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IMPLEMENTATION OF PROJECT PERFORMANCE FAILURE FACTORS PROJECTS IN THE EDUCATION OFFICE OF EAST JAVA PROVINCE

IMPLEMENTASI FAKTOR KEGAGALAN KINERJA PROYEK PADA PROYEK-PROYEK DI DINAS PENDIDIKAN PROVINSI JAWA TIMUR

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ABSTRACT

The problem of accepting new students through the zoning pathway has become a national problem, therefore an information system is needed so that there is public openness regarding the acceptance of these students. There are several similar research objects but only at the work and university levels. The results of the research implications aim to be applied to all local governments in Indonesia or internationally in determining new students. This final research model explains how the registration flow and results of the system can be accessed by the public. The object of the research system in East Java province for SMA, SMK and PKPLK levels, further research can be used for elementary to junior high school levels. The weakness of the research system is that it has not been fully integrated with related parties so that identification is still manual.This study examines the effect of project external environment and construction material supply related problems on project performance failure through ineffective contract management on building construction projects at the East Java Provincial Education Office. This study uses a quantitative method with SEM-PLS (Structural Equation Modeling) Partial Least Square analysis. The results of the study indicate that project external environment and construction material supply related problems affect project performance failure through ineffective contract management on building construction projects at the East Java Provincial Education Office.

***Keywords**: Project External Environment, Construction Material Supply Related Problem, Project Performance Failure, Ineffective Contract Management*

ABSTRAK

Masalah penerimaan siswa baru melalui jalur zonasi sudah menjadi masalah nasional, oleh karena itu diperlukan sebuah sistem informasi agar ada keterbukaan publik mengenai penerimaan siswa tersebut. Terdapat beberapa objek penelitian yang serupa namun hanya pada tingkat pekerjaan dan universitas. Hasil dari implikasi penelitian bertujuan untuk dapat diterapkan pada seluruh pemerintah daerah di Indonesia ataupun internasional dalam menentukan siswa baru. Model penelitian akhir ini menjelaskan bagaimana alur pendaftaran dan hasil dari sistem yang dapat diakses oleh publik. Objek sistem penelitian di provinsi Jawa Timur untuk tingkat SMA, SMK dan PKPLK, penelitian selanjutnya dapat digunakan untuk tingkat SD hingga SMP. Kelemahan dari sistem penelitian tersebut adalah belum sepenuhnya terintegrasi dengan pihak-pihak terkait sehingga identifikasi masih bersifat manual Penelitian ini menguji pengaruh lingkungan eksternal proyek dan masalah terkait pasokan material konstruksi terhadap kegagalan kinerja proyek melalui manajemen kontrak yang tidak efektif pada proyek konstruksi gedung di Dinas Pendidikan Provinsi Jawa Timur. Penelitian ini menggunakan metode kuantitatif dengan analisis SEM-PLS (Structural Equation Modeling) Partial Least Square. Hasil penelitian menunjukkan bahwa lingkungan eksternal proyek dan masalah terkait pasokan material konstruksi berpengaruh terhadap kegagalan kinerja proyek melalui manajemen kontrak yang tidak efektif pada proyek konstruksi gedung di Dinas Pendidikan Provinsi Jawa Timur.

Kata Kunci: Lingkungan Eksternal Proyek, Masalah Terkait Pasokan Material Konstruksi, Kegagalan Kinerja Proyek, Manajemen Kontrak Yang Tidak Efektif

INTRODUCTION

The East Java Education Office is one of the government institutions tasked with managing education policies in East Java. The high growth in the need for buildings for education, the East Java Education Office requires an increase in the capacity of building facilities. The East Java Education Office continues to strive to improve its services by

implementing projects and also initiatives to increase the effectiveness and efficiency of educational operations.

These various projects are related to the East Java and Bali building construction projects. The types of projects include, public school building procurement projects, procurement of main transmission materials, relocation and various other projects. This infrastructure will support services for additional students for the next ten years (Renja, 2024) so that a comprehensive implementation of project performance failure management analysis is needed to be able to identify, analyze, evaluate, and respond to project failure risks so that project work runs well. The following is data related to the procurement of goods and services projects at the East Java Provincial Education Office associated with monitoring results during the project.

Project performance failure analysis is basically a comprehensive process equipped with the tools, techniques, and science needed to recognize, measure, and manage project performance failure more transparently (Alubaid, Alhadeethi, & Alnajjar, 2018). According to (Andersen & Grude, 2017) project performance failure is a logical and systematic process in identifying, analyzing, and evaluating, controlling, supervising, and communicating project performance related to all activities, functions, or processes with the aim that the institution can minimize losses and maximize opportunities. This study chose a case study of the project performance failure analysis process on the East Java Provincial Education Office building construction project. Several problems that often arise in the preparation of project performance failure analysis studies, especially in the East Java Provincial Education Office, are the subjectivity of contract assessments which are still very high, delays in project completion targets and so on. Unidentified project performance failure analysis in the future has the potential to cause problems due to the unpreparedness of preventive controls and recovery controls. For example, in the previous project development, there was a delay in work due to the unavailability of material supply, external factors, project design problems, contract management problems that had an impact on project performance failure (Alma, 2019). This writing is an analysis of project performance failure on the East Java Provincial Education Office project. This project was chosen because it is an ongoing project and is one of the priorities for project completion by the East Java Provincial Education Office because it aims to anticipate the increase in the need for educators and the next few years and improve the quality and reliability of the distribution of educational facilities in various public schools.

Does the project external environment, and construction material supply related problems affect project performance failure through ineffective contract management on building construction projects at the East Java Provincial Education Office?

RESEARCH METHODS

This research is conclusive, because the results of the research are intended to help decision makers in evaluating and choosing what actions to use in certain situations (Hair, Christian, & Marko, 2019). In conclusive research, hypothesis testing is carried out with a formal and structured research process, a representative sample size, the use of quantitative data analysis, and the final result is a conclusion as a practical or scientific benefit. The research approach

used is a deductive approach, namely the process of developing existing theories with tests applied to practice when data collection and analysis occurs (Sugiyono, 2019).

This research utilizes quantitative data collected through a questionnaire distributed to respondents. The data collection method employs an agree-disagree scale, and the analysis technique is based on Structural Equation Modeling (SEM). The process includes editing the questionnaire, coding, assigning weights to each question, and tabulating the collected data (Ghozali, 2019).

RESULTS AND DISCUSSIONS

Outer Model

The following is an illustration of the SEM diagram used in this research:

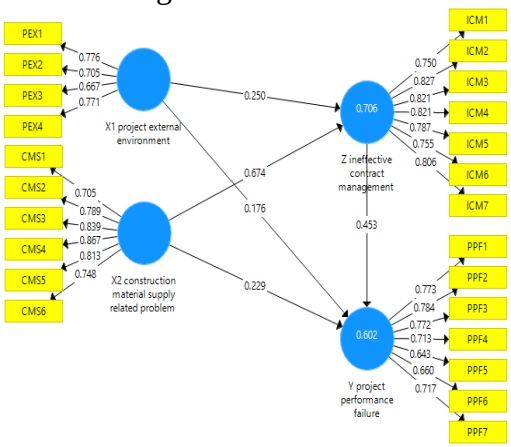

Figure 1. *Loading Factor*

The loading factor of each indicator on the variable with a minimum value of 0.6 and also the Average Variance Extract (AVE) analysis with a minimum value of 0.5 but there are meet the requirements.

Based on the table below, it can be seen that the results of convergent validity testing show that all variables have indicators with loading factor values of more than 0.6 or 0.5, meaning that all indicators have met the convergent validity criteria.

Table 1. Results of Loading Factor

Variabel	Item	*Loading Factor*	Info
Project External Environment	PEX1	0,776	Valid
	PEX2	0,705	Valid
	PEX3	0,667	Valid
	PEX4	0,771	Valid
Construction Material Supply Related Problem	CMS1	0,705	Valid
	CMS2	0,789	Valid
	CMS3	0,839	Valid
	CMS4	0,867	Valid
	CMS5	0,813	Valid
	CMS6	0,748	Valid
Project Performance Failure	PPF1	0,773	Valid
	PPF2	0,784	Valid
	PPF3	0,772	Valid
	PPF4	0,713	Valid
	PPF5	0,643	Valid
	PPF6	0,660	Valid
	PPF7	0,717	Valid
Ineffective Contract Management	ICM1	0,750	Valid
	ICM2	0,827	Valid
	ICM3	0,821	Valid
	ICM4	0,821	Valid
	ICM5	0,787	Valid
	ICM6	0,755	Valid
	ICM7	0,806	Valid

Data Source: Processed by Researchers, 2024

Next, the AVE Method is used to assess the convergent validity of each construct and latent variable. The minimum value that is considered to be met is at least 0.5. The average variance extracted by AVE based on these SEM results is as follows:

Table 2. *Average Variance Extracted* Value

Variabel	AVE	Info
Project External Environment	0,535	Valid
Construction Material Supply Related Problem	0,632	Valid
Project Performance Failure	0,526	Valid
Ineffective Contract Management	0,633	Valid

Data Source: Processed by Researchers, 2024

In the table above, the AVE value for the latent variable *project external environment* (0.535), *construction material supply related problem* (0.632),

project performance failure (0.526), *ineffective contract management* (0.633). Thus, it can be said that the measurement model is valid and meets the validity test requirements.The cross loading values based on the results in this SEM are as follows:

Table 3. *Cross Loading Value*

	X1 project external environment	X2 construction material supply related problem	Y project performance failure	Z ineffective contract management
CMS1	0.476	**0.705**	0.435	0.495
CMS2	0.473	**0.789**	0.506	0.592
CMS3	0.454	**0.839**	0.590	0.643
CMS4	0.470	**0.867**	0.599	0.709
CMS5	0.430	**0.813**	0.584	0.668
CMS6	0.398	**0.748**	0.577	0.736
ICM1	0.531	0.638	0.610	**0.750**
ICM2	0.537	0.608	0.633	**0.827**
ICM3	0.438	0.685	0.564	**0.821**
ICM4	0.409	0.675	0.544	**0.821**
ICM5	0.428	0.584	0.538	**0.787**
ICM6	0.536	0.652	0.574	**0.755**
ICM7	0.595	0.685	0.691	**0.806**
PEX1	**0.776**	0.419	0.394	0.477
PEX2	**0.705**	0.404	0.434	0.435
PEX3	**0.667**	0.378	0.424	0.412
PEX4	**0.771**	0.438	0.466	0.508
PPF1	0.528	0.700	**0.773**	0.709
PPF2	0.499	0.622	**0.784**	0.673
PPF3	0.428	0.631	**0.772**	0.598
PPF4	0.444	0.354	**0.713**	0.448
PPF5	0.338	0.283	**0.643**	0.362
PPF6	0.325	0.349	**0.660**	0.405
PPF7	0.347	0.367	**0.717**	0.437

Data Source: Processed by Researchers, 2024

In the cross-loading table, it is evident that the value for each latent variable is greater than the values of other latent variables.

This reliability test also examines the composite reliability value as an indicator of reliability, where both values should exceed 0.70. The Cronbach's alpha and composite reliability values obtained in this SEM are as follows:

Table 4. *Construct Reliability*

Variabel	Cronbach's Alpha	Composite Reliability	Info
Project External Environment	0.708	0.821	Reliable
Construction Material Supply Related Problem	0.883	0.911	Reliable
Project Performance Failure	0.856	0.885	Reliable
Ineffective Contract Management	0.903	0.924	Reliable

Data Source: Processed by Researchers, 2024

Based on the table above, the results of the reliability test analysis show that the composite reliability score is greater than 0.7, which means that all variables are reliable and have passed the test requirements.

Inner Model

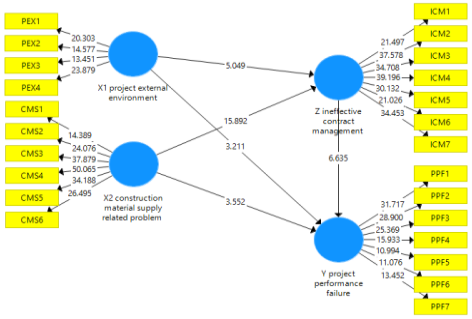

Figure 3. Inner Model

The model's feasibility test examines the R-square value, which ranges from 0 to 1. An R-square value of 0.75 is considered good, 0.50 is moderate, and 0.25 is considered poor. The following R-square values are based on the SEM results, as shown in the table and figure:

Table 5. Nilai R-Square

Variabel	R-Square	Info
Project Performance Failure	0.602	*Moderate*
Ineffective Contract Management	0.706	*Moderate*

Data Source: Processed by Researchers, 2024

From the table above, the model's suitability can be assessed by the r-square result for project performance failure, which is 0.602 (60.2%). This indicates that 60.2% of the variation in project performance failure can be explained by project external environment, construction material supply and ineffective contract management. The r-square result for ineffective contract management, which is 0.706 (70.6%). this indicates that 70.6% of the variation in ineffective contract management can be explained by project external environment and construction material supply.

To determine whether a relationship is significant, the p-value should be compared to the 5% error rate, as outlined in the research hypothesis testing:

Table 6. Path Coefficient SEM-PLS

	Original sample (O)	T statistics (|O/STDEV|)	P values
project external environment -> project performance failure	0.176	3.211	**0.001**
project external environment -> ineffective contract management	0.250	5.049	**0.000**
construction material supply related problem -> project performance failure	0.229	3.552	**0.000**
construction material supply related problem -> ineffective contract management	0.674	15.892	**0.000**
ineffective contract management -> project performance failure	0.453	6.635	**0.000**
project external environment -> ineffective contract management -> project performance failure	0.113	4.009	**0.000**
construction material supply related problem -> ineffective contract management -> project performance failure	0.306	6.278	**0.000**

Data Source: Processed by Researchers, 2024

Based on the table above, the results of the hypothesis test show the following results and conclusions:

1. Project external environment has a positive effect of 0.176 on project performance failure with a t-statistic value of 3.211 and a p-value of 0.001 < 0.05. Therefore, the hypothesis "Project external environment has a positive and significant effect on project performance failure" (H1) is accepted.
2. Project external environment has a positive effect of 0.250 on ineffective contract management with a t-statistic value of 5.049 and a p-value of 0.000 < 0.05. Therefore, the hypothesis "Project external environment has a positive and significant effect on ineffective contract management" (H2) is accepted.
3. Construction material supply related problem has a positive effect of 0.229 on project performance failure with a t-statistic value of 3.552 and a p-value of 0.000 < 0.05. Therefore, the hypothesis " Construction material supply related problem has a positive and significant effect on project performance failure" (H3) is accepted.
4. Construction material supply related problem has a positive effect of 0.647 on project ineffective contract management with a t-statistic value of 15.892 and a p-value of 0.000 < 0.05. Therefore, the hypothesis "Construction material supply related problem has a positive and significant effect on ineffective contract management" (H4) is accepted.
5. Ineffective contract management has a positive effect of 0.453 on project performance failure with a t-statistic value of 6.635 and a p-value of 0.000 < 0.05. Therefore, the hypothesis "Ineffective contract management has a positive and significant effect on project performance failure" (H5) is accepted.
6. Ineffective contract management mediates the relationship between the project external environment and project performance failure, with an effect of 0.113, a t-statistic value of 4.009, and a p-value of 0.000, which is less than 0.05. Therefore, the

hypothesis "Project external environment has a positive and significant effect through ineffective contract management on project performance failure " (H6) is accepted.

7. Ineffective contract management mediates the relationship between the construction material supply related problem and project performance failure, with an effect of 0.306, a t-statistic value of 6.278, and a p-value of 0.000, which is less than 0.05. Therefore, the hypothesis "Construction material supply related problem has a positive and significant effect through ineffective contract management on project performance failure " (H7) is accepted.

Impact project external environment on project performance failure

Project external environment influences include various aspects related to project needs, including project location conditions, inflation, labor issues, and political stability (Gadisa & Zhou, 2021). The need for building facilities in the state education sector in East Java Province has grown rapidly over the decades related to growth and transformation plans to improve the capabilities and roles of the education sector. This reform includes various world education policies related to the management, preparation, and implementation of strategic reforms in order to help meet the needs of suitable buildings, most of which play a role in state education (Andersen & Grude, 2017).

Impact project external environment on ineffective contract management

Other factors that affect scheduling, compiling work procedures for each division related to the contract in detail (work standards), conducting training so that it can increase HR experience, involving HR in seminars related to the contract, compiling job descriptions and workflows, improving the leadership of division heads so that they can implement the workflow that has been created, paying more attention to and implementing work procedures in accordance with the ISO Standards that have been used and it is better if the contract uses Indonesian, if the Indonesian contract system is deemed inadequate, then a contract system in a foreign language can be used, but the owner and contractor periodically hold workshops to align perceptions (Mahamid & Ibrahim, 2018).

Impact construction material supply related problem on project performance failure

Field conditions when there are variables in the model that are not met, then what will happen is errors from the contractor, problems with the surveyor related to poor communication and uncertainty problems so that these aspects become the main triggers for a project to fail so it is important to fix, fix and prepare for the initial problem so that it does not cause ongoing problems related to various project changes or variation orders (Sinesilassie, Tabish, & Jha, 2018). The problem of clarity of information flow, especially the poor various parties involved in a project to build a good information flow is still difficult to do. The problem of a poor and still poorly organized information flow clarity system is the cause of the problem of a messy work procedure system causing various uncertainties or loss of important information in the work system of a project. The success of a construction project is the existence of good and solid teamwork, a bad team causes various construction projects to be problematic, and a bad team triggers

errors in making every important decision on the project because fellow coworkers do not work together well (Gadisa & Zhou, 2021).

Impact construction material supply related problem on ineffective contract management

Regarding the problem of work contracts, namely flexibility contracts regarding contract adjustment issues, poor contract management, and multi-interpretable contracts. Contract changes also become triggers caused by problems with consultant costs, minimal project designer experience, obstacles with the contractor and supervisor. Obstacles from the client include design modifications, failure to make project decisions and the unavailability of experts. Poor contract procedural problems also trigger because the unpreparedness of the planning project is a trigger for project failure. The lack of preparation for contract coordination that explains the project work system is due to the lack of contract information, inappropriate initial agreements and problems of contract inconsistency with legal, environmental and other aspects (Gadisa & Zhou, 2021).

Impact ineffective contract management on project performance failure

Ineffective contract management can also be defined as the ineffectiveness of an agreement signed by the contractor, architect and owner after the initial contract is made and then modified by several scopes of work to adjust to costs and time (Gadisa & Zhou, 2021). Infographics/mapping need to be prepared so that the project failure process is easier to detect and even avoided so that it is easier to understand for operational purposes, namely starting with a checking procedure by the engineer owner to all production of consultant drawings which are further improved by selecting more experienced engineers, documenting all communication activities between the planning consultant and the engineer owner, conducting more joint workshops between the owner and planner (Andersen & Grude, 2017)

Ineffective contract management mediation influences the relationship between project external environment on project performance failure

The successful implementation of the East Java Education Office project is rarely seen. According to literacy (Sinesilassie, Tabish, & Jha, 2018)) various problems in public projects related to conflicts between project participants, managerial ignorance, lack of knowledge and unproductive human resource management hamper the performance of public project schedules. The implementation of public infrastructure projects has failed due to lack of emphasis on planning, failure to update schedules on time, poor contract management, and inadequate supervision locations. Inflation of building material prices, change orders, payments, schedule overruns, quality defects, cost overruns, capacity problems, organizational and coordination failures require extensive participation from related agencies to improve project service delivery (Alubaid, Alhadeethi, & Alnajjar, 2018).

Ineffective contract management mediation influences the relationship between construction material supply related problem on project performance failure

Project performance failure analysis is basically a comprehensive process equipped with the tools, techniques, and science needed to

recognize, measure, and manage project performance failure more transparently (Alubaid, Alhadeethi, & Alnajjar, 2018). Non-compliance with work standards and specifications caused by inadequate supervisor expertise. The impact of this risk is that the work structure related to construction quality is poor. The risk of late arrival of materials as the cause of this risk is the delay in purchasing orders. The delay in contractors submitting approval drawings. The next condition is that the manufacturer is overloaded, with the impact caused by this risk being that the work cannot be carried out according to the material schedule from the warehouse to the project location so that the commercial on date target is not achieved. The contractor is inadequate so it is necessary to form a consultant team and company coordination, contractors with a consultant team and a limited number of expert workers. The impact of this risk is that the construction work process experiences many obstacles so that it is necessary to evaluate the construction work every time an obstacle arises and find solutions to the obstacles that occur immediately so that they do not cause long-term impacts and have an impact on the construction work process experiencing many changes (Gadisa & Zhou, 2021).

CONCLUSION AND SUGGESTION

Here's a refined version of the conclusions:

Based on the analysis and discussion presented, the following conclusions can be drawn:

1. Project external environment has a significant positive effect on project performance failure. This indicates that improving the project external environment will lead to an increase project performance failure.
2. Project external environment significantly and positively influence ineffective contract management. This suggests that the stronger the project external environment influencing ineffective contract management.
3. Construction material supply related problem has a significant positive effect on project performance failure. This indicates that improving the construction material supply related problem will lead to an increase project performance failure.
4. Construction material supply related problem significantly and positively influence ineffective contract management. This suggests that the stronger the project external environment influencing ineffective contract management.
5. Ineffective contract management has a significant positive effect on project performance failure. This indicates that improving the ineffective contract management will lead to an increase project performance failure.
6. The mediation of ineffective contract management has a significant positive effect on the relationship between the project external environment and project performance failure. This indicates that a better project external environment, when mediated by a positive ineffective contract management, enhances project performance failure.
7. The mediation of ineffective contract management has a significant positive effect on the relationship between the project external environment and ineffective contract management. This indicates that a better project external environment, when mediated by a positive ineffective contract management, enhances ineffective contract management.

This research has suggestions that can influence the research results. The suggestions of this research are:

1. Expansion of Research Area:

Further research could be carried out in other cities or regions to see whether the same results apply in different locations. This will help test the generalizability of the findings of this study.

2. Improved Sampling Methods

Using a more representative sampling method and increasing the sample size to increase the validity and reliability of research results. Random sampling techniques or stratified sampling can be used to reduce bias.

3. Addition of Other Variables

Add other variables that may influence project performance failure, such as improper design, and internal factors (policies, financial). Examining further the role of other mediating and moderating variables that can influence the relationship between project external environment, construction material supply related problem, and project performance failure.

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