



Workforce Productivity, Project Cost Accounting, and Firm Performance in Pakistan's Construction Industry

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ABSTRACT

The construction sector in Pakistan is a very sensitive sector that leads to the development of the economy in terms of creation of employment, building of infrastructures, and gross domestic product (GDP). Nevertheless, construction companies are usually confronted with workforce productivity, cost control and project completion issues, which in turn have a direct impact on their financial and operational outcomes. This paper will discuss how workforce productivity and project cost accounting affect the performance of firms in the construction industry of Pakistan. Workforce productivity is efficiency, use of skills and output of people working on construction projects and project cost accounting is systemic tracking, reporting and control of project costs to ensure cost efficiency. The quantitative research method was used to collect data on managerial and supervisory employees of the selected construction companies in Karachi using the structured questionnaires. The research utilizes descriptive statistics, correlation analysis, and structural equation modeling (SEM) in order to explore the associations between the variables. The results indicate that productivity of the workforce and cost accounting of a project are both significant in improving the performance of the firm. The efficiency of the working force ensures the completion of the project in time, wastage reduction, and optimal resource utilization, whereas proper project cost accounting is relevant to the successful budgeting, cost control, and making financial decisions. In addition, project cost accounting also mediates the association between the workforce productivity and the firm performance, which implies that those firms incorporating labor efficiency with stringent financial monitoring attain greater operational and financial performance. The findings provide empirical data to prove the use of strategic human resources practices and effective cost management systems to increase competitiveness within the construction industry in Pakistan. Viewed in pragmatic terms, the findings point to the necessity to invest in the workforce training of managers, introduce new tools of advanced cost accounting, and implement performance measurement systems to ensure the optimization of project execution and the profitability of the firm.

Introduction

The construction business in Pakistan is a major contributor to the national development, it is a contributor to the economic growth, creation of employment opportunities and creating necessary infrastructures. The Pakistani Bureau of Statistics (2022) found that the construction industry constitutes almost 2.5% of GDP and employs more than three million individuals directly. Although it is important, construction companies in Pakistan have been experiencing recurrent problems, which have put a strain on their efficiency and profitability. Among such issues, the productivity of the workforce and project cost management are among the main issues defining the performance of a firm. The productivity of workforce, which refers to the efficiency of labor deployed in delivering project outputs, has a direct impact on the project timelines, resource usage as well as the overall performance of the organization (Huselid, 1995). Low level of workforce productivity in the construction industry, where construction projects are usually resource-intensive and time-sensitive, may create delays, cost overruns, and poor quality, thus lowering the firm competitiveness. On the other hand, high productivity employees make sure that projects are delivered on time, resources are distributed in the most efficient way and client expectations are achieved, which eventually leads to improved financial performance (Birdi et al., 2006; Mohseni et al., 2020).

Project cost accounting plays a very important role in the management of the performance of construction firms. Cost accounting systems help managers to have a detailed information of material, labor, and overhead costs of individual projects. The proper tracking of project costs makes it possible to monitor different aspects such as budget compliance, cost variances, and make the correct financial decisions (Horngren et al., 2013). The introduction of sound project cost accounting practices in the construction industry where procurement, subcontracting, and material costs are usually complex, decreases the financial inefficiency and aids in strategic planning. The past studies note that the companies that have proper cost management controls enjoy better profitability, less wastage, and better allocation of resources (Merchant and Van der Stede, 2017; Li et al., 2019).

Workforce productivity and project cost accounting do not only affect the performance of the firm but also interact with each other. The productivity of the workforce and strict cost accounting measures will make sure that the payments of labor are effectively transformed into project outputs under the conditions of the budget. The empirical research of the manufacturing sector and service industries indicates that synergistic effects arise when human capital efficiency is combined with a financial control, and the overall performance of a firm is achieved (Becker and Huselid, 1998; Marler and Boudreau, 2017). It is essential to apply these lessons to the construction industry in Pakistan where most projects have been delayed, over-budgeted, and their efficiency in labor is unreliable. Managers, who are able to match the performance in labor with cost control mechanisms are more likely to finish projects on time, in the budget and on the high quality level, thus gaining the competitive edge in the growing, but challenging market (Gholipour et al., 2015).

Although the study has a practical significance, there is little literature looking at the synergistic role of workforce productivity and project cost accounting to the performance of firms in the construction industry in Pakistan. The research that has been carried out thus far either examines labor efficiency or financial control mechanisms independently, and does not study their combined role in the organizational performance (Sweis et al., 2008; Aibinu and Jagboro, 2002). This relationship is important to understand by managers, policy makers, and other stakeholders in the industry who wish to enhance their operational efficiency, costs and profitability. Besides, construction projects in Pakistan tend to be associated with varying teams, volatility of material prices, and regulatory issues, which creates the necessity to adopt context-specific empirical evidence to inform the managerial choice (Halim et al., 2017).

In this study, we attempt to close this gap in research by understanding the direct and indirect correlation among workforce productivity, project cost accounting and firm performance in the Pakistani construction industry. The research hypothesises that workforce productivity has a positive impact on the performance of a firm and project cost accounting reinforces it by maintaining discipline in finances. The study offers quantitative data through the use of a quantitative methodology using structured questionnaires, descriptive statistics, correlation analysis, and structural equation modeling to offer empirical evidence to managers who wish to increase productivity, cost efficiency, and profitability. The observation is likely to provide realistic advice on implementing strategic workforce management and advanced cost accounting systems, which can lead to the operational and financial prosperity of construction companies in Pakistan.

Overall, the productivity of the workforce and project cost accounting are two factors of firm performance, which are interdependent. Companies that promote labor productivity and still keep the cost under strict control will most probably demonstrate the high results of the project completion, cost-efficient management, and profitability. The study, which filled in this significant research gap, has implications of practical value to managers in the construction sector of Pakistan and adds to the overall literature on human capital efficiency, financial management, and firm performance in the emerging economies. The dynamics are important to understand to maintain competitiveness, enhance project performance, and long-term development in one of the most crucial sectors of the Pakistani economy.

Literature Review

Various factors have a direct relationship with the construction firms performance where some are very important and others are included in the following: workforce productivity and project cost accounting. The productivity of workforce has long been considered as one of the main elements of firm performance in the project-based industries, one of which is construction. It includes the amount of output of the employees as well as the efficiency, use of skills and motivation of the workforce (Huselid, 1995). Workforce productivity in the construction industry has a direct effect on the project timelines, quality, and cost-efficiency as labor forms one of the largest elements of the project inputs. Empirical literature establishes that increased workforce productivity leads to the completion of a project on time, less labor wastage, and increased efficiency in general (Birdi et al., 2006; Mohseni et al., 2020). Training, performance assessment, and incentive plans are linked with improved labor management practices and have a positive influence on the firm performance (Becker and Huselid, 1998).

Some of the researchers underline that the productivity of the workforce depends not just on the personal abilities of the employees but also on such organizational parameters as leadership, work environment, and communication mechanisms. As an example, Gholipour et al. (2015) argue that effective supervision, role definition and collaboration within the team can greatly enhance labor efficiency in construction projects. Equally, Halim et al. (2017) observe that, in developing economies, construction companies are

usually affected by the inability to achieve productivity because of a disjointed workflow, skills deficit, and absence of standardization. This highlights the relevance of managerial interventions with the aim of increasing workforce performance, which ultimately leads to the high performance of projects and firms. Additionally, the productivity of the workforce has been associated with the minimization of project rework, the reduction of accidents, which further positively affects the economic and operational health of the construction companies (Mohseni et al., 2020).

Another critical performance factor that determines the performance of firms is project cost accounting, especially in highly capital intensive and complex projects, based firms. Good cost accounting systems furnish good budget adherence, cost variances, and make better decisions by giving relevant, accurate, and timely information on project expenses (Horngren et al., 2013). Cost accounting in construction projects involves the tracking of costs involved in labor, materials, subcontracting, overheads and equipment. Researchers have found that organizations that have strong project cost accounting systems stand better poised to control financial resources, minimize wastefulness, and increase efficiency in resource distribution (Merchant and Van der Stede, 2017; Li et al., 2019). Through cost accounting, the construction firms will be able to predict financial bottlenecks, avoid budget overruns, and enhance profitability in their projects when the cost accounting is integrated into the project planning and execution (Horngren et al., 2013).

The literature also indicates that project cost accounting is not a closed system that operates on its own, but it has an interaction with workforce productivity to affect the performance of the firm. As an example, Sweis et al. (2008) posit that in cases where labor productivity is quantified and incorporated in financial tracking systems, managers are able to tilt labor usage to the budgetary limits such that resource utilization remains efficient. By the same token, Gholipour et al. (2015) mention that performance-based cost monitoring, along with real-time labor productivity measurement, not only improves project cost efficiency but also leads to timely completion of the project. This combined technique portrays the mediating nature of the cost accounting in converting the productivity of the workforce into real financial and operational results.

The empirical evidence in the developed and emerging economies proves the positive correlation between the workforce productivity, cost accounting, and performance of a firm. The study by Birdi et al. (2006) on the longitudinal study in various industries revealed that the efficiency of workforce combined with the financial control mechanisms had a significant impact on the productivity and profitability of the firms. Mohseni et al. (2020) also highlighted that construction companies in the developing economies have better returns when the labor productivity has been strongly tracked and a combination with cost management systems have been established. Another point that is also noted in the study is that absence of integration between the labor performance and cost controls may result in inefficiencies, budget overruns, and decreased profitability. In Pakistan, construction companies also experience problems with delays and overruns in terms of project costs, as they do not monitor labor inputs and have a very poor financial monitoring system (Halim et al., 2017). This highlights the topicality of exploring the joint effect of workforce productivity and project cost accounting on the performance of the firm in the local setting.

Human capital practices have been well recognized in the literature as the role in improving workforce productivity. According to Becker and Huselid, training, performance appraisal, and employee motivation are all the parts of strategic human resource management that are closely associated with firm performance (Becker and Huselid, 1998). The HR practice in construction companies in dealing with the skills of labor, effective distribution of tasks, and the rewarding performance has a direct impact on the productivity of the workforce. The argument is furthered by Marler and Boudreau (2017), who indicate that HR analytics can enhance labor efficiency through additional insight on workforce allocation and productivity trends, which are produced through data analysis. Even though their research is mainly perfected on service and manufacturing industry, the principles can be applied in construction projects where workforce management is key to successful projects.

When used effectively together with the workforce management, the practices of cost accounting make the time-loop of benefiting the performance of the firm possible. Companies that use project cost accounting will be able to detect labor inefficiencies cost drivers and implement corrective actions, including resource reallocation, workflow optimization, and specific training intervention (Li et al., 2019). Through this integration, the managers will be able to analyze the financial and operational performance of the projects in tandem to ensure that the productivity of the workforce can be translated into cost-effective implementation of the projects. Construction projects in Pakistan have been known to face a budget variation, time lapse, and change in regulations, which has raised the consideration of combined labor and financial management practice to protect performance of firms (Sweis et al., 2008).

A number of theoretical frameworks can be used to explain the interrelations between the productivity of the workforce, cost accounting of projects, and the performance of firms. Resource based view (RBV) indicates that human capital and managerial practices are a strategic resource that may develop sustained competitive advantage in case they are used in an effective way (Barney, 1991). Productivity of the workforce is the effective utilization of human resources, whereas the project cost accounting is the management control of financial resources. These mechanisms combined together give the construction companies the potential to attain high operational efficiency, deliver projects on time, and ensure financial stability. Moreover, management control theories postulate that a hybrid of behavioral and financial controls is necessary to coordinate the efforts of employees with the organizational

directions (Simons, 1995; Merchant and Van der Stede, 2017). When applied to construction firms, these theories offer a theoretical perspective of the joint role played by the workforce productivity and project cost accounting in determining the performance of a firm.

Regardless of the theoretical and empirical evidence, little studies have been carried out in Pakistan to determine the synergistic impact of the productivity of workforce and the project cost accounting on the performance of the construction firms. The majority of the previous research involves either labor productivity or cost management, but the effect of the two variables on each other has not been studied in emerging economies (Aibinu and Jagboro, 2002; Halim et al., 2017). This research contributes to this gap through presenting context-specific evidence of Pakistani construction companies where there is evidence of the significance of combining workforce performance and financial balance in order to attain better firm performance.

Conclusively, the literature shows clearly that the workforce productivity and the project cost accounting are key predictors of the performance of construction firms. The productivity of the workforce helps to make sure that the labor will be used efficiently, that the project will be completed on time and of the desired quality, and that the project cost accounting will help to maintain financial discipline, keep the budget, and optimize the resources. The interaction between the two factors is that cost accounting mediates the intervention of workforce productivity on firm performance, where there is synergistic effect between the two factors that improves organizational performance. The existing literature furnishes a strong basis of empirical exploration of the relationships in the construction industry of Pakistan that is exposed to special challenges of labor efficiency, cost management and project management. With this context in mind, the study can be seen as both theoretically and practically useful to comprehending the way in which the construction companies can work more effectively, minimize financial risks and improve their overall performance.

Methodology

Research Design

The research design that has been adopted in this study is quantitative research design to help investigate the role of the workforce productivity and project cost accounting on the firm performance within the construction sector in Pakistan. Quantitative method gives an opportunity to measure variables systematically, test hypotheses and analyze relationships with the help of statistical methods. The researcher employs a cross-sectional survey design where he will collect data on managerial and supervisory staff who are engaged in construction projects in Karachi. Karachi has been selected on the basis of being one of the most active locations of construction in Pakistan with residential and commercial projects, hence representing a representative of the industry.

Population and Sample

The target population will include managers, project engineers, accountants and team supervisors in registered construction firm in Karachi. The respondents have direct work in the area of workforce management, project execution, and cost monitoring; hence they are reasonable sources of information in this study. The use of purposive sampling method was to make the necessary selection of the firms and respondents that met the inclusion criteria, i.e. the firms and respondents with an experience of at least three years of operating experience and participation in one or more current or completed construction projects. 250 questionnaires were sent and 200 of usable responses were received making the response rate of 80 percent acceptable respondent rate in construction research using survey as the methodology (Birdi et al., 2006; Sweis et al., 2008).

Variables and Measurement

The study examines three main constructs:

1. **Workforce Productivity (Independent Variable):** It is a variable that will quantify the efficiency, the application of skills and resultant production of employees in construction projects. It was measured at 7 items scale after Huselid (1995) and Birdi et al. (2006) at a 5-point Likert scale with 1 (strongly disagree) to 5 (strongly agree). Examples include, workers are task efficient and there is high skill application in the projects of the work force.
2. **Project Cost Accounting (Independent/ Mediating variable):** Project cost accounting represents accounting that quantifies the level of firms tracking, monitoring and control project expenditures. It was a 6-item scale, which is developed on the basis of Horngren et al. (2013) and Li et al. (2019). Some of such are: Project costs are regularly verified against budgets and Cost reporting systems provide timely and correct information.
3. **Firm Performance (Dependent Variable):** Firm performance is an operational efficiency, a financial performance, and a project delivery performance. It was measured on a 5-item scale that had been modified following Becker and Huselid (1998) and Marler and Boudreau (2017). The examples are as follows: the company finishes its projects within its budget

and Over all firm profitability is better due to good workforce management. All the items were scored on a 5 point Likert scale (1 = strongly disagree, 5 = strongly agree).

Data Collection Procedure

Structured questionnaires were used to gather primary data that were given to managerial and supervisory employees of various construction companies in Karachi in forms of structured questionnaires (both face-to-face and electronic). A pilot study was first carried out on 20 respondents before the actual survey to verify the clarity, reliability and validity of the items to be measured. Feedback was taken into consideration to make minor adjustments that enhanced better understanding. All the respondents were assured of confidentiality and anonymity, and their participation was informed.

Reliability and Validity

The scales were evaluated based on reliability, which was measured in terms of Cronbach alpha with a value of 0.70 as acceptable as a measure of internal reliability (Nunnally and Bernstein, 1994). Construct validity was established by the confirmation of the construct validity by confirmatory factor analysis (CFA) utilizing AMOS software that found out whether all the items loaded significantly on their respective constructs. To evaluate convergent and discriminant validity, factor loadings, average variance extracted (AVE), and composite reliability (CR) were evaluated to determine whether the measurement model is sufficient (Hair et al., 2019).

Data Analysis Techniques

The study employed multiple statistical techniques to analyze the data:

1. **Descriptive Statistics:** To present a summary of the demographic features as well as standard deviation scores and means of each construct.
2. **Correlation Analysis:** To analyze the strength and direction of the relationship between the productivity of the workforce, project cost accounting, and firm performance.
3. **Structural Equation Modeling (SEM):** It is used to test the hypothesized relationships and analyze indirect and direct effects. SEM involved the use of AMOS 26, which, gave path coefficients, t values and model fit index. CFI, TLI, RMSEA, and SRMR were used to evaluate model fit, and the thresholds that are accepted signify good model fit (Hair et al., 2019).

Ethical Considerations

The research was conducted in line with the ethical principles in research. The respondents were made aware of the objective of the research, voluntary participation and their entitlement to withdraw at any time. Anonymity and data confidentiality were highly applicable and the data collected was only utilized in the research. The study did not require any sensitive personal data and was approved by the respective institutional review board.

Data Analysis and Findings

Descriptive Statistics

Managerial and supervisory employees of Karachi construction firms provided 200 usable responses that were analyzed. The population sample showed that 68 percent of the respondents were men and 32 percent were women with most of them within the age brackets of 30-45 years (55 percent) of the middle-aged managerial staff in construction projects. The majority of the respondents had a bachelor degree in engineering or business management (72%), more than 60 percent of the respondents had 5-15 years of professional experience in construction projects.

Table 1 gives the descriptive values of all the variables used in the study in terms of mean, standard deviation, and reliability (Cronbachs alpha).

Table 1: Descriptive Statistics and Reliability

Variable	Items	Mean	SD	Cronbach's Alpha
Workforce Productivity	7	4.12	0.58	0.88
Project Cost Accounting	6	4.05	0.62	0.86
Firm Performance	5	3.98	0.64	0.87

Note: SD = Standard Deviation; Cronbach's Alpha > 0.70 indicates high reliability.

The findings show that all constructs have high internal consistency, and the values of Cronbach alpha are greater than the 0.70 cut-off value suggested by Nunnally and Bernstein (1994) which means that the measurement scales are reliable.

Correlation Analysis

Correlation analysis was done to see the intensity and direction of the relationship between workforce productivity, project cost accounting, and the firm performance. The Pearson correlation coefficients are presented in table 2.

Table 2: Correlation Matrix

Variable	1	2	3
1. Workforce Productivity	1		
2. Project Cost Accounting	0.62**	1	
3. Firm Performance	0.55**	0.59**	1

p < 0.01; N = 200

The correlation results show significant positive relationships:

- There is a positive correlation between the performance of a firm and workforce productivity (r = 0.55, p < 0.01).
 - The accounting of costs in projects is positively related with the performance of the firm (r = 0.59, p < 0.01).
- The correlation between workforce productivity and project cost accounting is extremely high (r = 0.62, p = 0.01), implying that strict cost accounting and effective labor practices usually go hand in hand.

These results present some initial evidence to the put forward relationships as well as an indication to the fact that workforce productivity, and project cost accounting are both strongly connected to the performance of firms.

Results of Structural Equation modeling (SEM).

To test the hypothesized relationships, the SEM was performed with the help of AMOS 26 investigating both direct and indirect impacts of the productivity of workforce and project cost accounting on the performance of the firms.

Model Fit Indices:

- $\chi^2/df = 1.92$ (acceptable < 3)
- CFI = 0.96 (>0.90)
- TLI = 0.95 (>0.90)

- RMSEA = 0.058 (<0.08)
- SRMR = 0.045 (<0.08)

The results indicate a good fit between the hypothesized model and observed data.

Table 3: SEM Path Coefficients

Path	β	SE	t-value	p-value	Result
Workforce Productivity → Firm Performance	0.34	0.08	4.25	<0.001	Significant
Project Cost Accounting → Firm Performance	0.42	0.09	4.67	<0.001	Significant
Workforce Productivity → Project Cost Accounting	0.61	0.07	7.78	<0.001	Significant
Workforce Productivity → Project Cost Accounting → Firm Performance	0.26	0.06	4.33	<0.001	Significant Mediation

Interpretation of Findings

- **Productivity and Firm Performance of the Workforce:**

- A positive path coefficient ($b = 0.34, p < 0.001$) proves that increased productivity of the workforce is a significant factor improving the performance of the firm. Effective labor practices such as optimal distribution of tasks, use of skills, and motivation positively impact on the implementation time, minimal wastage of resource, and better operational performance. The findings are in line with the earlier researches that have indicated the significance of human capital efficiency in the success of construction projects (Huselid, 1995; Birdi et al., 2006).

- **Project Cost Accounting and Firm Performance:**

The greatest direct impact of cost accounting on the performance of firms ($b = 0.42, p < 0.001$) shows the significance of budgeting, cost control, and financial management in profitable and efficient project implementation. This follows the previous studies that indicate that the cost accounting systems are important in optimizing resources and financial sustainability in construction companies (Horngren et al., 2013; Li et al., 2019).

- **Productivity of Workforce and Project Cost Accounting:**

Productivity of the workforce has a positive effect on the project cost accounting ($b = 0.61, p < 0.001$) which means that labor efficiency practices contribute to better financial management and control cost discipline. Companies that have efficient employees can use more accurate budgets, labor costs, and report their expenses, and this synergistic effect of human resource efficiency and financial control is created (Gholipour et al., 2015).

- **Intermediary Work of Project Cost Accounting:**

The relationship among the productivity of the workforce, and the firm performance is mediated by project cost accounting ($b = 0.26, p < 0.001$). It implies that the efficiency of the workforce in itself cannot be effective in achieving the best performance of the firm, but when it is combined with strong cost management mechanisms, it will further increase its impact on the operational and financial performance. The construction companies that associate labor productivity and strict cost accounting measures have a higher possibility of realizing better project deliverables, decreased budget overflow as well as increased profitability.

The data analysis supports the fact that workforce productivity and project cost accounting can contribute to the performance of firms in the construction sector in Pakistan to a great extent. Also, project cost accounting can be considered a partial mediator meaning that effective labor practices are most likely to be effective under systematic financial monitoring. These findings are

empirical to construction managers in the sense that they should adopt a comprehensive method, whereby employees efficiency and cost containment systems go hand in hand in order to bring about increased operational efficiency, completion of the project on time and better financial performance.

Discussion

The result of the study suggests a powerful empirical evidence of the critical role of workforce productivity and project cost accounting in improving firm performance in the construction industry in Pakistan. The existence of the positive and significant relationship between the productivity of the workforce and the firm performance ($b = 0.34$, $p < 0.001$) points at the significance of efficient use of labor, skills deployment, and motivation. These findings are consistent with the previous studies that have indicated that effective employees play a direct role in ensuring that the projects are delivered on time, minimal rework and operations are more efficient (Huselid, 1995; Birdi et al., 2006). Inefficiencies in workforce performance can in construction projects where a good percentage of the expenditures of the project are on labor, this leads to high budget overruns and project delays. The current research proves the idea that companies investing in employee training, the efficient distribution of tasks, and monitoring their performance can attain the tangible results in their operation.

There was an even more direct impact of project cost accounting on the firm performance ($b = 0.42$, $p < 0.001$), highlighting the need to have correct financial tracking, budgeting, and monitoring in construction projects. The findings are in line with those of Horngren et al. (2013) and Li et al. (2019), who have stressed that cost accounting mechanisms give managers the ability to manage costs, detect cost variances, and make informed financial decisions. When applied in the situation of the Pakistani country where building projects are often characterized by changeable costs of materials, inefficiencies in labor, and the impact of governmental policies, the existence of a reliable cost accounting system is significant in assuring profitability and accomplishing strategic goals. Companies, which combine real-time cost monitoring and project implementation, are in a better position to manage resources well to save money.

An interesting result of this research would be the close positive correlation existing between the productivity of the workforce and project cost accounting ($b = 0.61$, $p < 0.001$), which indicates that labor efficiency promotes financial management. Staff members who perform well also help in proper registration of labor costs, compliance with project budgets, and financial reporting and information in time thus enhancing the correlation between human capital and a financial control mechanism. The result is consistent with Gholipour et al. (2015), who pointed to the synergistic nature of the combination of the efficiency of the workforce and the cost monitoring to improve the overall performance of the project.

The intermediate effect of project cost accounting ($b = 0.26$, $p < 0.001$) means that the productivity of the workforce is not enough to maximize the performance of the firm. Operational results are enhanced by efficient labor, but in full, this process is best achieved when it is accompanied by strict cost management practices. By integrating labor efficiency and the systematic cost accounting, construction firms have an opportunity to produce a high level of performance in terms of cutting budget overruns, more efficient resource utilization and on-time project completion. This mediating effect proves an expectation of the theoretical perspective of strengthening the organizational performance with the integration of the behavioral and financial control mechanisms (Simons, 1995; Merchant and Van der Stede, 2017).

On the whole, the article offers Pakistan-specific evidence that shows that construction companies can increase their performance with the help of two-fold orientation on workforce efficiency and financial control. The results indicate that the effectiveness of operational changes in the field of labor management should be combined with effective financial tracking aimed at attaining noticeable increase in profitability, quality of projects, and customer satisfaction.

Conclusion

This paper finds that the productivity of workforce and project cost accounting are important predictors of the performance of the firms within the construction industry in Pakistan. Key conclusions include:

The productivity of the workforce has a positive impact on the performance of a firm and it is crucial to highlight that efficient allocation of skilled motivated and well motivated labor is a key element in the success of a project.

The direct influence of project cost accounting on firm performance is strong, and it proves the need of effective financial management and cost monitoring of construction projects.

The productivity of workforce has a positive influence on the project cost accounting, implying that productive workforce contributes to the effective financial management.

Project cost accounting mediates the relation between the productivity of workforce and performance of firms or organizations, which point out the synergistic impact of integrating labor efficiency and financial controls.

These concluding remarks demonstrate the necessity of the construction companies to use integrated operational and financial management methods to be more efficient, profitable, and competitive in the construction industry in Pakistan.

Recommendations

The study will recommend to construction managers and policymakers the following guidelines that are practical based on the findings:

Invest in Workforce Development: Construction companies are supposed to invest in the continuous training and in skill development programs and performance incentives to improve the productivity of labour and eliminate delays in projects.

Installation of the Advanced Project Cost Accounting Systems: Companies should install computer-based cost accounting tools and programs that can assist companies to track their labor, material and overhead costs in real time to maintain financial discipline and budget compliance.

Combine Workforce Productivity and Cost Management: Managers are advised to connect labor performance with cost monitoring, and this will bring a feedback loop that enhances the performance of operations and financial management.

Monitor and Evaluate Project Performance: Workforce and financial performance evaluation periodically at every stage of the project would allow detecting inefficiencies early and take corrective actions and make decisions.

Policy Assistance to the Construction Industry: Government and industrial organizations ought to advocate the requirements on labor efficiency and project cost control, giving directions and encouragement to firms that follow the best practices.

With such recommendations, construction companies in Pakistan can improve their project performance, efficiency, and final performance of the firm, which will help the construction sector become more competitive and sustainable.

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