

Evaluation of the Influence of Communication Aspects and Leadership Competence in Decision Making to Improve Performance in Housing Developers

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ABSTRACT

The construction industry, particularly in housing development, plays a strategic role in meeting the need for adequate housing, supporting economic growth, and improving the quality of life for communities. However, the implementation of housing projects faces complex challenges, such as pressure to meet high quality standards, tight schedules, and limited budgets. Factors such as communication aspects and leadership competence play a significant role in decision-making to enhance project performance. This study aims to analyze various factors that influence the quality and performance of projects in housing development, including the influence of communication and leadership competence in decision-making to improve project performance. In addition, this research also evaluates the relationship between decision-making and project performance, as well as the mediating role of decision-making in the relationship between communication aspects and leadership competence on project performance. This study uses a quantitative approach with a survey method. Data were collected through a closed-ended questionnaire using a Likert scale and analyzed using statistics. The analysis includes descriptive analysis and PLS-SEM (Partial Least Squares Structural Equation Modeling), covering both the outer model and inner model measurements. The results of this study revealed a significant relationship between communication aspects and project leadership competencies on decision-making, as well as the impact of decision-making on overall project performance with a percentage of 73.6%. Furthermore, decision-making plays an important mediator in strengthening the relationship between the two variables of communication aspects and project leadership competencies with project performance with a percentage of 49.4%.

KEYWORDS

Communication Aspects, Project Leadership Competence, Project Performance



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INTRODUCTION

The construction industry has an important contribution to national development, especially in the provision of decent, safe, and affordable housing. Rapid population growth and increasing urbanization have led to a surge in demand for housing, especially in urban areas (Jasrul & Rarasati, 2022). In this context, the housing construction sector not only provides physical housing, but also creates a living environment that supports the welfare of the community. Well-designed residential areas can improve the quality of life, strengthen social cohesion, and encourage sustainable development (Kawer et al., 2018). Therefore, housing developers play a strategic role in overcoming the housing backlog and creating residential areas that are in line with the needs of modern society.

In addition to the social aspect, the housing sector also has a significant economic impact. Housing development activities create jobs, encourage the growth of supporting sectors such as building material manufacturing and logistics services, and contribute to increasing regional income through taxes and levies (Djurdjani et al., 2022; Wasyiah, 2023). Investment in this

sector has a multiplier effect that strengthens the local and national economic structure. However, the achievement of these benefits is highly dependent on the effectiveness of the management of housing projects. Projects that fail to meet quality, time, and budget standards not only harm developers, but also have far-reaching social impacts.

Project management plays an important role in ensuring the success of housing development. In practice, housing projects are faced with various challenges such as variations in project size, geographical conditions, local government regulations, and market demand dynamics (Widodo, 2022). Developers must be able to respond to this complexity through an adaptive and strategic managerial approach. The three main aspects that greatly determine the quality and performance of a project are communication management, project leadership competencies, and risk management. Effective communication between stakeholders is able to accelerate the flow of information and reduce the potential for miscommunication (Chernenko et al., 2022). Competent leadership can ensure solid team coordination and responsiveness to field changes (Dhaniel et al., 2023). Meanwhile, systematic risk management helps to identify, analyze, and anticipate potential barriers during the development process (Malasyi et al., 2021).

This study is related to "Evaluation of the Influence of Communication Management and Project Risk Management on Leadership Competence and Performance in Housing Developers", to comprehensively understand how the three aspects of project management contribute to the success of the project. This research is expected to provide strategic recommendations for developers in designing and managing projects more effectively, efficiently, and sustainably by examining the interaction and combined influence of the three in the context of housing projects, especially in Indonesia.

Based on this background, the problems that will be raised in this study are:

How do communication aspects and leadership competence influence decision-making to improve the performance of housing developers?

Based on the formulation of these problems, the problems that will be raised in this study are Analyzing the influence of communication aspects and project leadership competence on decision making. Determining the impact of decision-making on overall project performance.

Research Uses: Contributing to the development of literature in the field of construction management, particularly regarding the influence of communication aspects and project leadership competence on decision-making and project performance. Strengthening the theoretical understanding of the role of decision-making as a mediating variable in the relationship between project leadership factors and project performance. It is a reference for future research that wants to examine more deeply the success factors of housing projects. Provide guidance to housing developers in identifying the key factors that affect the success of the project, both in terms of quality and performance. Help project managers understand the importance of the role of effective communication and leadership competencies in improving project outcomes. Provides practical recommendations for decision-makers in the construction sector to integrate better project management strategies to achieve quality and performance targets. Provide construction professionals with insights into the importance of project quality as an element that can improve the overall performance of a project.

METHOD

This research is a research that uses a quantitative approach. According to Sugiyono (2020), it is stated that quantitative research can be defined as a research method based on the philosophy of positivism and has the goal of testing predetermined hypotheses. In general, sampling techniques are carried out randomly, data collection using research instruments, and data analysis is quantitative or statistical. It is called a quantitative approach because research data is in the form of numbers and analysis using statistics. The method used in this study is the survey method. The survey method is a method used to obtain data from certain natural (not artificial) places, where researchers carry out treatments in data collection, for example by distributing questionnaires, tests, and so on according to Sugiyono (2020). In this study, data was collected using a questionnaire, from the results of the questionnaire were analyzed to determine the influence of each variable calculated using the SEM PLS analysis application version 4.

RESULT AND DISCUSSION

Research Results

The Partial Least Square analysis in this study was carried out using the help of SmartPls Software version 4.0. According to Ghazali (2016), in general, model evaluation in Partial Least Square analysis is the evaluation of the measurement model (outer model) and the evaluation of the structural model (inner model). Measurement models (outer models) are used to assess the validity and reality of the model. The validity test was carried out to determine the ability of the instrument being measured (Cooper and Schindler in Jogiyanto and Abdillah 2009), while the structural model (inner model) is a structural model to predict the causal relationship between latent variables. Through the bootstrapping process, T-statistic test parameters are obtained to predict the existence of causal relationships. The structural model (inner model) was evaluated by looking at the percentage of variance described by the R² value for the dependent variable using the Stone-Geisser Q-square test measure (Stone, 1974; Geisser, 1975 in Kalnadi 2013).

In this study, hypothesis testing used the Partial Least Square (PLS) analysis technique with the smartPLS 3.0 program. The following is a sample of the PLS program model.

1. Evaluation of Measurement Models (Outer Model)

The evaluation of the outer model of the research was carried out by paying attention to four criteria for measuring the outer model, while the four criteria are Convergent Validity, Discriminant Validity, Composite Reliability and Cronbach Alpha. The model of this research can be seen in figure 4.1.

a. Convergent Validity

In testing convergent validity, the value of outer loading or loading factor is used. An indicator is declared to meet convergent validity in the good category if the outer loading value > 0.7 . The following is the outer loading value of each indicator in the research variable:

Tabel 1. Outer Loading

	Project Performance	Decision Making	Communication Aspects	Project Leadership Competencies
PK1		0,859		
PK10		0,881		
PK11		0,877		
PK2		0,844		
PK3		0,800		
PK4		0,859		
PK5		0,826		
PK6		0,807		
PK7		0,807		
PK8		0,783		
PK9		0,747		
KP1	0,859			
KP10	0,821			
KP11	0,868			
KP12	0,827			
KP13	0,750			
KP2	0,900			
KP3	0,890			
KP4	0,865			
KP5	0,872			
KP6	0,792			
KP7	0,889			
KP8	0,858			
KP9	0,897			
AK1			0,761	
AK10			0,804	
AK2			0,812	
AK3			0,775	
AK4			0,784	
AK5			0,752	
AK6			0,772	
AK7			0,762	
AK8			0,771	
AK9			0,785	
KKP1				0,868
KKP10				0,772
KKP11				0,740
KKP12				0,752
KKP13				0,839
KKP14				0,783
KKP15				0,907
KKP2				0,915

KKP3	0,906
KKP4	0,881
KKP5	0,795
KKP6	0,856
KKP7	0,852
KKP8	0,903
KKP9	0,815

Source: Primary Data processed (2025)

Based on the results of *outer loading* measurements on reflective indicators, it is known that most of the research indicators have met the criteria to be used as variable measurement indicators because they have an *outer loading* value greater than 0.7 (*outer loading* > 0.7), so that all indicators are declared feasible or valid to be used for further research analysis.

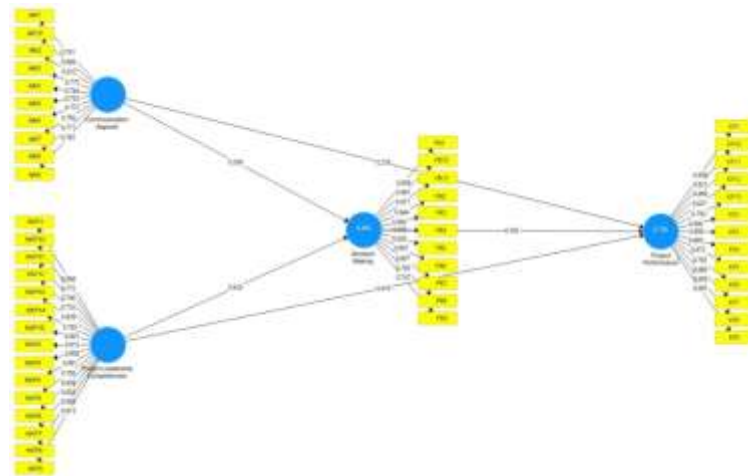


Figure 1 Outer Model

Source: Primary Data Processed (2025)

b. Discriminant Validity

Discriminant Validity is used to ensure that each concept of a latent variable construct is different from the other latent variable. The most recent measurement is best to look at *the Heretroit-Monotrait Ratio* (HTMT) value. If the HTMT value < 0.90, then a construct has good discriminant validity (Sarsted et al., 2017). The results of the *discriminant variability* test can be seen in the image below:

Tabel 2 Heterotrait – Monotrait Ratio (HTMT)

	Project Performance	Decision Making	Communication Aspects	Project Leadership Competencies
Project Performance				
Decision Making	0,760			
Communication Aspects	0,736	0,644		
Project Leadership Competencies	0,794	0,661	0,637	

Source: Primary Data processed (2025)

Based on the table, it can be seen that the HTMT ratio of all variables has an HTMT value of less than 0.9 ($HTMT < 0.9$) so it can be said that the entire construct of the variable has a good *discriminant* value. Another method of measuring *discriminant validity* is to look at the *square root value of average variance extracted* (AVE). The recommended value is above 0.5 (Ghozali, 2015). Here are the AVE values in the resulting study in the following table:

Tabel 3. Average Variant Extracted (AVE)

	Average Variance Extracted (AVE)
Project Performance	0,729
Decision Making	0,684
Communication Aspects	0,605
Project Leadership Competencies	0,707

Source: Primary Data processed (2025)

Based on the table above, it is known that all research variables have met the AVE standard value above 0.5 ($AVE > 0.5$). The Project Performance variable (Y) has an AVE value of 0.729, the Project Leadership Competency variable (Z) has an AVE value of 0.684, and the Communication Management variable (X1) has an AVE value of 0.605, the Project Risk Management variable (X2) has an AVE value of 0.707. Based on the consideration of the AVE value possessed by each variable, it can be concluded that all variables meet the *discriminant validity* value with an AVE value greater than 0.5. Thus, it can be stated that each variable has a good *discriminatn validity*.

c. Composite Reliability

The next test is the *composite reliability* of the indicator block that measures the construct. A construct is said *to be reliable* if the *composite reliability value* is above 0.70 (Ghozali, 2015). The following are the results of *the outer model* that shows the *composite reliability of each construct*:

Tabel 4. Composite Reliability

	Composite Reliability
Project Performance	0,972
Decision Making	0,960
Communication Aspects	0,939
Project Leadership Competencies	0,973

Source: Primary Data processed (2025)

Based on table 4 it shows satisfactory *composite reliability* results, namely the Project Performance variable (Y) has a *composite reliability* value of 0.972, the Decision Making variable (Z) has a *composite reliability* value of 0.960, and the Communication Management variable (X1) has a *composite reliability value* of 0.939, in the Project Leadership Competencies variable (X2) it has a *composite reliability value* of 0.973. These results show that the *composite reliability* value of all variables is greater than 0.7 where this study variable can be said to have high reliability.

d. Cronbach Alpha

The above *composite reliability* reliability test can be strengthened by using the *cronbach alpha* value. A variable can be declared reliable or meet *cronbach alpha* if it has a *cronbach alpha* value of > 0.7 (Ghozali, 2015). The following is the *cronbach alpha* value of each variable:

Tabel 5. Cronbach Alpha

	Cronbach's Alpha
Project Performance	0,969
Decision Making	0,954
Project Quality	0,972
Communication Aspects	0,928
Project Leadership	0,970
Competencies	

Source: Primary Data processed (2025)

Based on the data presented above in table 5, it can be seen that the *cronbach alpha* value of each research variable > 0.7 . Thus these results can show that each of the research variables has met the requirements of the *cronbach alpha* value, so it can be concluded that the overall variable has a high level of reliability.

2. Evaluation of Structural Models (*Inner Model*)

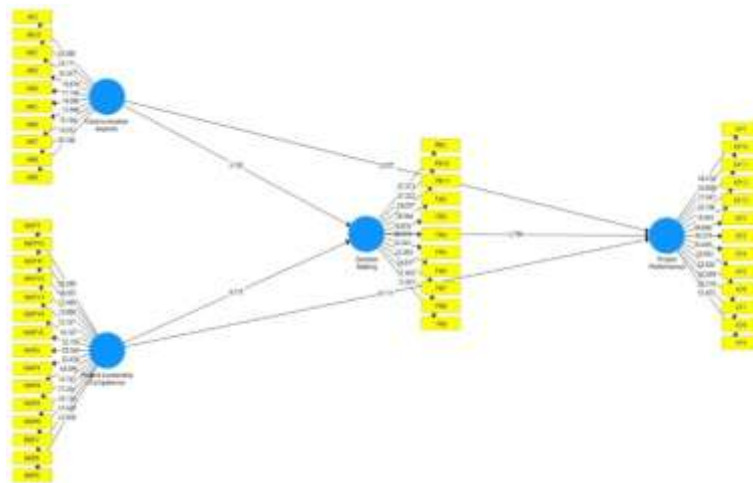


Figure 3. Inner Model

Source: Processed Primary Data (2024)

a. Uji Path Coefficient

Path coefficient *evaluation* is used to show how strong the effect or influence of independent variables is on dependent variables. Meanwhile, *coefficient determination* (R-Square) is used to measure how much endogenous variables are influenced by other variables. Chin said that the result of R^2 of 0.67 and above for endogenous latent variables in the structural model indicates that the influence of exogenous variables (affecting) on endogenous variables (influencing) is included in the good category. Meanwhile, if the result is 0.33 – 0.67, it is included in the medium category, and if the result is 0.19 – 0.33, it is included in the weak category (Ghozali, 2014).

Based on the inner model scheme that has been shown in Figure 4.2 above, it can be explained that the largest *path coefficient* value is shown by the influence of project leadership competencies on project performance 6,111. Then the second largest influence was the influence of project leadership competencies on project leadership competence at 4,575, and the smallest influence was shown by the influence of communication aspects on project performance at 3,557.

Based on the description of the results, it shows that all variables in this model have a *path coefficient* with a positive number. This shows that the greater the value of *the path coefficient* in one independent variable against the dependent variable, the stronger the influence between independent variables on that dependent variable.

b. Determination Coefficient Test (R²)

Based on the data processing that has been carried out using the smartPLS 3.0 program, the R-Square value is obtained as follows:

Table 6. R Square Values

	R Square	R Square Adjusted
Project Performance	0,736	0,727
Decision Making	0,494	0,484

Source: Primary Data processed (2025)

Based on the data presented in table 6 above, it can be seen that the R-Square value for Project Performance is 0.736. The acquisition of these values explains that the large percentage of Communication Aspects, and Project Leadership Competencies in influencing or explaining project performance variables is 73.6%. Then for the R-Square value obtained the variable of decision making is 0.494. This value explains that Communication Aspects and Project Leadership Competencies in influencing or explaining Project Leadership Competencies is 49.4%.

c. Q-Square Test

The *goodness of fit assessment* is known from the Q-Square value. The Q-Square value has the same meaning as *the coefficient determination* (R-Square) in regression analysis, where the higher the Q-Square, the better the model can be said to be the better or the better fit the data. The results of the calculation

$$Q^2 = 1 - \{(1 - R_1^2) \times (1 - R_2^2)\}$$

$$Q^2 = 1 - \{(1 - 0,736^2) \times (1 - 0,494^2)\}$$

$$Q^2 = 1 - \{(1 - 0,542) \times (1 - 0,244)\}$$

$$Q^2 = 1 - \{(0,458) \times (0,756)\}$$

$$Q^2 = 1 - 0.346$$

$$Q^2 = 0,654$$

Based on the results of the calculation above, a Q-Square value of 0.654 was obtained. This shows that the amount of diversity of research data that can be explained by the research model is 65.4%. While the remaining 34.6% is explained by other factors that are outside this research model. Thus, from these results, this research model can be stated to have a good *goodness of fit*.

d. F-square test

The *f-square value* is used to determine the influence of independent variables on dependent variables. The value of *f-square* has a number of criteria, where if the value is 0.02 it is classified as a weak influence, if the value is 0.15 it is a moderate influence and if the value is 0.35 it is a strong influence. The value of *f-square* in this study can be found as follows:

Table 7. Value of *f-square*

	Project Performance	Project Leadership Competencies	Communication Aspects	Project Leadership Competencies
Project Performance				
Decision Making	0,175			
Communication Aspects	0,157		0,160	
Project Leadership Competencies	0,328		0,226	

Source: Primary Data Processed (2025)

Based on the results of the table above, it is known that the *f-square* value in the variable of decision making on project performance has a value of 0.175, which is a value above 0.15 classified as a moderate influence. The communication aspects variable on project performance has a value of 0.157, which is a value above 0.15 classified as a moderate influence. In the communication aspects variable on decision making, it has a value of 0.160, which is a value above 0.15 classified as a moderate influence. In the variable of project v on project performance, it has a value of 0.328, which is a value above 0.15 classified as a moderate influence. In the variable of project project leadership competencies on decision making, it has a value of 0.226, which is a value above 0.15 classified as a moderate influence.

e. Uji Hypothesis

Based on the data processing that has been carried out, the results can be used to answer the hypothesis in this study. The hypothesis test in this study was carried out by looking at the T-Statistics value and the P-Values value. The research hypothesis can be declared acceptable if the P-Values value < 0.05 (Hair et al., 2019). The following are the results of the hypothesis test obtained in this study through the inner model:

Table 8. Hypothesis Test

Hipotesis	Variable Influence	T Statistics	P Values
H1	Communication Management -> Decision Making	3,703	0,000
H2	Project Leadership Competencies - > Decision Making	4,575	0,000
H3	Communication Aspects -> Project Performance	3,557	0,000
H4	Project Leadership Competencies -> Project Performance	6,111	0,000
H5	Decision Making -> Project Performance	3,799	0,000
H6	Communication Aspects -> Decision Making-> Project Performance	2,829	0,005

H7	Project Leadership Competencies -> Decision Making-> Project Performance	2,780	0,006
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Source: Primary Data processed (2025)

The results of the research hypothesis test can be explained as follows:

a. H1 Hypothesis

The results of the hypothesis testing show that the communication aspect (X1) has a significant influence on decision-making (Z), with a T-statistic value of 3.703 and a P-value of 0.000. Since the T-statistic is greater than the T-table value ($3.703 > 1.984$) and the P-value is lower than the 5% significance level ($0.000 < 0.05$), it can be concluded that there is a significant influence of the communication aspect on decision-making. Therefore, the first hypothesis (H1) is accepted, indicating a positive and significant effect of the communication aspect on decision-making.

b. H2 Hypothesis

The second hypothesis testing indicates that project leadership competence (X2) has a T-statistic value of 4.575 and a P-value of 0.000 in relation to decision-making (Z). Since the T-statistic is greater than the T-table value ($4.575 > 1.984$) and the P-value is less than 0.05 ($0.000 < 0.05$), this demonstrates a significant influence of project leadership competence on decision-making. Therefore, the second hypothesis (H2) is accepted, indicating a positive and significant effect of project leadership competence on decision-making.

c. H3 Hypothesis

The results of the hypothesis testing show that the communication aspect (X1) has a T-statistic value of 3.557 and a P-value of 0.000 in relation to project performance (Y). Since the T-statistic is greater than the T-table value ($3.557 > 1.984$) and the P-value is less than 0.05 ($0.000 < 0.05$), this indicates a significant influence of the communication aspect on project performance. Therefore, the third hypothesis (H3) is accepted, meaning that there is a positive and significant effect of the communication aspect on project performance.

d. H4 Hypothesis

The fourth hypothesis testing indicates that project leadership competence (X2) has a significant influence on project performance (Y), with a T-statistic value of 6.111 and a P-value of 0.000. Since the T-statistic is greater than the T-table value ($6.111 > 1.984$) and the P-value is less than 0.05 ($0.000 < 0.05$), it can be concluded that there is a significant influence of project leadership competence on project performance. Thus, the fourth hypothesis (H4) is accepted, confirming a positive and significant effect of project leadership competence on project performance.

e. Hypothesis H5

The fifth hypothesis testing shows that decision-making (Z) has a significant influence on project performance (Y), with a T-statistic value of 3.799 and a P-value of 0.000. Since the T-statistic is greater than the T-table value ($3.799 > 1.984$) and the P-value is less than 0.05 ($0.000 < 0.05$), this indicates a significant effect of decision-making on project performance. Therefore, the fifth hypothesis (H5) is accepted, indicating a positive and significant influence of decision-making on project performance.

f. Hypothesis H6

The hypothesis testing results indicate that the communication aspect (X1) influences project performance (Y) through decision-making (Z), with a T-statistic value of 2.829 and a P-value of 0.005. Since the T-statistic is greater than the T-table value ($2.829 > 1.984$) and the P-value is less than 0.05 ($0.005 < 0.05$), this demonstrates a significant influence of the communication aspect on project performance through decision-making. Therefore, the sixth hypothesis (H6) is accepted, confirming a positive and significant effect of the communication aspect on project performance through decision-making.

g. Hypothesis H7

The seventh hypothesis testing shows that project leadership competence (X2) has an influence on project performance (Y) through decision-making (Z), with a T-statistic value of 2.780 and a P-value of 0.006. Since the T-statistic is greater than the T-table value ($2.780 > 1.984$) and the P-value is less than 0.05 ($0.006 < 0.05$), this indicates a significant effect of project leadership competence on project performance through decision-making. Therefore, the seventh hypothesis (H7) is accepted, indicating a positive and significant influence of project leadership competence on project performance through decision-making.

Discussion of Research Results

1. The Influence of Communication Management and Risk Management on Project Leadership Competencies

1) The Influence of Communication Aspects and Project Leadership Competence on Decision-Making

T Statistic = 3,703 ($> 1,984$)

P-Value = 0.000 (< 0.05)

Path coefficient = Positive

Conclusion: Communication aspects has a positive and significant effect on decision making. Hypotheses accepted.

2) The Influence of Risk Management on Project Leadership Competencies

T Statistic = 4,575 ($> 1,984$)

P-Value = 0.000 (< 0.05)

Path coefficient = Positive

Conclusion: Project Leadership Competence has a positive and significant effect on decision making. Accepted hypotheses

Based on the hypothesis testing results for the variables of communication aspects and project leadership competence on decision-making, it can be concluded that both communication and project leadership competence have a significant influence on decision-making. Effective communication plays a crucial role in ensuring clear and timely information flow among project stakeholders, such as project managers, contractors, and suppliers. This facilitates better coordination and minimizes the risk of miscommunication, which in turn supports more effective decision-making within the project.

Good communication ensures that each party has the necessary information to perform their tasks efficiently and effectively, thereby improving the quality of project outcomes (Ibdayanti et al., 2023; Suraji, 2022). Overall, these results confirm that communication aspects and leadership competence have a positive and significant impact on decision-making, which

in turn can contribute to the success of construction projects. The hypotheses for both variables were accepted, indicating that these two factors are highly important in supporting efficient and high-quality project management.

2. The Influence of Decision Making on the Overall Performance of the Project

The influence of Decision Making on Project Performance has:

T Statistic = 3,799 ($> 1,984$)

P-Value = 0.000 (< 0.05)

Path coefficient = Positive

Conclusion: decision making have a positive and significant effect on project performance. Accepted hypotheses

Based on the results of the fifth hypothesis testing, with a T-statistic value of 3.799 and a P-value of 0.000, it can be concluded that decision-making has a significant influence on project performance in housing development. Effective decision-making strategies in a project—such as making the right decisions and motivating team members—directly enhance the efficiency and effectiveness of project execution.

A leader with strong decision-making strategies, for example, is capable of managing conflicts, resolving technical issues, and ensuring that the project progresses according to its predetermined objectives. These factors ultimately contribute to improved project performance (Ahdi, 2021; Hidayat & Syahra, 2023). Furthermore, leaders with skills in resource management and sound decision-making are able to optimize project time, budget, and quality (Khaidar et al., 2024). Effective decision-making also plays a key role in accelerating project progress. Thus, strong decision-making not only improves individual performance within the project but also supports the overall success of the project. In summary, project decision-making is proven to be a crucial factor in determining the success of project performance. Therefore, making sound and timely decisions should be a top priority in every project to ensure it is completed within the planned timeframe.

3. Difference Between Commercial & Subsidy Housing Management

The main difference between commercial and subsidized real estate management lies in the market segment they are aimed at. Commercial housing management is generally aimed at the upper middle class, with higher selling or rental prices. Commercial housing projects often involve larger developments and use higher quality technology and materials. Management in this context focuses more on achieving maximum profits, as well as property management that involves design innovations and premium facilities that can increase attractiveness for potential buyers or tenants.

On the other hand, subsidized housing is designed to meet the needs of low-income communities. Subsidized housing management aims to provide access to underprivileged groups to own houses at more affordable prices. Therefore, the planning and management of subsidized housing focuses more on cost efficiency, fulfillment of basic housing standards, and accessibility. The facilities provided in subsidized housing are also simpler than commercial housing, as the main priority is to ensure the availability of decent housing for low-income families.

In terms of financing and policy, commercial and subsidized housing management also have significant differences. For commercial housing, funding is generally more private, with

investors or developers responsible for financing the project. Meanwhile, subsidized housing often involves the government or financial institutions that provide special financing facilities, such as low-cost home loans or cost assistance. This creates a difference in the way property is managed, regulated, and maintained, which of course affects how these two types of housing are managed and marketed

CONCLUSION

Based on the research conducted on evaluating the influence of communication aspects and project leadership competence in decision-making to improve performance in housing developers, the following conclusions can be drawn: this study reveals a significant relationship between communication aspects and project leadership competence with decision-making. Furthermore, the impact of decision-making on overall project performance accounts for 73.6%. In addition, decision-making serves as a key mediating factor in strengthening the relationship between both communication aspects and project leadership competence with project performance, contributing 49.4%.

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