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The Effect of Motivation on Professional Construction Workforce Commitment and Project Performance

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ABSTRACT

The phenomenon of good project performance in East Kalimantan needs to be aware of the possibility of project labor turnover. Employee commitment serves as a stabilizing force that maintains the direction of behavior even if the company fails to meet expectations. Employee commitment is a psychological condition that creates a personal attachment to an organization. This study aims to identify the influence of Motivation on Professional Construction Labor Commitment and Project Performance. This study uses an Explanatory Sequential Mixed Method design, involving 250 respondents of employees and staff of contractor companies, consultants, and building project owners, with SmartPLS SEM analysis at the quantitative stage. The qualitative stage involves the leaders of contractor companies, consultants, and building project owners. The results of the study show that Motivation has a significant effect on the Commitment of the Professional Construction Workforce.

Introduction

The construction sector is one of the main drivers of the national economy and is considered an important pillar in supporting the economic climate. This sector not only increases economic growth but also plays a significant role in job creation. (Arifiani, Ambarwati, & Rumijati, 2023). The success of construction and infrastructure projects is the basis for the country's progress. As a key driver of growth in other economic sectors, the construction sector plays a crucial role in the global economic revival by creating many job opportunities for specialists. (Li, 2018).

The relationship between the construction industry and the economy stems from three main characteristics: public sector clients, the size of a large market with investment potential, and the multiplier effect as a major source of employment. The contribution of the construction sector to Indonesia's Gross Domestic Product (GDP) increased from

9.79% in 2015 to 10.12% in 2019. Labor growth in this sector is also significant, with projected labor absorption to reach 8,528,463 million in 2022 and 8,769,798 in 2023.

The success of construction projects plays an important role in economic development through the achievement of four key criteria: time, cost, quality, and environment. Research shows that factors such as quality, quantity, labor costs, materials, and auxiliary tools, the competence of the parties involved, pre-construction planning, and project control and communication systems greatly affect project performance. Construction project resources, including cost estimation, resource planning, working methods, and risk management, also play a significant role in maintaining good project performance.

Human resources are the key to the success of a project. Effective workforce management is essential for construction companies because it can improve or negatively impact contractor performance. Employee Commitment (EC) is an important component that describes the psychological attachment of workers to the organization. Construction safety, which includes activities to meet security, safety, health, and sustainability standards, is also a critical aspect of the implementation of construction projects.

BPSDM of the Ministry of PUPR defines construction safety as all engineering activities that support construction work in meeting safety and health standards for workers and the environment. Construction workers are divided into two categories: permanent workers and wholesale or freelance daily workers. More than 90% of construction workers belong to the category of wholesale workers, who are vulnerable to work accidents due to the absence of formal work ties. Therefore, occupational safety is a very important aspect of achieving optimal work results, reducing negative impacts on the environment, and preventing work accidents.

As such, the construction sector plays a strategic role in the national and global economy and requires effective project management and a commitment to occupational safety to achieve maximum project success.

(Wibowo, Ardiana, & Andjarwati, 2023) Argue that work motivation has a significant effect on organizational commitment. Gunawan and Kusumah (2023) found that achievement motivation directly affects work performance and organizational commitment partially mediates the direct influence of achievement motivation on work performance. In addition, these findings suggest that friendliness and awareness moderate the strength of the relationship between achievement motivation and work achievement mediated by organizational commitment.

Furthermore, (Hartono, 2023) revealed that job satisfaction and work motivation affect organizational commitment both partially and simultaneously. On the other hand, (MUTHUSWAMY, 2023) argues that Motivation has a significant effect on employee commitment. Furthermore, it can be concluded that motivation has a greater direct influence on employee commitment. This study also shows that the role of motivation is proven to strengthen the influence of job satisfaction on employee commitment. These studies indicate that there is a relationship between Motivation and Employee Commitment. The phenomenon of good project performance in East Kalimantan, as

outlined in the research background, needs to be aware of the turnover of project labor that may occur due to the geographical factors of East Kalimantan which are quite far from professional construction human resources as well as material resources and building material supply chain conditions. The research of (Ayodele, Chang-Richards, & González, 2020) states that the factors that cause the turnover of project labor include factors related to the nature of the work, the external industrial environment, the construction company itself, and the individual workforce. Research by Tamrin (Tamrin & Hanoky, 2023) found that commitment has a significant and negative influence on employee turnover. Therefore, the commitment of a professional workforce is important to prevent labor turnover in the building construction sector.

Based on the results of the literature study of relevant previous studies, it can be identified that the problem formulation is whether the work-life balance affects the commitment of professional construction workers and project performance in East Kalimantan. Based on the formulation of this problem, the purpose and purpose of the research can be identified, namely how much the work-life balance affects the commitment of professional construction workers and project performance in East Kalimantan.

Method

The research method used is mixed. According to (Kuantitatif, 2016), the mixed research method is a research method that combines or combines quantitative methods and qualitative methods to be used together in a research activity, so that more comprehensive, valid, reliable, and objective data is obtained. The mixed research design used in this study is Explanatory Sequential Mixed Methods Design. According to (Creswell & Creswell, 2018), the Explanatory Sequential approach is a design in a mixed method that appeals to individuals with a strong quantitative background or from a relatively new field to qualitative approaches.

The research was carried out in East Kalimantan starting from the exploration of literature reviews related to the problem to be researched. The research variables included the independent variables including the Motivation variable (X), the mediation variable (intervening), namely the Professional Construction Workforce Commitment (M); and the Project Performance bound variable (Y). The operationalization and measurement of the research variables are as follows:

This study is a mixed quantitative phase of research followed by a qualitative phase so the population, samples, and research instruments from the two phases are determined as follows.

Quantitative Phase. This research is related to the management of human resources of construction project workers so the research population is all the workforce involved in construction projects in East Kalimantan, which is a large number. According to (Kuantitatif, 2016), "samples are part of the number and characteristics possessed by the population. The sample taken from the population must be truly representative of the

population." In the quantitative phase, the number of research samples was determined to be 250 consisting of level 1 construction workers. 2. And 3.

Qualitative Phase. Informants as sources of information in the qualitative phase are determined by purposive sampling. According to (Kuantitatif, 2016), purposive sampling is a technique for determining samples with certain considerations. The research into man at the qualitative stage consists of 1 manager of the Owner, 1 manager of the Contractor, 1 manager of the Consultant, and 1 leader of construction workers.

Quantitative Phase. The research data is primary data in the form of respondents' answers to questionnaires related to research variables including Motivation, Professional commitment, and Performance. The research instrument was in the form of a questionnaire containing questions with five alternative closed answers on the Likert scale, including SS = Strongly Agree, S = Agree, RR = Hesitant, TS = Disagree, and STS = Strongly Disagreement. The questionnaire was distributed to the research sample selected by Simple Random Sampling, which means that the sample selection is carried out randomly without paying attention to the strata in the population. (Kuantitatif, 2016). Before the questionnaire instrument was widely distributed to the research sample, the questionnaires were tested on 30 respondents who were not included in the research sample group, to find out the validity and reliability of each question item in each questionnaire. This validity and reliability determine how far the question items in each questionnaire have measured the indicators of the variables measured.

Qualitative phase. Research data is primary data in the form of informants' answers to open-ended questions asked during interviews related to the findings of quantitative research analysis that still require further clarification.

Quantitative Phase. Data analysis in this study includes (a) descriptive data analysis, and (b) inferential data analysis. In this study, the research error rate was determined α = 5% (0.05). Descriptive statistics are statistics that are used to analyze data by describing or describing data that has been collected without intending to make generalized conclusions or generalizations. The model of this research is Structural Equation Modeling (SEM), which is a statistical tool used to solve cascading models simultaneously that cannot be solved by linear regression equations. SEM analysis was carried out with the SmartPLS program. The SmartPLS program was chosen with the consideration that PLS analysis has the advantage of not requiring normally distributed data and can be used with a small number of samples.

Qualitative Phase. According to (Kuantitatif, 2016), data analysis is the process of systematically searching for and compiling data obtained from the results of interviews, field notes, and documentation by organizing data into categories, describing them into units, synthesizing, compiling them into patterns, choosing which ones are important and what will be studied, and making conclusions so that they are easily understood by yourself and others. Data analysis during the field of the Miles and Huberman Model in qualitative research is carried out during data collection and after the completion of data collection in a certain period. Miles and Huberman (1984) stated that activities in qualitative data analysis are carried out interactively and continue until completion.

The image of the research model indicates the following research hypotheses:
1. H1 Motivation (X) affects the Commitment of Professional Construction Workers (M)
2. H2Motivation (X) affects Project Performance (Y)

Thus, the novelty of this research can be identified so that it is expected to add to and complement the existing literature treasures.

Results and Discussion

Validity Test and Reliability Test

Table 1
Summary of the Validity of the Reliability of the Research Questionnaire

Questionnaire	Mark *Corrected Item-Total Correlation*	Validity Criteria	Validity Test Conclusion	Mark *Cronbach's Alpha*	Reliability Test Criteria	Reliability Test Conclusion
Motivation (X)	0.780 – 0.958	Greater than 0.361	Valid	0.962	Between 0-1, the closer to 1 the more reliable it is	Reliable
Professional Construction Workforce Commitment (M)	0.908 – 0.951		Valid	0.964		Reliable
Project Performance (Y)	0.887 – 0.951		Valid	0.975		Reliable

Table 1 shows that the results of the trial on 30 respondents outside the research respondents, resulted in all research questionnaires being tested for validity and reliability so that they could be distributed to 250 research respondents.

Data Analysis

A summary of the results of the analysis of the parameters of the research model (Inner and Outer Model) as a whole can be seen in the following Research Model Diagram:

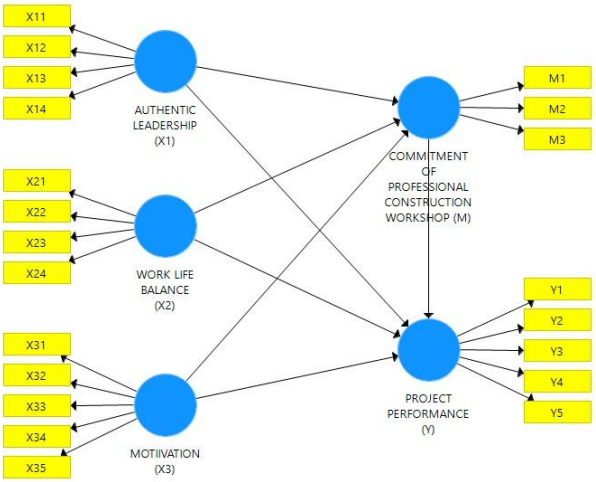

Figure 1. Research Model Diagram

Direct Effects

Table 2
Direct Effects

Independent Variable	Variable intervention Professional Construction Kindergarten Commitment (M)		Bound Variables Project Performance (Y)	
	Coefficient	p-Value	Coefficient	p-Value
Motivation (X)	0.792	0.000	-0.101	0.001
Professional Construction Kindergarten Commitment (M)	-	-	0.582	0.000

Table 2 shows that:

1. The direct effect of Motivation (X) on Professional Construction Kindergarten Commitment (M) is positive 0.792 with a p-value of 0.000 which is less than 0.05 and means significant
2. The direct effect of Motivation (X) on Project Performance (Y) is negative 0.101 with a p-value of 0.001 which is smaller than 0.05 means significant.
3. The direct effect of Professional Construction Kindergarten Commitment (M) on Project Performance (Y) is positive 0.582 with a p-value of 0.001 which is smaller than 0.05 and means significant.

Indirect Effects

Table 3
Indirect Effects

Jalur	Indirect Influence	
	Coefficient	p-Value

Motivation (X) -> Commitment of Construction Workers Profesional_(M) -> Performance Proyek_(Y)	0.461	0.000

Sumber: SmartPLS

Table 3 shows that the indirect influence of Motivation (X) on Project Performance (Y) with the mediation of Professional Construction Kindergarten Commitment (M) is 0.461 with a p-value of 0.000 which is less than 0.05 means significant.

Total Effects

Table 4
Total *Effects*

Variable		Total influence	
Free	**Bound**	**Coefficient**	**p-Value**
Motivation (X)	Project Performance (Y)	0.360	0.000
Professional Construction Workforce Commitment (M)		0.582	0.000

Source: SmartPLS

Table 4 shows that:

1. The total effect of Motivation (X) on Project Performance (Y) is positive 0.360 with a p-value of 0.000 which is less than 0.05 means significant.
2. The total effect of Professional Construction Workforce Commitment (M) on Project Performance (Y) is positive 0.582 with a p-value of 0.000 which is less than 0.05 means significant.

Koefisen Determinasi (R-square)

Table 5
Coefficient of Termination

Bound Variables	R-square
Professional Construction Workforce Commitment (M)	0.626
Project Performance (Y)	0.775

Analysis of the determination coefficient (R2) shows that:

1. The commitment of Professional Construction Workers (M) can be explained by the Motivation factor (X) of 0.626 or 62.60% while the remaining 37.40% is explained by factors other than Motivation (X).
2. Project Performance (Y) can be explained by the Motivation factor (X) and Professional Construction Workforce Commitment (M) of 0.775 or 77.50% while the remaining 22.50% is explained by factors other than Motivation and Commitment of Professional Construction Workforce (M).

Model Fit

The results of the measurement of the model fit of the research model with the research data can be seen in the following details:

Outer Model

Nilai outer loading dari masing-masing variabel dapat dilihat pada tabel berikut.

Table 6
Outer Loading

Variable	*Outer Loading*	Criterion	Conclusion
Motivation (X)	0.857 – 0.950	Greater than 0.5 – 0.6	Fit
Professional Construction Workforce Commitment (M)	0.940 – 0.976		Fit
Project Performance (Y)	0.889 – 0.958		Fit

Table 6 shows that all the outer loading values of each variable are greater than 0.5 – 0.6 so it can be concluded that the research model from the perspective of convergent validity is fit.

Discriminant validity

Table 7
Validity Construct

Variable	*Average Variance Extracted (AVE)*	Criterion	Conclusion
Motivation (X)	0.834	Greater than 0.50	Fit
Professional Construction Workforce Commitment (M)	0.911		Fit
Project Performance (Y)	0.855		Fit

Table 7 shows that all research variables have good discriminant validity because they have an average variance extracted (AVE) value of each greater than 0.50 so it can be concluded that the research model from the perspective of discriminant validity is fit.

Composite reliability

Table 8. Konstruk Reabilitas

Variable	*Composite Reliability*	Criterion	Conclusion
Motivation (X)	0.962	Greater than 0.70	Fit
Professional Construction Workforce Commitment (M)	0.968		Fit

Project Performance (Y)	0.967	Fit

Table 8 shows that all research variables have good composite reliability because each has a composite reliability value greater than 0.70 so it can be concluded that the research model from the perspective of composite reliability is suitable (fit).

Inner Model

The fit of the inner model is measured by the formula

Q2 = 1 – (1 – R12) (1 – R22) ... (1- Rp2) where Table 4 shows that R12 = R-square Commitment of Professional Construction Manpower (M) = 0.626 and R22 = R-square Project Performance (Y) = 0.775

Q2 = 1 - (1 - 0.626) (1 - 0.775) = 1 – 0.08415 = 0.91585 which is close to 1 so it is said that the fit of the inner model is good (fit).

Because the outer model and the inner model are both proven to be fit, it can be concluded that the research model based on the research data is fit.

The Effect of Motivation (X) on Professional Construction Workforce Commitment (M)

Motivation (X) has a significant positive effect on the Commitment of Professional Construction Workers (M). These findings are in line with the studies of (Wibowo et al., 2023); (Gunawan & Kusumah, 2023); (Hartono, 2023); and (MUTHUSWAMY, 2023) Who stated that organizational commitment mediates the role of the influence of work motivation on performance, work motivation has a significant effect on organizational commitment, and the role of motivation is proven to strengthen the influence of job satisfaction on employee commitment.

Effect of Motivation (X) on Project Performance (Y)

Motivation (X) hurts Project Performance (Y) significantly. These findings contradict the studies of (Ramadan et al., 2022) Who revealed that motivation has a positive and significant effect on employee performance; employee performance is significantly influenced by motivation, human resource competence, and organizational commitment; The work environment and motivation have a positive and significant effect on employee performance. This finding is also not in line with Diantari's (2023) research which found that motivation has a positive but not significant effect on employee work results.

Effect of Professional Construction Workforce Commitment (M) on Project Performance (Y)

The commitment of Professional Construction Workers (M) has a significant positive effect on Project Performance (Y). These findings are in line with the studies of (Utami, Sitania, & Profita, 2022) which revealed that organizational commitment has a positive and significant effect on employee performance; organizational commitment and job satisfaction have a considerable positive impact on worker performance; Organizational Commitment (OC) can predict and influence the growth and improvement of employee performance (EP); and the higher the level of organizational commitment

employees have to the organization, the more likely they are to show improved performance. However, this finding contradicts the research of (Yusnita, Gursida, & Herlina, 2022) which found that organizational commitment is negatively related to employee performance.

Total Influence

Table 4 shows that Motivation (X) and Professional Construction Workforce Commitment (M) all have a significant effect on Project Performance (Y) because the p-value is all 0.000 which is less than 0.05. By looking at its total coefficient of influence, it can be identified that:

1. The commitment of Professional Construction Workers (M) has a large influence on Project Performance (Y) and has a total influence coefficient of 0.582. This means that every increase in the Professional Construction Manpower Commitment (M) by 1 unit will affect the increase in Project Performance (Y) by 0.792 units.
2. Motivation (X) is ranked third in the magnitude of influence on Project Performance (Y), which is with a total influence coefficient of 0.360. This means that every increase in Motivation (X) by 1 unit will affect the increase in Project Performance (Y) by 0.360 units.

The description shows that in the construction of the Building project in East Kalimantan, project *stakeholders* need to pay attention to the Leadership factor is the main factor in the success of Project Performance. On the other hand, the Motivation factor needs to be watched out for because if it is not managed properly, the increase in the imbalance of worker motivation will be able to reduce Project Performance.

Conclusion

Based on the results of hypothesis analysis and testing, as well as referring to the research objectives, it can be identified that Motivation has a significant effect on the Commitment of Professional Construction Workers with a termination coefficient of 0.626 which means that Motivation can explain the Commitment of Professional Construction Workers by 62.60%, while the remaining 37.40% is explained by factors other than Motivation. Motivation has a significant effect on Project Performance with a termination coefficient of 0.775 which means that Motivation can explain Project Performance by 77.50%, while the remaining 22.50% is explained by factors other than Motivation.

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