



Analysis Of The Effect Of Time Management, Budget Management, And Employee Skill Through Quality Project As Mediation Variables To Improve Customer Satisfaction In Luxury Residential Interior Design

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ABSTRACT

The purpose of this thesis is to determine the effect of time management, budget management, and employee skills on project quality and customer satisfaction in luxury residential interior design projects. This research was conducted on Arandy Mega Construction (AMC) customers with a population of 55 customers. The research design used quantitative research with a causal research type. Sampling used saturation sampling, which involved the entire population as a research sample. Data collection used questionnaires and data analysis was carried out using SEM PLS analysis. The results of the instrumental test show that each statement representing the research variables in the questionnaire is a valid and reliable statement. The results of the hypothesis test with SEM PLS explain that time management, budget management, and employee skills had a significant positive effect on project quality. The results of the study also showed that project quality had a partial mediation role on the effect of budget management on customer satisfaction, but had a full mediation role on the effect of time management and employee skills on customer satisfaction.

INTRODUCTION

Interior design is an art to improve the interior of a building to be more aesthetic according to the wishes of the building owner. The interior design business includes professional services, products, and consultations to improve the aesthetic appeal, functionality, and design of interior space (Credence Research, 2023). According to research conducted by Credence Research (2023), The demand for interior design services globally is worth USD 131,542.5 million in 2022 and is predicted to increase to USD 206,514.9 in 2030. This prediction is followed by a compounded annual

growth rate (CAGR) of 5.8 percent during 2023 to 2030. It was further explained that the highest increase in demand was in the luxury residential interior design segment. This segment in 2022 is included in the interior design section for residences which dominates 40 percent of the global market share, followed by interior design for educational facilities and offices which dominates 30 percent of the global interior design market share. Not only that, interior design services also have a role in the property and real estate industry. The role in question is to provide added value in the form of increasing property value, accelerating the process of selling and renting property, improving the reputation of developers, and providing satisfaction to consumers (Ademchic, 2024).

The interior design business after the Covid-19 pandemic has a positive trend. In 2020, there was an increase in demand for luxury housing. One of them was explained by the developer Ciputra Group who explained that November 2020 saw an increase in sales of luxury homes with prices starting at IDR 4.8 billion (Alexander, 2020). In 2023, demand for housing for the upper middle class will increase. According to Real Estate Indonesia (REI), 63% of developers think that housing for the upper middle class is the most attractive to develop because it is in high demand. It is further explained that 60.1% of developers said that upper middle-class housing has contributed to the positive performance of the property and real estate sector in 2023. This is in contrast to the conditions in 2020, which showed that 65.5% of developers stated that lower-class housing contributed the most (Permana, 2023). The phenomenon reveals that there is an increasing demand for luxury residential in Indonesia. The high demand for luxury residential is also followed by interior design services which are also increasingly in demand by the public. This is evidenced by the increase in demand for interior design services and services experienced by interior design service business actors by 45 percent in the first quarter of 2022 (Hasibuan, 2022).

There are several cases or problems related to interior design projects not going well or producing interior designs that are in accordance with consumer expectations (Ayuningtyas, 2021). The lack of availability of certified construction workers with a high educational background is a challenge for companies working in the construction sector. This is because the majority of available workers have less work experience, non-specific knowledge, which can pose a risk to the quality of the project being carried out. Certification for construction workers is important because it provides specific training and knowledge about construction work. The ability to do time management, cost management, consultation, skills, to determine quality materials in construction work are some of the things provided in the construction worker certification process (Rahayu, 2019). The problems that have been expressed are actually also felt by Arandy Mega Construction (AMC) during the luxury residential interior design project for less than 4.5 years. During the 4.5 years, Arandy Mega Construction (AMC) has completed approximately 40 projects.

Referring to the problems that have been explained, it can be grouped that the problems that can disrupt interior design projects include some of them related to time management, budget management, and employee skills. The RBV theory explains that company capabilities consist of aspects of skills, valuable physical assets, human resource assets, valuable organizational assets, competitive capabilities, and alliances that need to be considered (Rigan & Parahiyanti, 2022). In addition, RBV theory explains that companies have two forms of resources, namely tangible and intangible assets (Dasuki, 2021). Based on these problems, this research focuses on intangible assets, namely intangible assets, which in this research are manifested in the skill aspect, namely time management and budget management, then the human resource asset aspect is manifested in employee skills.

Therefore, this study was conducted to analyze the influence of the three variables on project quality and customer satisfaction in luxury residential interior design projects. Problems that occur in businesses or projects run in the field of interior design can pose a risk to the quality provided so that it can cause dissatisfaction to stakeholders and consumers. Quality is the goal of interior design services. If you can provide quality services, it can have an impact on stakeholders and satisfied consumers which then has a positive impact on the business in the long term (Sahil & Samiksha, 2020).

LITERATURE REVIEW

Resource-Based View (RBV) Theory

Resource-Based View (RBV) Theory is a theory that provides a perspective in determining strategic resources available in an organization or company so that it can create competitive advantages. This theory emphasizes that the competitiveness of an organization can be created when it is able to exploit internal resources (Rohman, Sari, & Puspitadewi, 2022). RBV theory focuses on two main elements, namely resources and capabilities. Companies try to understand the potential of the resources they have and the capabilities of the organization. There are two forms of resources owned by the organization, namely: (1) tangible resources, which are resources that have a physical form; and (2) intangible resources, which are resources that do not have a physical form, but are created as a result of the interaction of the organization with its environment (Dasuki, 2021). Among the two forms of resources explained, this study focuses on intangible assets, which in this study are manifested in the skill aspect, namely time management and budget management, then the human resource asset aspect is manifested in employee skills. The three variables are tested in this study to determine their influence on project quality and customer satisfaction which is the ultimate goal of implementing RBV theory which can create competitive advantage for organizations.

Customer Satisfaction

Satisfaction can be explained as a function of the difference between perceived performance and expectations. If performance is below expectations, consumers may experience disappointment, but if performance is in accordance with expectations, consumers feel satisfied. Performance that exceeds expectations makes consumers feel higher levels of satisfaction (Widiasanti et al., 2023). In organizations engaged in the service sector, customer satisfaction is part of the desired work result indicators. Performance is the work result that can be achieved by a person or organization in a company in accordance with the authority and responsibility of each person to achieve the organization's goals legally and not contrary to morals and ethics (Hermanto, 2019).

Time Management

Time management is the process of planning, scheduling, monitoring, and controlling, and adjusting activities in a project to ensure timely achievement of project objectives (Belferik et al., 2023). Failure to manage time well in each stage of construction activity can result in an increasing number of abandoned projects in the construction sector (Indra, 2020).

Companies that can implement good time management tend to be able to complete projects well and faster than the planned time (Indra, 2020). The same results were also explained by Sahil & Samiksha (2020), that time management has a dominant role in supporting construction projects to be successful and on time. According to Silalahi et al. (2023), Good planning in the process of running a construction project has a strong correlation with the quality of the resulting project.

H1: Time management has a significant effect on project quality.

Budget Management

Budget management is a way of managing and tracking income and expenses. Budget management involves budgeting and managing a budget that covers all costs incurred and keeps the project sustainable in the long term (Adolphe & Njenga, 2021). Effective budget management is important to avoid over budget which can cause losses to the project and disrupt overall project performance (Heryana et al., 2023). The existence of budget management is intended to ensure that the project budget outline is developed and ready to be used with the aim of maintaining the continuity of the project until completion with good quality (Adolphe & Njenga, 2021). The use of an appropriate budget in accordance with the project plan that has been prepared can provide a tendency for the project to be completed well and on time (Budianingsih, 2022).

H2: Budget management has a significant effect on project quality.

Employee Skill

Skills are the capacities required to perform a set of tasks that develop as a result of training and experience (Siswanto, Sawitri, & Martaleni, 2021). Skills in a worker can be developed by involving individuals with companies to better integrate with each other to form the ability to act while carrying out a job (Farid & Taher, 2021).

The skills possessed by workers are a necessity for companies to support the achievement of their goals, namely producing quality projects (Farid & Taher, 2021). The better the skills of the construction workers, the better the workers are in carrying out their responsibilities in the process of completing a project. That way the results shown are also of higher quality (Siswanto et al., 2021). The same results were also explained by Aglaonema et al. (2023) which explains skills in the form of hard skills and soft skills can improve performance which can then support improving the quality of the work results provided including project quality.

H3: Employee skill has a significant effect on project quality.

Project Quality

Project quality is a process and activity that determines policies, objectives, and responsibilities to ensure that a project can meet the required needs (Subiksa, Ariawan, & Peling, 2024). Quality in a project can be classified into output quality and quality during the process management carried out (Widiasanti et al., 2023).

According to Sahil & Samiksha (2020), Quality plays a role in determining whether a project that is being worked on or has been worked on can be accepted by consumers. This explains that quality projects tend to be more able to encourage consumers to feel more satisfied. Gazal et al. (2023), explains that consumers can become more satisfied with quality projects. This is because the projects that are being worked on have met the hopes and expectations of consumers. Poor project quality indicates that the performance of the project implementation is below consumer expectations. This causes consumers to perceive the project in question to be less (Widiasanti et al., 2023).

Research that has been conducted by Indra (2020) explains that companies that are able to implement good time management during the project are more able to produce quality projects. This quality project is the hope of consumers, if their expectations can be met, then consumers feel greater satisfaction. As explained by Sahil & Samiksha (2020) that consumers can feel better satisfaction with projects that are of high quality or according to plan.

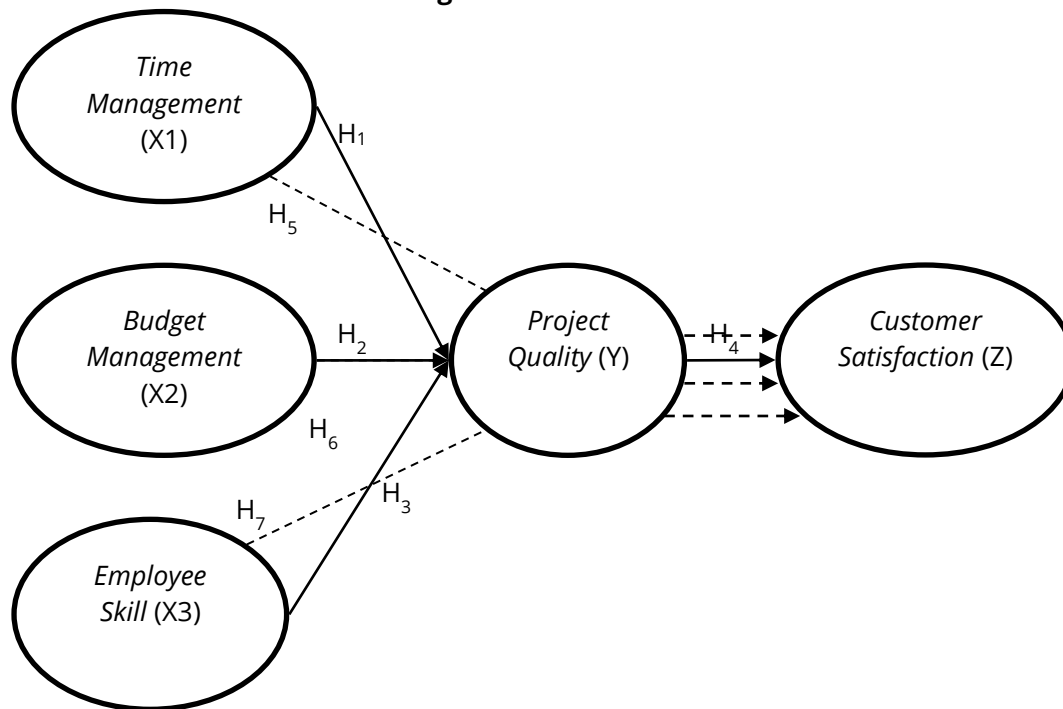
Adolphe & Njenga (2021) explains that budget management can have a positive effect on project quality. This is because through good budget management, project implementation costs become more precise and more efficient so that the resulting project becomes of better quality. Silalahi et al. (2023) explaining the accuracy in calculating costs and budgets in this project can support the accuracy of the results of the project being worked on, so that it can create increasingly satisfied consumers. This is because the project produced is in accordance with the expectations and plans of the consumer. Siswanto et al. (2021) explains that workers who have good skills can carry out their responsibilities well, so that the resulting projects also show better quality. Sahputra & Abizar (2022) adding that when a project is carried out by skilled workers, there is a greater tendency for the resulting project to show better quality or be able to meet consumer expectations, so that consumers can feel better satisfaction.

H4: Project quality has a significant effect on customer satisfaction.

H5: Time management has a significant effect on customer satisfaction, mediated by project quality.

H6: Budget management has a significant effect on customer satisfaction, mediated by project quality..

H7: Employee skill has a significant effect on customer satisfaction, mediated by project quality..

Figure 1 Research Framework

Source: Data by Author (2025)

METHODS

Research Method

This research design is quantitative research, namely research that uses data in the form of numbers from survey answers that are distributed to research samples and analyzed using statistical analysis techniques (Sugiyono, 2022). In addition, this research is a causal research type, which aims to measure the strength between two or more variables, and also shows the direction of the relationship between independent and dependent variables (Sugiyono, 2022). This study itself aims to determine the influence of time management, budget management, employee skills on project quality and the mediating role of project quality on the influence of time management, budget management, employee skills on customer satisfaction.

Population and Sampling

This study uses a population that is all consumers or customers of Arandy Mega Construction (AMC). Customers of AMC are companies or private individuals who need luxury residential interior design services. Based on internal company data published through the company profile of AMC, it is known that there are 55 companies that have become customers.

In this study, sampling was carried out using saturation sampling, namely using all members of the research population as samples (Sugiyono, 2022). Therefore, this study involved 55 AMC customers. If the customer is a company, it can be represented by more than 1 representative who communicates directly with AMC during the luxury residential interior design service process.

Data Collection Method

The data collection procedure in this study was carried out by distributing questionnaires online via Google Form to reach each research respondent. The measurement scale used was the Likert ordinal scale. With the Likert scale, the variables to be measured are described as variable indicators (Sugiyono, 2022). The Likert scale itself has five categories, from Strongly Disagree to Strongly Agree.

Measurement

The variables studied in this study consist of two types, namely independent variables and dependent variables. Independent variables are variables that influence, which consist of time management, budget management, employee skills. Dependent variables are variables that are influenced, which consist of project quality and customer satisfaction. The operational definition of the research variables can be explained in more detail in Table 1 below.

Table 1 Definisi Operasional Variabel Penelitian

No	Variable	Indicator
1	Time management is the process of planning and adjusting activities in a project to ensure punctuality in completing the project.	1. Identify activities 2. Estimate activity duration 3. Develop a realistic schedule 4. Allocate resources 5. Monitor project progress 6. Report project progress Source: Belferik et al. (2023)
2	Budget management, explains efforts to carry out detailed planning to determine the sources of income and expenses used in running a project in one period.	1. Budget planning 2. Budgeting 3. Budget control Source: Heryana et al. (2023)
3	Employee skills, explains the capabilities of human resources to support efficient project implementation.	1. Soft skill 2. Hard skill Source: Aglaonema et al. (2023)
4	Project quality, describes the activities carried out to ensure a project can meet planned needs based on customer demand.	1. Plan quality management 2. Perform quality assurance 3. Control quality Source: Belferik et al. (2023)
5	Customer satisfaction is the consumer's response to the product or service they perceive compared to their expectations regarding the quality of the product or service.	1. Conformity to expectations 2. Interest in repurchasing 3. Willingness to recommend Source: Tjiptono (2020)

Analysis Technique

The analysis of this study is using SEM (Structural Equation Model). In this study, data processing and analysis were carried out using SEM PLS, which is a powerful analysis method (Ghozali, 2020), because it is not based on many assumptions. SEM PLS is one of the alternatives for estimating structural equation models that is primarily used to confirm or reject the truth of existing theories. PLS is one of the SEM statistical analysis methods that can be used to solve multiple regression when there are problems with the data used, such as small sample sizes, missing values, and multicollinearity. In addition, SEM PLS is used in explanatory research on less developed theories. As is known, this study involved a sample of 55 respondents with a hypothesis consisting of two types of influence, namely direct influence and indirect influence on the variables of time management, budget management, and employee skills on project quality and customer satisfaction based on RBV theory.

RESULTS

Respondent Characteristics

The results of the descriptive analysis that has been carried out regarding the gender profile, age, type of service that has been used, and intensity or frequency of use of services from AMC are shown in Table 2 below.

Table 2. Descriptive of Profile Respondent

Characteristics	Frequency	Percentage
Gender		
Male	33	60,0%
Female	22	40,0%
Age		
18-35 tahun	28	50,9%
35-50 tahun	17	30,9%
50-60 tahun	7	12,7%
> 60 tahun	3	5,5%
Type of service		
architecture	20	36,4%
interior design	35	63,6%
Frequency using service		
1 time	17	30,9%
2 times	23	41,8%
> 2 times	15	27,3%

Source: Data processed (2024)

The results show that most of the AMC customers involved in this study were male, 33 people, and the remaining 22 AMC customers involved were female. The age of the majority of AMC customers was 18 to 35 years, 28 people. There were also customers aged 35 to 50 years, 17 people, aged 50 to 60 years, 7 people, and over 60 years, 3 people. The type of AMC service that was most in demand was related to interior design with 35 customers and the remaining 20 people were interested in services related to architecture. There were 23 customers who had used AMC services twice, then 17 people had only used AMC services once, and 15 people had used AMC services more than twice.

Convergent Validity

Convergent validity is carried out using the Average Variance Extracted (AVE) value and loading factor. The AVE value is expected to be ≥ 0.5 and the loading factor ≥ 0.7 (Ghozali, 2020).

Table 3. AVE Value

Variable	AVE	Description
<i>time management (X1)</i>	0,653	Valid
<i>budget management (X2)</i>	0,729	Valid
<i>employee skill (X3)</i>	0,748	Valid
<i>project quality (Z)</i>	0,799	Valid
<i>customer satisfaction (Y)</i>	0,573	Valid

Source: SmartPLS Test Result Processed, 2025

Table 4. Loading Factor Value

Variable	Indicator	Loading factor	Description
<i>Time management (X1)</i>	X1.1	0,768	Valid
	X1.2	0,882	Valid
	X1.3	0,869	Valid
	X1.4	0,759	Valid
	X1.5	0,708	Valid
	X1.6	0,849	Valid
<i>Budget management (X2)</i>	X2.1	0,752	Valid
	X2.2	0,884	Valid
	X2.3	0,916	Valid
<i>Employee skill (X3)</i>	X3.1	0,816	Valid
	X3.2	0,814	Valid
	X3.3	0,880	Valid
	X3.4	0,889	Valid
	X3.5	0,885	Valid
	X3.6	0,900	Valid
<i>Project quality (Z)</i>	Z1	0,874	Valid
	Z2	0,912	Valid
	Z3	0,895	Valid
<i>Customer satisfaction (Y)</i>	Y1	0,775	Valid
	Y2	0,719	Valid
	Y3	0,773	Valid
	Y4	0,760	Valid

Source: SmartPLS Test Result Processed, 2025

All variables have Average Variance Extracted (AVE) value ≥ 0.5 and loading factor value ≥ 0.7 . Therefore, it can be explained that each variable has a decent convergent validity.

Discriminant Validity

Discriminant validity in the study was conducted using the cross loading value. An indicator will be declared to meet discriminant validity if the indicator's cross loading value on its variable is the largest compared to other variables (Ghozali, 2020).

Table 5. Cross Loading Value

	<i>Time management (X1)</i>	<i>Budget management (X2)</i>	<i>Employee skill (X3)</i>	<i>Project quality (Z)</i>	<i>Customer satisfaction (Y)</i>
X1.1	0,768	0,074	0,256	0,263	0,349
X1.2	0,882	0,203	0,328	0,417	0,557
X1.3	0,869	0,203	0,416	0,620	0,557
X1.4	0,759	0,054	0,378	0,349	0,258
X1.5	0,708	0,029	0,422	0,250	0,246
X1.6	0,849	0,220	0,571	0,476	0,475
X2.1	0,057	0,752	0,474	0,442	0,541

	<i>Time management (X1)</i>	<i>Budget management (X2)</i>	<i>Employee skill (X3)</i>	<i>Project quality (Z)</i>	<i>Customer satisfaction (Y)</i>
X2.2	0,289	0,884	0,483	0,553	0,599
X2.3	0,101	0,916	0,448	0,491	0,541
X3.1	0,452	0,462	0,816	0,599	0,525
X3.2	0,395	0,612	0,814	0,536	0,547
X3.3	0,444	0,479	0,880	0,496	0,504
X3.4	0,459	0,355	0,889	0,485	0,453
X3.5	0,340	0,508	0,885	0,496	0,504
X3.6	0,478	0,406	0,900	0,496	0,484
Z1	0,419	0,508	0,535	0,874	0,752
Z2	0,417	0,458	0,518	0,912	0,694
Z3	0,574	0,589	0,563	0,895	0,772
Y1	0,357	0,361	0,379	0,675	0,775
Y2	0,494	0,416	0,357	0,644	0,719
Y3	0,388	0,605	0,422	0,607	0,773
Y4	0,382	0,635	0,633	0,578	0,760

Source: SmartPLS Test Result Processed, 2025

Each indicator in the research variable has the largest cross loading value on the variable it forms compared to the cross loading value on other variables. Based on the results obtained, it can be stated that each indicator used in this study has good discriminant validity in compiling each variable studied.

Reliability Test

The composite reliability and cronbach alpha values of each variable used in this study are shown in Table 6 below.

Table 6. Composite Reliability and Cronbach Alpha

Variable	Composite Reliability	Cronbach Alpha
time management (X1)	0,918	0,895
budget management (X2)	0,889	0,811
employee skill (X3)	0,947	0,932
project quality (Z)	0,922	0,874
customer satisfaction (Y)	0,843	0,752

Source: SmartPLS Test Result Processed, 2025

The composite reliability value of each variable is > 0.6 and the Cronbach alpha value is > 0.6 . These results indicate that each variable studied has met the composite reliability and cronbach alpha values so that it can be concluded that all variables have a high level of internal consistency reliability.

Inner Model

The inner model test conducted showed the following R-Square values.

Table 7. R square

Variable	R-Square	R-Square Adjusted
<i>project quality (Z)</i>	0,550	0,523
<i>customer satisfaction (Y)</i>	0,689	0,683

Source: SmartPLS Test Result Processed, 2025

Table 7 shows that the adjusted R-Square value for the project quality variable is 0.523. This adjusted R-Square value explains that the ability of time management, budget management, and employee skills to explain project quality is 52.3%. The R-Square value for the customer satisfaction variable is 0.683. The R-Square value explains that the ability of time management, budget management, and employee skills, and project quality to explain customer satisfaction is 68.3%. Based on the R-Square value, the Q-Square value of this model is:

$$\begin{aligned}
 \text{QSquare} &= 1 - [(1-0,523) \times (1-0,683)] \\
 &= 1 - (0,477 \times 0,317) \\
 &= 1 - 0,151 \\
 &= 0,849
 \end{aligned}$$

The Q-Square value of this research model is 0.849. The Q-Square value shows the magnitude of the diversity of research data that can be explained by the research model is 84.9%, while the remaining 15.1% is explained by other factors outside this research model.

Hypothesis Test

In this study, the hypotheses tested consist of two, namely the direct influence hypothesis and the indirect influence hypothesis (mediation). Hypothesis testing in this study was carried out by looking at the t-statistic value and the p-value. The research hypothesis can be declared accepted if the p-value < 0.05.

Table 8. Hypothesis Testing

		Original Sampel	T-statistic	P-Value	Description
H ₁	time management → project quality	0,354	2,446	0,018	Accepted
H ₂	budget management → project quality	0,406	3,059	0,003	Accepted
H ₃	employee skill → project quality	0,206	2,081	0,042	Accepted
H ₄	project quality → customer satisfaction	0,830	9,546	0,000	Accepted
H ₅	time management → project quality → customer satisfaction	0,294	2,480	0,016	Accepted
H ₆	budget management → project quality → customer satisfaction	0,337	2,576	0,013	Accepted
H ₇	employee skill → project quality → customer satisfaction	0,171	2,075	0,043	Accepted

Source: SmartPLS Test Result Processed, 2025

Based on the results shown in Table 8, the explanation of the hypothesis test is explained as follows.

1. The p-value shown on the influence of time management on project quality is 0.018 with a t-statistic value of 2.446. This result explains that time management has a significant positive effect on project quality and proves that the first hypothesis can be accepted.
2. The p-value shown on the influence of budget management on project quality is 0.003 with a t-statistic value of 3.059. This result explains that budget management has a

significant positive effect on project quality. Therefore, the second hypothesis can be accepted.

3. The p-value shown on the influence of employee skill on project quality is 0.042 with a t-statistic value of 2.081. This result explains that employee skill has a significant positive effect on project quality. Therefore, the third hypothesis can be accepted.
4. The p-value shown on the influence of project quality on customer satisfaction is 0.000 with a t-statistic value of 9.546. This result explains that project quality has a significant positive effect on customer satisfaction. Therefore, the fourth hypothesis can be accepted.
5. The p-value shown on the influence of time management on customer satisfaction through project quality is 0.016 with a t-statistic value of 2.480. This result explains that project quality can be a mediating variable on the influence of time management on customer satisfaction. Therefore, the fifth hypothesis can be accepted.
6. The p-value shown on the influence of budget management on customer satisfaction through project quality is 0.013 with a t-statistic value of 2.576. This result explains that project quality can be a mediating variable on the influence of budget management on customer satisfaction. Therefore, the sixth hypothesis can be accepted.
7. The p-value shown on the influence of employee skill on customer satisfaction through project quality is 0.043 with a t-statistic value of 2.075. This result explains that project quality can be a mediating variable on the influence of employee skill on customer satisfaction. Therefore, the seventh hypothesis can be accepted.

DISCUSSION

Effect of Time Management on Project Quality

Time management has a significant positive effect on project quality in luxury residential interior design projects. These results explain that the time management skills possessed by the project service provider, which in this study is Arandy Mega Construction (AMC) can determine the quality of luxury residential interior design projects. The results of the study show that the majority of AMC customers have positive responses about AMC's time management capabilities related to the ability to provide accurate project implementation estimates. This shows that AMC can provide accurate predictions that can give customers a sense of trust in AMC to help design the interior of their luxury residential. Accurate estimates from AMC can help customers to make efficiency from time delays and additional costs due to delays (Ode et al., 2023). That way, customers can feel the good quality of the luxury residential interior design project carried out by AMC. Accurate estimates provided by AMC can be realized because AMC can compile a list of activities for implementing luxury residential interior design projects clearly and in detail. This makes AMC's project planning more accurate in terms of time estimation, because it can be seen the picture of the difficulties and forms of activities that will be carried out for the interior design project being carried out. Therefore, AMC can maintain the accuracy of the project implementation estimates given to customers, one of which is by considering various forms of obstacles experienced based on the experience that has been passed by AMC workers.

Effect of Budget Management on Project Quality

Budget management has a significant positive effect on project quality in luxury residential interior design projects. These results explain that the budget management capabilities possessed by Arandy Mega Construction (AMC) can determine the quality of luxury residential interior design projects. The results of the study explain that the majority of AMC customers gave positive and relatively uniform responses to AMC's ability to create a budget for luxury residential interior design projects appropriately or in accordance with the cost estimates that had been planned at the beginning. The budget plays an important role in the sustainability of the project, because it can

prevent the project from going over budget and having an impact on the project becoming less quality (Heryana et al., 2023). Therefore, it is important for AMC to be able to communicate and coordinate with customers slowly, to be able to find out the needs and desires of customers regarding luxury residential interior design.

Effect of Employee Skill on Project Quality

Employee skills have a significant positive effect on project quality in luxury residential interior design projects. These results explain that the ability of each worker owned by Arandy Mega Construction (AMC) involved in the project can determine the quality of the luxury residential interior design project. The results of this study explain that the majority of AMC customers showed positive and similar responses about the ability of AMC workers who have good knowledge of luxury residential interior design projects. The knowledge and skills possessed by AMC workers are an asset, as explained by Farid & Taher (2021), that skills in the form of knowledge, experience, and expertise possessed by workers are needed to achieve the company's goals, namely to provide a positive contribution to the resulting project. Therefore, this can be considered by AMC to be able to provide workers who are not only skilled but also have adequate knowledge and good communication skills.

Effect of Project Quality on Customer Satisfaction

Project quality has a significant positive effect on customer satisfaction in luxury residential interior design projects. These results explain that the quality of the results of luxury residential interior design projects carried out by Arandy Mega Construction (AMC) can determine the satisfaction of project service users. The results of this study explain that the majority of AMC customers gave positive and uniform responses to AMC's ability to carry out interior design projects based on thorough planning and efficient methods. AMC's ability to carry out projects efficiently is followed by the ability to provide detailed information and materials and monitored regularly to stay in line with the initial plan. As explained by Gazal et al. (2023), that in construction projects, procedures are important to be described in the planning and can be followed during the project implementation in order to create efficiency. Therefore, it is important for the AMC to be able to maintain these capabilities, by maintaining the time management, budget management, and employee skills that are owned, so that the quality of the resulting project can be maintained well and even become better.

Effect of Time Management on Customer Satisfaction Mediated by Project Quality

Time management has a significant effect on customer satisfaction through project quality as an intervening variable. This result explains that the time management capabilities possessed by the project service provider, which in this study is Arandy Mega Construction (AMC) can determine the quality of luxury home interior design projects which then provide better satisfaction to customers who use services from AMC. The results of this study are in line with the results of research from Indra (2020) which explains that companies that can implement good time management tend to be able to produce quality projects, namely projects that can meet the hopes and expectations of customers so that customers can also feel more satisfied. If we pay attention to the respondent profile, it is known that the tendency of AMC customers is dominated by male customers. According to Aji (2021), in the project preparation stage, including matters related to craftsmen or project workers, this is generally done by men. This is because there is an assumption that men know more and can easily interact with project workers for the coordination process and work orders.

Effect of Budget Management on Customer Satisfaction Mediated by Project Quality

Budget management has a significant effect on customer satisfaction through project quality as an intervening variable. These results explain that the budget management capabilities possessed by Arandy Mega Construction (AMC) can determine the quality of luxury home interior design projects which then provide better satisfaction to customers who use services from AMC. The results

of this study support the research by Silalahi et al. (2023) that accurate cost and budget calculations in a project can create satisfaction in the minds of customers. This is because the resulting project is in line with the plan agreed upon between the customer and the service provider. When considering age, it is known that the majority of AMC customers are between 18 and 35 years old. This is a productive age and falls into the upper-middle class category. As explained by Rachman (2024), 48% of the middle class are Gen Z and millennials. Both are productive age groups, which, according to Real Estate Indonesia (REI), are the most popular housing products for the middle class (Permana, 2023). This high level of interest correlates with high demand for interior design, so people of productive age tend to choose competent service providers. AMC, with its budget management capabilities, can be one of the candidates for people to choose as an interior design service provider. Budget management can be an important aspect to consider, as customers will prioritise efficiency in meeting their needs. A reasonable budget with strict supervision is an important point sought by customers (Adolphe & Njenga, 2021).

Effect of Employee Skill on Customer Satisfaction Mediated by Project Quality

Employee skills have a significant effect on customer satisfaction through project quality as an intervening variable. These results explain that the capabilities of each worker employed by Arandy Mega Construction (AMC) can determine the quality of luxury residential interior design projects, which in turn provides greater satisfaction to customers who use AMC's services. The results of this study support the findings of Sahputra & Abizar (2022) that when projects are carried out by workers with good skills, which are appropriate to the field of work, the quality of the work produced can be improved, thereby creating better customer satisfaction. The results of this study also explain that the majority of AMC customers gave positive and consistent responses regarding the ability of AMC workers to provide input on problems and creative ideas during the interior design project. This shows that customers are comfortable with the abilities of AMC workers. Regarding the discussion and communication process, considering the dominance of male customers at AMC, this indicates the existence of traditional roles, whereby roles related to the environment outside the home or family are handled by men, while women tend to take care of domestic matters within the home. This is also conveyed by Aji (2021), who states that in middle-class communities that tend to be well-established, there is a division of roles where men take on public affairs and women take care of domestic matters. Although women actually have the ability to access information about building layout and interior design, they prefer to leave these roles to men. With men taking on these roles, the communication process between customers and workers also becomes more comfortable, as it is easier to understand each other.

CONCLUSION

The conclusion of this study explains that time management, budget management, and employee skills have a positive and significant effect on project quality in luxury residential interior design projects. Good time management helps projects run on schedule, effective budget management ensures optimal use of resources, and high employee skills contribute to quality end results. In addition, project quality has been proven to have a significant effect on customer satisfaction. Good project quality increases customer satisfaction because the final results are as expected. Project quality also acts as a mediating variable that strengthens the relationship between time management, budget management, and employee skills on customer satisfaction. Thus, the better the management of time, budget, and employee skills, the higher the quality of the project produced, which ultimately increases customer satisfaction. The results of this study are in line with the RBV Theory, which emphasizes that optimizing a company's internal resources, including time management, budget, and workforce skills, can create sustainable competitive advantage. In the context of Arandy Mega Construction (AMC), implementing a more effective project management

strategy can improve the company's reputation and attract more customers in the luxury residential interior design market.

The suggestion that can be put forward through this research is for business actors who provide luxury residential interior design services, including Arandy Mega Construction (AMC), to establish more intensive communication with customers to understand their needs and expectations, and prepare a realistic project completion schedule, improve the accuracy of project implementation estimates by considering possible obstacles based on previous experience, improve coordination with vendors to obtain more accurate material price estimates that are in accordance with project needs, conduct training for employees, both in terms of soft skills (communication and project management) and hard skills (installation techniques and use of interior design technology), and implement a mentoring system between experienced and new workers to accelerate the transfer of knowledge and skills in the field. Suggestions for future research are to add other factors that may contribute to project quality and customer satisfaction in luxury residential interior design projects, conduct research with a larger sample size and include customers from various similar service providers to obtain more generalizable results, and analyze other factors in the RBV Theory that can be implemented in luxury residential interior design projects, such as the involvement of expert consultants in improving project quality.

LIMITATION

During the research, there were several limitations experienced, namely this study only involved customers from Arandy Mega Construction (AMC) which were relatively small in number, namely 55 respondents. This can make the research results less able to describe the general conditions of the industry and the demand for luxury residential interior design services. In addition, this study also only focuses on the influence of time management, budget management, and employee skills on project quality and customer satisfaction based on RBV theory as the basis for the variables used in the study.

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