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Rajeevan, Pradesh and Gupta Guhathakurta

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[*1]Rajeevan, Pradesh and [2]Gupta Guhathakurta
[1,2]Ministry of Water Resources, New Delhi
*Corresponding authors email: prajeevan @mwr.gov

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Abstract

Financial competency refers to understanding the organization's financial processes; preparing, justifying and administering the program budget. It also involves overseeing procurement and contracting to achieve desired results; monitoring expenditures and using cost benefit thinking to set priorities. This paper sought to determine the effect of financial competency on performance of construction projects. The study population of this study was 382 ongoing dam projects in India. The study employed descriptive survey design. The results were analyzed using social sciences (SPSS) computer software. Financial competency revealed a positive and significant relationship with performance of construction projects. It was also concluded that financial competency influences performance of construction projects. Proper financial management skills in terms of resource planning, funding and allocation are critical to the growth of construction sector. Financial competencies in terms of budget planning, resource allocation is required in the prudent use of financials resources in the construction sector. Proper channeling of resources may help curb resource embezzlement that is rampant in the construction sector.

Key words: *Financial competency, project completion, Dam projects, India*

1.1 Introduction

Completing a project within the planned budget requires cost management, estimation, determination and controlling (Demirdöğen & Işık, 2016). Innovations will affect cost of the project as well as the project complexity, procurement methods, tendering method and project size. Achieving the lowest cost possible as well as meeting the project's budget requirements are the major outcomes of a construction project as it is in timeliness. Financial competency is crtitical in ensuring that the funds are used prudently to minimize to minimize project activity costs as well as the operational costs at the corporate level. Financial competencies may take the form of financial appraisal and budget planning. The process of financial appraisal is an important part, as the projects are investments that are aimed to give maximum output in return (Lytvynchenko, 2017).

The realism of budget planning is usually understood as a technical problem of calculating the cost of a project product. Visible sources of error in cost planning are reduced to determining the resource amount (product technology) and estimating the resource cost. A realistic budget (financial plan) implies the combination of the project's target plan, the contract conditions and

the state of key stakeholder's financial systems (Montenegro, Obradović & Žarkić-Joksimović, 2019). Understanding the financial context helps, on the one hand, to create an adequate financial management system for a particular project, program and portfolio, and, on the other hand, it can be useful in adapting existing project management methodologies or forming one's own if the organization is sufficiently competent in this matter.

The success of any project to a great extent depends on its financial discipline and its accountability for the funds provided. A sound financial management system should clearly define the accounting policies and procedures to be adopted by all the project authorities. The accounts and financial statements prepared should be in accordance with the accepted accounting principles and procedures. This would also ensure comparability across accounting units/implementing agencies, for effective monitoring and implementation of the project.

Dams are considered as agency of development for its contribution to flood management, hydropower production, irrigation, navigation and supplying water for urban and industrial needs. There are an estimated 4,762 completed large dams with another 382 under construction in India (Zhang, Urpelainen & Schlenker, 2018). Dams also provide wide-ranging benefits in terms of flood control, irrigation, navigation, and job creation. The largest concentrations of dams in India can be found in the central-western part of the country (Bid, Siddique & Ghosh, 2018). Most dams are small-scale irrigation dams, but there are also significant numbers of hydroelectric and water-supply dams scattered throughout the central-western parts of the country.

2.0 Empirical Literature

Demirdöğen and Işık (2016) determined the effect of internal capabilities on success of construction company innovation and technology transfer. Structural Equation Modelling method was used to analyse data collected from 52 construction companies and construct a model representing the interrelationships between the factors. It was found that financial competency in project management is critical to the success of the project.

Kasrai, SaniKavaki and Soloukdar (2014) undertook a study, prioritizing Financing Methods for Dam and Power Plant Projects Using Hierarchical Analysis Process (AHP) Model (Case Study of Dam and Power Plant Projects in Iranian Water and Power Resources Development Company). Statistical population in this study consists of deputies, senior managers, financial managers and generally the experts in the field of finance in dam projects being constructed by Iranian Water and Power Resources Development Company which are 38 subjects. Therefore, selecting the appropriate financing method for foundational plans and projects is of utmost importance. In some projects, the required funds can be provided by the governmental credits and support, but in important and infrastructural projects, it is not possible for the government to fund all the required funds.

Lytvynchenko (2017) investigated financial context of project management competency. The financial context allows us to understand the specifics of project management for the contractor, the owner and the investor. Financial system of the organization will determine the requirements for the effectiveness of the actions of the project manager, even if the budget is calculated formally, and the benefits do not have a clear monetary form. Ignoring the financial context leads to distortions in the understanding of the project management methodology and practice.

Montenegro, Obradović and Žarkić-Joksimović, (2019) explored project managers' competences in financial industry. Respondents were project managers and project team members from the

most prominent financial institutions in Serbia. Financial management among other competency is critical in project management.

Omopariola and Windapo (2019) studied financial management strategies that influence project and organisation performance. Thereafter, the data collected was analysed using the mean score, regression analysis, and Z-test. It was also found out that budgeting, creditworthiness, risk management, review and evaluation are effective financial management strategies among the organisations surveyed; and that the financial management strategies used have a positive effect on project and organization performance.

Bid, Siddique and Ghosh (2018) explored dam projects. The discussion makes us informed that building of dams in various time and space has helped human civilization flourish with diverse benefits of which supply of irrigation water for agriculture and control of floods have been most important. With the development of technology and demand on water, dams have been used to fulfill other benefits like generation of hydroelectricity which served the towns gradually emerged in different locations along with the extension of agriculture.

3.0 Methodology

The research used descriptive survey design. The study population was 382 ongoing dam projects in India. The units of observation were the dam project managers. Structured questionnaire were distributed to project managers. Data analysis was conducted by use of SPSS version 25.0. Simple OLS was employed to establish the impact of financial competency on project performance of dam projects in India.

4.0 Results

4.1 Descriptive Analysis

4.1.1 Financial competency

The study sought to examine the influence of financial competency on dam project completion in India. For the purposes of interpretation strongly disagree and disagree were interpreted together as disagreeing, agree and disagree were grouped and interpreted as agreeing while unsure was interpreted alone. The results obtained are presented in Table 1.

Table 1 Financial competency

Financial competency	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean	SD
Financial resources are allocated effectively to the various facets of projects	37.0%	33.1%	4.7%	8.6%	16.7%	2.4	1.2
Comprehensive and details budgets for all material requirements is conducted by knowledgeable experts	37.0%	34.2%	4.7%	8.2%	16.0%	2.2	1.3
The available financial resources are used prudently to limit wastage and embezzlement	34.6%	35.4%	6.6%	7.0%	16.3%	2.4	1.4
The company seeks external funding to support project completion	35.8%	36.6%	3.9%	6.2%	17.5%	2.3	1.1
Funding of projects is done on timely manner to avoid project delays	35.4%	35.4%	5.1%	8.9%	15.2%	2.3	1.4

Table 1 shows that majority of project managers disagreed that financial resources are allocated effectively to the various facets of projects, with mean score of 2.4 and standard deviation of 1.2 implying that allocation of resources is poorly done. The results also showed that majority of the project managers disagreed that comprehensive and details budgets for all material requirements is conducted by knowledgeable experts with mean score of 2.2 and standard deviation of 1.3 implying that comprehensive and details budgets is not adequately done. The results also showed that majority of the project managers disagreed that the available financial resources are used prudently to limit wastage and embezzlement with mean score of 2.4 and standard deviation of 1.4 implying that resource embezzlement is a problem in the construction industry. It was also revealed that majority of project managers agreed that the company seeks external funding to support project completion, with mean score of 2.3 and standard deviation of 1.1 implying construction companies rely on internal resources. Further, also revealed that majority of project managers disagreed that funding of projects is done on timely manner to avoid project delays, with mean score of 2.3 and standard deviation of 1.4 implying that funding of projects experience payment delays.

4.1.2 Performance of construction projects

The study sought to evaluate **performance of dam projects**. For the purposes of interpretation strongly disagree and disagree were interpreted together as disagreeing, agree and disagree were grouped and interpreted as agreeing while unsure was interpreted alone. The results obtained are presented in Table 2.

Table 2 Performance of dam projects

Performance of construction projects	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean	SD
Construction housing projects are implemented according to the set timelines	34.2%	36.2%	6.2%	4.3%	19.1%	2.4	1.3
Construction housing projects are constructed as per the cost/budget provisions	32.7%	43.6%	3.5%	4.3%	16.0%	2.1	1.1
Construction housing projects meet quality standards stipulated by construction authority of India	37.7%	36.2%	4.7%	4.3%	17.1%	2.2	1.2
Construction housing projects meet user satisfaction	21.4%	41.2%	16.0%	3.5%	17.9%	2.3	1.3
Construction housing projects attract sufficient return on investment for the owners	19.8%	34.6%	18.3%	5.4%	21.8%	2.4	1.4

Table 2 shows that majority of project managers disagreed that construction housing projects are implemented according to the set timelines, with mean score of 2.4 and standard deviation of 1.3 implying that implementation of construction projects fail to meet deadlines. The results also showed that majority of the project managers disagreed that construction housing projects are constructed as per the cost/budget provisions, with mean score of 2.1 and standard deviation of

1.1 implying that construction projects are not undertaken as per budget constraint. The results also showed that majority of the project managers disagreed that construction housing projects meet quality standards stipulated by construction authority of India with mean score of 2.2 and standard deviation of 1.2 implying quality of construction projects is in question. It was also revealed that majority of project managers agreed that construction housing projects meet user satisfaction, with mean score of 2.3 and standard deviation of 1.3 implying that some construction projects fail to meet customer satisfaction. Further, also revealed that majority of project managers disagreed that, construction housing projects attract sufficient return on investment for the owners, with mean score of 2.4 and standard deviation of 1.4 implying that returns from construction projects may be limited if internal competence is not adequately deployed.

4.2 Regression

The results presented in Table 3 present model summary and coefficient regression model.

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.642[a]	.594	.491	.58167

a. Predictors: (Constant), project management competence

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	35.876	1	35.876	106.037	.000[b]
	Residual	86.276	255	.338		
	Total	122.152	256			

a. Dependent Variable: Performance of construction projects

b. Predictors: (Constant), Project management competence,

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.065	.139		7.682	.000
Financial competency	.582	.056	.542	10.297	.000

a. Dependent Variable: Performance of dam projects

Project management competence explains 51.2% of the performance of dam projects. Project management competence are good predictors in predicting performance of construction projects a supported indicated by F statistic of 88.481> 2.53.The results also revealed that project management competence and performance of dam projects have a positive and significant relationship (β=.288, p=0.000<0.05). The regression of coefficient implies that if project management competence increase by one unit, the increases by .288 units.

The outcomes additionally showed that there is a significant positive association between financial competency and performance of construction projects (r=.542, p=0.000<0.05). Financial competencies helps in the management of resources needed to grease the daily business of the construction firm. The efficiency and effectiveness of project management requires prudent use of financial resources. Project financial competencies ensure that in all

project phases project management knows how much financial resource is required for each time interval. The resources required depend on the project cost, the time schedule and the payment conditions.

The management of financial competence includes planning, sourcing, and controlling the use of financial capacity during construction. The sufficiency of financial competence depends on the correct composition and correct financing at all times during construction. Financial competence is very critical in enhancing project performance. To ensure that the level of financial competence is maintained and that there is sufficient provision of funds to finance current assets to facilitate projects to be project completion within cost and time, there is need of establishing the optimum level of financial competence needs of a project. Further there is need of continuous checking and monitoring the quantum of individual parts that comprise the financial competence to ensure that the requirements are not exceeded.

5.0 Conclusion

It was also concluded that financial competency influences performance of construction projects. Proper financial management skills in terms of resource planning, funding and allocation are critical to the growth of construction sector. Construction organizations will perform better when a combination of financial management strategies is used in their operations.

6.0 Recommendations

Financial competencies in terms of budget planning, resource allocation is required in the prudent use of financials resources in the construction sector. Proper channeling of resources may help curb resource embezzlement that is rampant in the construction sector.

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