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Factors Influencing the Construction Cost Control System in a Construction Company

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Abstract:

This study aimed to determine the level of factors influencing the construction cost control system in a construction company during the calendar year 2024. The study variables are age, highest educational attainment, position, and service years. In contrast, the areas of the study are project planning and design, risk management, procurement and contracting, project monitoring and control, and communication and collaboration. According to the study, most respondents are older but fall into a lower category for maximum educational attainment. Regarding years of service, most respondents fall into the more extended category, whereas most fall into the higher category regarding the position variable. The study suggests several important implications for the organization's construction processes and project management practices. It first highlights how crucial it is to incorporate state-of-the-art technology into the project design and planning phases to enhance project efficiency. The report also emphasizes how important it is to categorize and prioritize various risk management components to control construction sector expenses successfully. The results also demonstrate the importance of considering supplier reputation and dependability when entering into contracts and making purchases. The paper also suggests employing advanced project management software to facilitate the monitoring and management of construction projects. In summary, the findings underscore the necessity for improved collaboration between project teams and stakeholders to establish an effective construction cost control system. Based on the study's results, the researcher concluded that age, years of service, and highest educational attainment do not affect the construction cost control system, according to the area of project planning and design and project monitoring and control. On the other hand, position is a variable that affects the construction cost management system according to the areas of project planning and design and project monitoring and control. That age, the highest level of education attained, position, and years of service do not affect the construction cost control system, according to risk management, procurement, contracting, communication, collaboration, and other variables.

Keywords: Construction cost control system, construct company, construction sector, project planning and design, risk management, procurement and contracting, project monitoring and control, communication and collaboration

Introduction:

Nature of the Problem

The construction sector, an essential part of the global economy, shapes the physical environment we live and work in. However, it is an industry marked by complexity, unpredictability, and significant monetary investments. Project cost management is critical to maintaining a construction company's profitability and performance. Therefore, practitioners and decision-makers in the sector must comprehend the aspects that influence building cost control.

Construction cost control has been the subject of countless studies. However, there is still a need for thorough research that systematically examines the many elements impacting construction costs within the context of a construction company. This research attempts to close that gap. The study's findings can directly assist construction practitioners, including contractors, project managers, and decision-makers, by offering practical insights to improve cost management techniques and project results. The cost-effectiveness of projects is directly impacted by well-controlled construction costs, which has wider economic ramifications for businesses and the societies in which they operate. Understanding how sustainable building methods and technical developments affect construction costs is crucial for directing future choices and investments in these fields.

With construction costs as the primary variable, this research study aims to investigate the elements that influence construction cost control initiatives in a construction firm. This study's rationale comes from the construction industry's crucial need for cost control and its complexity, difficulties, and potential for beneficial economic and environmental effects. This research aims to benefit industry practices, give stakeholders insightful information, and support the further growth of the construction industry.

Current State of Knowledge

In the business field, enterprises operating in the construction industry are divided into three groups: Building houses of all kinds, construction of civil engineering works, and specialized construction. Within each industry group, there are different types of industries. For example, Construction of civil engineering works includes Construction of railway and road works (construction of railway works, construction of road works), construction of public works (construction electrical works, construction of water supply and drainage works, construction of telecommunications, communication, construction of other public works), construction of other civil engineering works (construction of waterworks, construction of mining projects, construction of processing, manufacturing, and construction of other civil engineering works) (Prime Minister, 2018).

The initiative's objective was to reduce the investment cost of its project portfolio by 20% by 2025 – without any life cycle cost increase or decrease in customer satisfaction. The initiative is strategic because it is both business-critical and transformative, aiming to lead to substantial organizational change (Martinsuo et al., 2020). The initiative is intra-organizational (executed in one organization) and inter-organizational (it works across construction projects). The inter-organizational aspect is given by considering projects as temporary organizations embedded in the permanent organization with a certain degree of independence and strong project cultures (Sydow & Braun, 2018).

The changes must be institutionalized for a lasting effect, which implies learning from temporary actions to permanent practices. A broad spectrum of challenges in such settings has been studied in the literature (e.g., Saunders et al., 2008; Stensaker et al., 2008; Kunisch et al., 2019; De Melo et al., 2020). Previous initiatives in the organization had focused on stand-alone actions in individual projects. Such actions include innovative use of contractual approaches, more effective use of area, and standardization. However, even if these actions contributed to delivering successful individual projects at low cost, more was needed to reduce the total costs significantly and permanently at an organizational level. Improving a portfolio's long-term cost performance requires transferring relevant experience between projects. Therefore, the organization started a strategic initiative to bundle the efforts made in previous projects to fulfill the need for increased cost performance and achieve lasting cost-efficiency.

Karoriya and Pandey (2018). [11] conducted a study in India to address the problems of improper material management application in construction projects. The difference between actual and planned budgets was also investigated. A questionnaire survey highlighted the factors that lead to cost increases. These factors included improper planning and control of material quantities, shortage of materials when needed, poor identification of materials types, occasionally moving materials, and tight storage. The study suggested measures for effective material management in construction sites. Planning for material supply and using suitable inventory control were considered the most critical measures for material management problems. A material managing system based on economic quantity analysis was developed.

Nowadays, China's construction project investment budget mode generally uses the static management mode of the same quality and the same price engineering budget quota. The relevant departments of the government mainly supervise this project mode. The government determines the various prices of the construction project cost budget link, including the management fee, and may also limit the profit rate. It cannot fundamentally and comprehensively consider the technical strength and expertise of the investment enterprise, the labor level of the enterprise, the procurement of construction materials, and the management strength of the enterprise investment and operation.

Theoretical Underpinnings

This study is anchored in one of the decision-making theories, The Analytic Hierarchy Process (AHP). It is a system that combines math and psychology to organize and analyze complicated choices. Thomas L. Saaty created it in the 1970s, and since then, it has been improved. It is divided into three sections: the main objective or issue one is attempting to solve, all potential answers or alternatives, and the standards by which one will evaluate the other options. By putting the decision's criteria and possible outcomes into numerical form and connecting them to the main objective, AHP offers a logical framework for making necessary decisions.

The analytic hierarchy process (AHP) is a multicriteria procedure that is highly favored and frequently utilized. This method integrates the procedures of assessing alternatives and aggregating them to locate the most pertinent ones. The method chooses the best option from a group of options or ranks a collection of alternatives. Rankings and selections are made in light of a broad objective divided into several factors.

Setting the importance weights to be applied to the criteria in determining the ultimate goal is the process of using the technique. To do this, pairwise comparisons of the requirements are made. The researcher used the AHP theory because it aptly fits the problem of the study.

Objectives

This study aimed to determine the level of factors influencing the construction cost control system in a construction company during the calendar year 2024. Specifically, this study seeks to answer the following questions: 1) the profile of the respondents in terms of the age, educational attainment, company position and years of experience in the construction industry; 2) the level of the factors influencing a construction company's construction cost control system in the area of project planning and design, risk management, procurement and contracting, project monitoring and control, communication and collaboration; 3) the significant difference in the level of factors influencing a construction company's construction cost control system when grouped and compared according to the abovementioned variables.

Methodology

This chapter presents the research design, locale of the study, respondents, data gathering instrument, validity and reliability of the device, data gathering procedure, analytical schemes, and statistical tools.

Research Design

The descriptive research method determined the factors influencing a construction company's cost control system. According to Calmorin (2016), a descriptive research design method focuses on the present situation and aims to find the new truth. The truth may have different forms, such as an increased quantity of knowledge, a further generalization, or a new "law," an improved insight into a factor. Hence, the descriptive research design is appropriate for this study. It aims to gather more information about the present field of investigation characteristics and aids in making professional judgments. Further, a descriptive research design was employed since it is non-experimental research. It gave freedom to the researcher to measure and assess their statistical relationship with little effort to control extraneous variables. Data was gathered, categorized, tabulated, treated, analyzed, and interpreted to develop findings, conclusions, and recommendations.

Study Respondents

The study's respondents were 114 out of 160 employees actively engaged in municipal projects within a construction company, encompassing various roles such as project managers, engineers, site supervisors, and other key personnel closely involved in the construction endeavors. The sample size for the study was determined using the Cochran formula. Purposive sampling is categorized as a non-probability sampling method wherein researchers exercise judgment in selecting population members to participate in the study. This sampling approach necessitates researchers to possess prior knowledge regarding the objectives of their studies, allowing them to choose and approach eligible participants judiciously. Purposive sampling is employed when researchers aim to target a specific subset of individuals, with all study participants selected based on their alignment with a predefined profile (Foley, 2018).

Instruments

A self-made questionnaire was used to collect the needed data on The Level of Factors Influencing the Construction Cost Control System In A Construction Company. It was subjected to validity (4.7-excellent) and reliability (0.818-acceptable). All of them were interpreted as worthy and good; respectively. Part I of the questionnaire contains the respondents' profiles, such as age, highest educational attainment, company position, and years in service. At the same time, Part 2 of the questionnaire contains the factors influencing the construction cost control system in a construction company, which are the areas of the study, such as project planning and design, risk management, procurement and constructing, project monitoring and control, communication, and collaboration. There are five (5) questions per area of the study, yielding a total of 25 questions all in all. The factors influencing the construction cost control system in a construction company were rated on a scale of 1-5, with five (5) interpreted as Extremely Influential, four (4) as Very Influential, three (3) as Somewhat Influential, two (2) as Slightly Influential, and one (1) as Not at all Influential.

Procedure

Data Collection

Quantitative data in this study was obtained through a survey questionnaire. According to Good (Vega, 2015), a questionnaire is a list of planned, written questions related to a particular topic with a space to indicate the response to each question. In this study, the researcher asked permission from the proper authorities. When permission was granted, the researcher proceeded personally to administer the instruments to target respondents, and Google Forms were also circulated to other participants. Web-based surveys may be created using Google Forms, a cloud-based information management tool (Raju & Harinarayana, 2016). Moreover, the raw data were transformed into numerical

code guided by a coding manual to determine the level of skills and degree of difficulties. The Statistical Package for Social Science (SPSS) software and Microsoft Excel were used to compute encoded data. Also, statistical tables were constructed based on the problems stated in this investigation.

Data Analysis and Statistical Treatment

Objective No. 1 used the descriptive-analytical scheme and frequency and percentage to determine the respondent's profile regarding the selected variables: age, educational attainment, company position, and years in services. Objective No 2 used descriptive analytical scheme and mean to determine the level of the factors influencing a construction company's construction cost control system in the area of project planning and design, risk management, procurement and contracting, project monitoring and control, communication and collaboration; Objective No. 3 utilized a comparative analytical scheme and Mann-Whitney U test to determine the significant difference in the level of factors influencing a construction company's construction cost control system when grouped and compared according to the abovementioned variables.

Ethical Consideration

Principles that direct study designs and procedures are ethical considerations. When gathering information from individuals, researchers and scientists must always abide by a set of rules (P. Bhandari, 2022). Voluntary participation, Informed consent, confidentiality, and plagiarism will be strictly considered. Study participants will not be forced or pressured; they can withdraw at any time without giving any reason to cancel. The study participants will be thoroughly informed about the purpose and nature of the study, including the benefits, risks, and consequences. The study participants will be assured of the confidentially of all information relevant to their personal information or any form of identifying information relating to their person.

Results and Discussion

This section presents, analyzes, and interprets the data that were gathered consistent with its predetermined objectives.

Table 1
Profile of Respondents

Variables	Categories	Frequency	Percentage
Age	Younger (below 42 years old)	40	35.10
	Older (42 years old and above)	74	64.90
	Total	**114**	**100**
Highest Educational Attainment	Lower (Bachelors and College Graduate)	85	74.60
	Higher (Bachelors and Masters)	29	25.40
	Total	**114**	**100**
Position	Lower (Engineer)	40	35.10
	Higher (Project Manager and Supervisor)	74	64.90
	Total	**114**	**100**
Years in Service	Shorter (below six years)	44	38.60
	Longer (6 years and above)	70	61.40
	Total	**114**	**100**

Table 1 shows the profile of the study respondents. On the age variable, 35.10% of the respondents belong to the younger category (below 42 years old), while 64.90% belong to the older category (42 years old and above). Regarding the highest educational attainment, 74.60% belong to the lower category (Bachelors and College Graduate), while 25.40% belong to the higher category (Bachelor and Master). Moreover, on the position variable, 35.10% of the respondents belong to the lower category (Engineer), while 64.90% belong to the higher category (Project Manager and Supervisor). Furthermore, on the years of service variable, 38.60% belong to the shorter category (below six years), while 61.40% belong to the longer category (6 years and above). The result of the study implies that on age, most of the respondents belong to the older category. In comparison, on highest

educational attainment, most of the respondents belong to the lower category. As to the position variable, most belong to the higher category, while on years of service, most respondents belong to the more extended category.

Table 2
Level of Factors Influencing the Construction Cost Control System According to the Area Project Planning and Design

Items	Mean	Interpretation
As a construction builder, construction cost is influenced by…		
1. the clarity of project(s) design.	4.48	High Level
2. the sustainable and cost-efficient materials to be used for the project.	4.28	High Level
3. the utilization of advanced technology for the project.	2.68	Moderate Level
4. the integration of value engineering principles applied in the project.	4.27	High Level
5. the clarity of the scope of the project.	3.96	High Level
Overall Mean	**3.94**	**High Level**

Table 2 shows the level of factors influencing the construction cost control system according to the area project planning and design. The overall mean is 3.94, which is interpreted as a high level. The highest mean is 4.48, interpreted as a high level in item 1, "The clarity of project(s) design," while the lowest mean is 2.68, interpreted as a moderate level in item 3, "The utilization of advanced technology for the project. The result of the study implies that there is a need for the company to utilize advanced technology during project planning and design. Addressing technological aspects during project planning and design could lead to more effective cost-control measures within the construction company.

Table 3
Level of Factors Influencing the Construction Cost Control System According to the Area Risk Management

Items	Mean	Interpretation
As a construction builder, construction cost is influenced by…		
1. the mitigation strategies to be implemented in the project.	4.24	High Level
2. the use of insurance and contingency plans for the project.	4.65	Very High Level
3. the early identification of potential cost overruns due to risks.	4.54	Very High Level
4. the collaboration between project teams and risk management professionals.	4.26	High Level
5. the flexibility of the project plan in response to changing risk scenarios.	4.17	High Level
Overall Mean	**4.37**	**High Level**

Table 3 shows the level of factors influencing the construction cost control system according to the area risk management. The overall mean is 4.37, which is interpreted as a high level. The highest mean is 4.65, interpreted as a very high level, on item 2, "the use of insurance and contingency plan for the project."; while the lowest mean is 4.17, which is interpreted as a high level on item 5, "The flexibility of the project plan in response to changing risk scenarios." The result of the study implies that recognizing and prioritizing various risk management factors is essential for effective cost control within the construction company. This finding aligns with existing literature, emphasizing the multifaceted nature of risk management in construction projects (Smith et al., 2016).

Table 4
Level of Factors Influencing the Construction Cost Control System According to the Area Procurement and Contracting

Items	Mean	Interpretation
As a construction builder, construction cost is influenced by…		
1. the selection of appropriate procurement methods for the project.	4.39	High Level
2. the supplier's reputation and reliability.	2.03	Low Level
3. the negotiation of a favorable contract term for the project.	4.55	Very High Level
4. the fair and transparent bidding process for the project.	4.35	High Level
5. the effective management of subcontractors of the project.	4.35	High Level
Overall Mean	**3.93**	**High Level**

Table 4 shows the level of factors influencing the construction cost control system according to the area procurement and contracting. The overall mean is 3.93, which is interpreted as a high level. The highest mean score is 4.55, interpreted as a very high level on item 3, "The negotiation of favorable contract terms for the project."; while the lowest mean score is 2.03, which is interpreted as a low level on item 2, "The supplier's reputation and reliability." The result of the study implies that the company must consider the supplier's reputation and reliability regarding the procurement and contracting domain. This finding aligns with existing literature, emphasizing the multifaceted nature of supplier selection in construction projects (Molenaar, 2017). Recognizing and prioritizing factors within procurement and contracting are crucial for effective cost control in the construction company.

Table 5
Level of Factors Influencing the Construction Cost Control System According to the Area Project Monitoring and Control

Items	Mean	Interpretation
As a construction builder, construction cost is influenced by…		
1. The use of advanced project management software in monitoring and controlling project construction.	3.65	High Level
2. The adherence to project schedules.	4.61	Very High Level
3. The timely identification and resolution of issues and bottlenecks of the project.	4.81	Very High Level
4. The accurate and real-time reporting of project progress.	4.99	Very High Level
5. The implementation of performance metrics and key performance indicators in the project.	4.67	Very High Level
Overall Mean	**4.55**	**Very High Level**

Table 5 shows the level of factors influencing the construction cost control system according to the area project monitoring and control. The overall mean is 4.55, which can be interpreted as a very high level. The highest mean score is 4.99, interpreted as Very High Level, and is on 4, "The accurate and real-time reporting of project progress." ; while the lowest mean score is 3.65, interpreted as High Level, is on item 1, "The use of advanced project management software in monitoring and controlling the construction of the project." The result of the study implies that there is a need for the company to use advanced project management software in monitoring and controlling the construction of projects. This finding aligns with existing literature, emphasizing the multifaceted nature of project monitoring and control in construction projects (Abdul-Rahman et al., 2020).

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Recognizing and prioritizing various project monitoring and control factors is essential for effective cost control in the construction company.

Table 6
Level of Factors Influencing the Construction Cost Control System According to the Area Communication and Collaboration

Items	Mean	Interpretation
As a construction builder, construction cost is influenced by…		
1. the clarity and transparency regarding cost-related matters about the project.	3.90	High Level
2. the utilization of technology for remote collaboration about the project	4.64	Very High Level
3. the alignment of communication strategies with project goals.	4.64	Very High Level
4. the regular feedback and input from the project team working on the project.	4.75	Very High Level
5. the collaboration between project teams and stakeholders.	2.24	Low Level
Overall Mean	**4.04**	**High Level**

Table 6 shows the level of factors influencing the construction cost control system according to the area of communication and collaboration. The overall mean is 4.04 and is interpreted as a high level. The highest mean score is 4.75, and is interpreted as a very high level, is on item 4, "the regular feedback and input from project team working on the project," while the lowest mean score is 2.24, interpreted as a low level is item 5 "the collaboration between project teams and stakeholders." The result of the study implies that there is a need for the company to collaborate between project teams and stakeholders in order to have an efficient construction cost control system. This finding aligns with existing literature, emphasizing the challenges associated with stakeholder collaboration in construction projects (Miles et al., 2019). Addressing specific challenges related to stakeholder collaboration is crucial for enhancing its impact on cost control in the construction company.

Table 7
Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Project Planning and Design According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	40	57.74	1470.50	0.954	0.05	Not Significant
	Older	74	57.37				
Highest Educational Attainment	Lower	85	55.08	1026.50	0.172		Not Significant
	Higher	29	64.60				
Position	Lower	40	43.88	935.00	0.001		Significant
	Higher	74	64.86				
Years in Service	Shorter	44	54.69	1416.50	0.464		Not Significant
	Longer	70	59.26				

Table 7 shows the difference in the level of factors influencing the construction cost control system according to the area project planning and design according to variables. As shown in the table, the computed mean rank in terms of age for the younger group is 57.74, and for the older group is 57.37, with a p-value of 0.954, and is interpreted as insignificant. Regarding the highest educational attainment, the computed mean rank

for the lower group is 55.08, while for the higher group, it is 64.60, with a p-value of 0.172, and is interpreted as insignificant. Regarding position, the computed mean rank for the lower group is 43.88, while the computed mean rank for the higher group is 64.86, with a p-value of 0.001, and is interpreted as significant. In terms of years in service, the computed mean rank for the shorter group is 54.69, while the computed mean rank for the longer group is 59.26, with a p-value of 0.464, and is interpreted as insignificant. The result of the study implies that age, highest educational attainment, and years in service do not influence the construction cost control system according to the area's project planning and design. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is accepted. However, the result of the study further implies that position, as a variable, influences the construction cost control system according to the area project planning and design. Therefore, the null hypothesis, that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is rejected.

Table 8
Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Risk Management According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	40	59.39	1404.50	0.639	0.05	Not Significant
	Older	74	56.48				
Highest Educational Attainment	Lower	85	56.96	1187.00	0.757		Not Significant
	Higher	29	59.07				
Position	Lower	40	52.19	1267.50	0.187		Not Significant
	Higher	74	60.37				
Years in Service	Shorter	44	52.01	1298.50	0.142		Not Significant
	Longer	70	60.95				

Table 8 shows the difference in the level of factors influencing the construction cost control system according to the area risk management according to variables. As shown in the table, the computed mean rank in terms of age for the younger group is 59.39, and for the older group is 56.48, with a p-value of 0.639, and is interpreted as insignificant. Regarding the highest educational attainment, the computed mean rank for the lower group is 56.96, while for the higher group, it is 59.07, with a p-value of 0.757, and is interpreted as insignificant. Regarding position, the computed mean rank for the lower group is 52.19, while the computed mean rank for the higher group is 60.37, with a p-value of 0.187, and is interpreted as insignificant. In terms of years in service, the computed mean rank for the shorter group is 52.01, while the computed mean rank for the longer group is 60.95, with a p-value of 0.142, and is interpreted as insignificant. The result of the study implies that age, highest educational attainment, position, and years in service do not influence the construction cost control system according to the area risk management according to variables. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is accepted.

Table 9
Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Procurement and Contracting According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	40	55.10	1384.00	0.558	0.05	Not Significant

	Older	74	58.80				
Highest Educational Attainment	Lower	85	58.48	1149.50	0.578		Not Significant
	Higher	29	54.64				
Position	Lower	40	62.44	1282.50	0.228		Not Significant
	Higher	74	54.83				
Years in Service	Shorter	44	53.34	1357.00	0.273		Not Significant
	Longer	70	60.11				

Table 9 shows the Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Procurement and Contracting According to Variables. As shown in the table, the computed mean rank in terms of age for the younger group is 55.10, and for the older group is 58.80, with a p-value of 0.558, which is interpreted as insignificant. Regarding the highest educational attainment, the computed mean rank for the lower group is 62.44, while for the higher group, it is 54.83, with a p-value of 0.578, and is interpreted as insignificant. Regarding position, the computed mean rank for the lower group is 52.19, while the computed mean rank for the higher group is 60.37, with a p-value of 0.228, interpreted as insignificant. In terms of years in service, the computed mean rank for the shorter group is 53.34, while the computed mean rank for the longer group is 60.11, with a p-value of 0.273, and is interpreted as insignificant. The result of the study implies that age, highest educational attainment, position, and years in service do not influence the construction cost control system according to the area procurement and contracting variables. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is accepted.

Table 10
Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Project Monitoring and Control According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	40	57.35	1474.00	0.971		Not Significant
	Older	74	57.58				
Highest Educational Attainment	Lower	85	59.02	1103.00	0.390		Not Significant
	Higher	29	53.03				
Position	Lower	40	78.80	628.00	0.000	0.05	Significant
	Higher	74	45.99				
Years in Service	Shorter	44	56.23	1484.00	0.739		Not Significant
	Longer	70	58.30				

Table 10 shows the difference in the level of factors influencing the construction cost control system according to the area project monitoring and control according to variables. As shown in the table, the computed mean rank in terms of age for the younger group is 57.35, and for the older group is 57.58, with a p-value of 0.971, and is interpreted as insignificant. Regarding the highest educational attainment, the computed mean rank for the lower group is 59.02, while for the higher group, it is 53.03, with a p-value of 0.390, and is interpreted as insignificant. Regarding position, the computed mean rank for the lower group is 78.80, while the computed mean rank for the higher group is 45.99, with a p-value of 0.000, and is interpreted as significant. In terms of years in service, the computed mean rank for the shorter group is 56.23, while the computed mean rank for the longer group is 58.30, with a p-value of 0.739, and is interpreted as insignificant. The result of the study implies that age, highest educational attainment, and years in service do not influence the construction cost control system according to the area project monitoring and control according to variables. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project

in a construction company when grouped and compared according to the abovementioned variables," is accepted. However, the result of the study further implies that position, as a variable, influences the construction cost control system according to the area project monitoring and control according to variables. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is rejected.

Table 11
Difference in the Level of Factors Influencing the Construction Cost Control System According to the Area Communication and Collaboration According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	40	59.06	1417.50	0.705	0.05	Not Significant
	Older	74	56.66				
Highest Educational Attainment	Lower	85	55.72	1081.50	0.316		Not Significant
	Higher	29	62.71				
Position	Lower	40	62.09	1296.50	0.266		Not Significant
	Higher	74	55.02				
Years in Service	Shorter	44	60.32	1416.00	0.461		Not Significant
	Longer	70	55.73				

Table 11 shows the difference in the level of factors influencing the construction cost control system according to the area of communication and collaboration according to variables. As shown in the table, the computed mean rank in terms of age for the younger group is 59.06, and for the older group is 56.66, with a p-value of 0.705, and is interpreted as insignificant. Regarding the highest educational attainment, the computed mean rank for the lower group is 55.72, while for the higher group, it is 62.71, with a p-value of 0.316, and is interpreted as insignificant. Regarding position, the computed mean rank for the lower group is 62.09, while the computed mean rank for the higher group is 55.02, with a p-value of 0.266, interpreted as insignificant. In terms of years in service, the computed mean rank for the shorter group is 60.32, while the computed mean rank for the longer group is 55.73, with a p-value of 0.461, and is interpreted as insignificant. The result of the study implies that age, highest educational attainment, position, and years in service do not influence the construction cost control system according to the area of communication and collaboration according to variables. Therefore, the null hypothesis, which states that "there is no significant difference in the level of factors influencing the construction cost control project in a construction company when grouped and compared according to the abovementioned variables," is accepted.

Conclusions

From the study findings, the researcher arrived at the following conclusion. According to the area of project planning and design, project monitoring, and project control, age, highest level of education, and years of service do not influence the construction cost control system. However, position affects the construction cost management system as a variable by the field's project planning, design, monitoring, and control. According to the area risk management, procurement and contracting, area communication and collaboration, and other variables, age, most excellent educational attainment, position, and years of service have no bearing on the construction cost control system. From the study findings, the researcher arrived at the following recommendations: 1) Integrating cutting-edge technologies during the project planning and design stages needs to be the construction company's top priority. Using state-of-the-art equipment and software in these early phases can significantly improve the project's productivity. This technology integration is expected to lead to improved control measures and more precise cost projections, ultimately improving the overall success of construction projects; 2) It is also recommended that the business carefully consider assessing and choosing suppliers according to their standing and dependability in the contracting and procurement industries. Building strong connections with reliable suppliers can result in lower risks, better cost control, and more predictable results. The construction company can develop a procurement plan that aligns with its overall cost management goals by identifying and prioritizing these aspects. And, 3) It is essential to consider that encouraging cooperation between project teams and stakeholders is critical. The business should

aggressively foster collaboration and communication amongst all pertinent parties to improve the construction cost control system. It is essential to tackle specific obstacles associated with stakeholder collaboration to optimize procedures, minimize possible problems, and guarantee the project's seamless advancement. Using collaborative tools and efficient communication channels can significantly influence the success of cost control initiatives inside the construction company.

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