

It is applied to examine the influence of two or more individual variables (y) on a dependent variable (x). The linear regression analysis is used to predict the dependent variables (Outcome variables) based on the impact of independent variables via Hypothesis 2, 3 and 5 in the analysis.

Table-8.2:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423 ^a	.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

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-8.2). 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-8.2a).

Table-8.2a:ANOVA^a

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

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-8.2b: Coefficients^a

Model	t	Sig.
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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

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 8.2b). 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.

Table 8.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711 ^a	.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 8.3a: ANOVA^a

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

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

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-8.3). 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-8.3a). 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 ($\alpha \leq 0.05$) on Improving Operational efficiency in the Construction 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. 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 -8.3b). *Hence, the Null Hypothesis H04 is rejected and Alternative analysis (H14) is accepted.*

Table8.3b: Correlations

	<i>Solving Problems</i>	<i>Improving Operational Efficiency</i>
Solving Problems	1	.316
		.073
	100	100

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

8.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464 ^a	.215	.162	.57704

a. Predictors: (Constant), Solving Problems, Improving Operational Efficiency

8.4a:ANOVAa

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6.747	5	1.349	4.053	.003 ^b
Residual	24.640	74	.333		
Total	31.387	79			

a. Dependent Variable: Successful Completion of the Projects,

b. Predictors: (Constant), Solving Problems, Improving Operational Efficiency

8.4b: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.118	.880		3.545	.001
Solving Problems	.348	.177	.228	1.959	.054
Improving Operational Efficiency	.276	.117	.317	2.358	.021

a. Dependent Variable: Successful Completion of the Projects

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

The adjusted R square 0.215 reveals that there is about 22 percent combined influences of the Outcomes of Knowledge Management Implementation variables via Solving Problems, Improving Operational Efficiency on the dependent variable – Successful Completion of the Projects (Table-8.4). There is a significant difference that has been found in the influences of such independent variables on the dependent variable (F- 4.053, Sig 0.003**) significant at 0.01 level (Table-8.4a). It shows that the statistical significance level is (0.001) which is less than (0.05). There is an impact for knowledge management outcome variables (Solving Problems, Improving Operational Efficiency) at a significance level ($\alpha \leq 0.05$) on Successful Completion of the Projects in the organizations, selected for the study. Similarly, the t- values and their respective significant levels at 0.05 and 0.001 levels are presented. The independent factors via, Solving Problems, Improving Operational Efficiency have been found to be significant at 0.05* level (Table 8.4b). There is a combined Impact of Solving Problems, Improving Operational

Efficiency on Successful Completion of the Projects, of the selected Construction organizations in Andhra Pradesh. Hence, the Null Hypothesis (H_0) is rejected and Alternative Hypothesis (H_1) is accepted.

IX. CONCLUSION, LIMITATIONS AND FUTURE WORK

Nowadays, 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. The Implementation KM in the organization will positively impact corporate success by assisting in timely completion of the projects. Management support, ICT infrastructure, Budget allocation, Training programmes are very much needed to carry out knowledge-intensive activities. Therefore, it is important to efficiently and effectively handle the enterprise's information assets and capital to incorporate knowledge management practices in the enterprises to consistently function, gain, and maintain a competitive advantage. There is a scope for further research; an empirical study may be conducted by taking in to consideration the other important out comes via, Successful & Effective Completion of the Projects and also Organizational Efficiency and Development as dependent variables. 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. Further, the critical success factors (CSFs) that affect implementing knowledge management systems (KMSs) need to be studied.

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