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The Influence of the Procurement System and Vendor Reputation on the Success of Construction Projects in the Construction of the Jakarta RDF Plant with the E-Procurement System as a Moderator

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Abstract: This study uses e-procurement as a moderator to investigate how the procurement system and vendor reputation affect construction projects' success in the building of the RDF Plant Jakarta. The study's participants were KSO Wika-Jaya Konstruksi personnel. In this study, a quantitative descriptive approach was used. The analysis method used in this study is structural equation modeling. To look at the direct and moderating effects between variables, the research design uses causality. SmartPLS (Partial Least Square) 3.0 is the program in use. Purposive sampling is the method employed, specifically using a non probability sampling technique called purposeful sampling, researchers specifically choose participants based on predetermined standards or traits that align with the study's goals. The sample size is 100 respondents. Data collecting methods distribute questionnaires via Google Form in order to obtain primary information. The results of the study indicate that the procurement system significantly and favorably influences the success of construction projects, a vendor's good reputation has a big positive effect on the success of construction projects, and that e-procurement significantly and favorably strengthens the link between the procurement system and construction project success.

Keywords: E-Procurement, Project Success, Procurement System, Vendor Reputation.

INTRODUCTION

Waste not only causes problems, but also affects public health. The Provincial Government of DKI Jakarta has been very concerned about the impact and environmental conditions of ineffective waste management. Ineffective landfill management are the two main factors causing many problems in waste management.

The current waste forecast at the Bantargebang One Stop Integrated Service (TPST) stands at 23,336,869 m^3 with the height of the active zone almost reaching 50 meters. Given the urgency of handling waste at TPST Bantargebang which is complex, the construction of

Landfill Mining facilities and RDF (Refuse Derived Fuel) Plant facilities are planned to be built with a Design and Build scheme.

The Environmental Agency targets the construction of the two facilities to be completed in 2025 and ready to operate in the same year by building the Jakarta RDF Plant project which is located in the North Jakarta and East Jakarta areas, precisely in the Rorotan Region. RDF development is considered to be one of the DKI Jakarta Provincial Government's solutions to overcome the waste problem. RDF is an alternative fuel made from the process of collecting, sorting, drying and storing waste and is flammable like briquettes.

The conversion of electrical energy from RDF waste is done by burning RDF, the heat generated can be used to make steam, which can rotate the turbine connected to the generator to generate electricity. In the process of developing design and build construction projects, in the scope of EPCC (Engineering, Procurement, Construction and Commissioning) for the Jakarta RDF Plant project, KSO Wika - Jaya Konstruksi holds a sizable portion of Procurement / Procurement for waste treatment system technology providers and civil works which include the construction and construction of waste management buildings.

In Indonesia, the procurement system is carried out in two ways, namely through goods or service providers (third parties) or through self-management (Article 3 Perpres 4/2015). This process includes procurement of goods, construction works, consultancy, and other services. The principles of procurement, namely efficient, effective, and transparent (Ilham et al., 2023).

In construction projects, good management is needed to provide work tools and building materials. One element of the planning result is the project schedule, which can provide information about the plan schedule and project progress in terms of resource performance, including cost, labor, equipment, and materials, as well as the project duration plan and estimated completion time. Scheduling management becomes more difficult with larger projects due to the management of funds, resource requirements, and the number of resources required (LIRAWATI, 2021).

The procurement team in its implementation always classifies vendors who will supply goods or services to this project in accordance with the provisions of construction and engineering. In the construction of the Jakarta RDF Plant in the 75% completion process, it was informed that the earthwork in the back area experienced landslides, the project team emphasized that conditions like this had no other solution other than reworking related to soil compaction for the area. Given that the progress of this work has reached 75%, the reworking of soil compaction that occurred in the landslide must be carried out as soon as possible, because it can hamper other work carried out in the area and its surroundings, problems like this really involve the company's procurement system with problems like this, the project team certainly questions the work done by vendors related to this work, the vendor's reputation is certainly questionable regarding this incident. The procurement team must initiate another vendor with a good trade record for this work, the contract extension must certainly be done with the selected vendor even though it must overhaul the final quatity of the vendor. One of the factors that led to this kind of problem was not only the wrong selection of vendors but also the lack of special research related to land and land works that had to be done.

Based on the problems that occur in the Jakarta RDF Plant development and previous research related to variables that can consider each variable in order to become an accurate research. (Nurhayati, 2022) Shows that E-Proc significantly has a good influence in the management of providers of goods or services in construction and in other fields, meaning that it is more optimal By implementing electronic procurement, the process of procuring goods and services becomes more effective and can realize a successful project because its application is a crucial factor in realizing a successful project. (Kusnadi et al., 2023) states that the application of E- procurement is very influential in the procurement process. the better the application of E- Procurement, the more the achievement of the success of the Construction

project will increase. This is because implementing E-Procurement can make the procurement process more transparent and responsible, speed up the procurement process, help the supervision and audit process, and meet information needs directly, which shows that the procurement process becomes more efficient. The difference based on the research gap that has been explained, that this research is interesting because this research has differences related to variables in previous studies which tend to only use 3 variables. This research will be the latest discussion, apart from because this study uses 4 variables, this study also uses the E-Procurement variable as a moderating variable so that it can complement previous research. In research (Mahamada et al., 2024) explains that the procurement system has an effect on the construction quality of the project being procured. The direct procurement method improves the quality of construction because service providers have looser costs to complete the work due to the not far decrease in the bid price from the HPS in direct procurement. Meanwhile, in the tender method due to the existing competition there is a decrease in the bid price far from the HPS so that whoever the winner is will get a low contract price and has less room for maneuver in managing costs and resulting in construction quality must be sacrificed if there is a shortage of costs.

This study aims to make a benchmark for construction companies whether there is an influence of the Procurement System and Vendor Reputation on the Success of Construction Projects moderated by the E Procuremenet System. And to prove whether the E-Procuremenet System relationship can strengthen the Procurement System and Vendor Reputation. Companies may consider this research in selecting a procurement team and selecting vendors that are in accordance with the qualifications both in budget and specifications of the project team responsible for implementing construction projects. Where the availability of construction goods and services is the scope needed for the implementation of construction projects, especially design and build projects such as the construction of the Jakarta RDF Plant project.

Vendor Performance Indicators

An evaluation approach that begins with determining supplier performance metrics. To avoid insufficient material, because there are generally various suppliers for each product. VPI has a relevant relationship with this research kara Vendor Performance Indicators can affect the vendor reputation variable, by determining vendo indicators, it will provide efficiency in deciding which vendor is chosen to provide goods and services for a project or company (Firza & Zakaria, n.d.).

Procurement System

In construction projects, the material and equipment procurement system is the most important component of the project, and can account for between fifty and sixty percent of the project cost. it is important for project organizers to pay special attention to this system. Most procurement systems have procedures that are broadly the same for the procurement process, one of which is by using a PO. The process of issuing a purchase order includes negotiations on vendor selection as well as the details of the contract to be executed. The issuance of the order must be in accordance with the contract and have been signed by an authorized official, then the supplier will make the delivery and confirm (Anggoro & Pravitasari, 2024).

Vendor Reputation

The image attached to a company or product and leaving a strong impression on its name makes customers decide to buy something based on the company's reputation, not just its products or services. Customer confidence in the organization is strategically supported by a good vendor reputation. Companies that have a good reputation can be considered a sign that they have acted ethically and consistently (Gemilang Wahyu Bimantara, Dian Ferriswara,

Damajanti Sri Lestari, 2024). In the implementation of construction project development, vendor reputation is one of the components that must be considered, the better the value or reputation of the vendor, it will be a consideration for the procurement division in determining vendors as providers of goods and services in accordance with the classification.

Construction Project Success

Construction projects tend to have higher risks than other businesses due to their complexity. There are two criteria for project success: project management success and product success. Project success is defined as the achievement of the project from the point of view of time, cost, and quality associated with the role of procurement of goods and services. Project success can also be influenced by the manager's leadership style, commitment, coordination, and capability (Sarbagita et al., 2021).

E-Procurement

The Indonesian government innovates by using information technology to overcome the shortcomings of conventional procurement processes, such as procurement planning, classification, and administrative processes. They are using information technology for electronic procurement, also known as E-procurement. Such as a system designed by a company to support the procurement process starting from vendor selection, administration to the process of settling vendor bills can be accessed and monitored through the system (Nurhayati, 2022).

Effect of Procurement System on Construction Project Success

In the implementation of construction project development, procurement is something that must always be considered, especially in the supply of goods and services. Based on the scope of EPCC (Engineering, Procurement, Construction and Commissioning). One important way to create pre-conditions for achieving project objectives is through procurement systems. Often, project failure and client dissatisfaction will be caused by improper selection of the procurement system. A systematic and realistic approach in selecting the best procurement system helps projects achieve their goals (Dwijendra et al., 2023). The greater the value of achieving the target realization of the procurement system in the implementation of construction projects, the greater the success of the project will be achieved. Various sources explain that the procurement system has a good influence in its efforts to realize the quality of supplies of goods and services, timeliness and cost efficiency of materials and work in achieving the success of a construction project. Based on the results of previous research from the above arguments, the first hypothesis is determined, namely

H1: The Procurement system has a positive effect on Construction Project Success.

The Effect of Vendor Reputation on Construction Project Success

Vendor reputation is an image that stands out on the name of a product or company. Reputation is usually associated with people's opinions, customer experiences, and news in the media about the product or company. Reputation usually reflects the competence of the product or company (Nurahman, 2021). From several sources that have been explained that Vendor Reputation has a significant influence both because customers never meet the seller directly, word of mouth recommendations are an important factor in building customer trust in the seller. Positive information about sellers can help customers feel safer and less afraid when transacting with them, which can make customers more trusting of sellers in terms of competence, benevolence, and integrity. Based on the results of previous research and arguments. Based on the results of previous research and the arguments above, the second hypothesis can be determined, namely

H2: Vendor Reputation Has a Positive Effect on Construction Project Success

Effect of E-Procurement on Construction Project Success

The Government Goods and Services Procurement Policy Institute developed e-procurement, known in Indonesia as online Procurement Services. E-Procurement is a system that integrates the entire procurement process electronically. It includes various stages such as purchasing, requisitioning, shipping to payment (Kusnadi et al., 2023). From several sources that have been explained, it can be concluded that E - Procurement has a good influence on the Procurement process and performance so that it can strengthen its influence on the success of construction projects, where the better the use of the E - Procurement System, the greater the chances of a construction service company in the success of development / construction projects. Based on the results of previous research and the arguments above, the second hypothesis can be determined, namely

H3: E-Procurement Positively Affects Project Success

E-Procurement Strengthens the Relationship Between Procurement System and Construction Project Success

According to (Pinaria et al., 2020) Before starting the procurement process, the procurement system can be optimized to improve its performance. His research strengthens the relationship between the Procurement System and Project Success because the implementation of E-Procurement can create effectiveness from several points of view. So it can be concluded that E-Procurement has a strong role in the relationship between the Procurement System and Construction Project Success where the application of E-Procuement can be used as a reference for construction service companies in overcoming problems that occur in the procurement system. Based on the results of previous research and the arguments above, the second hypothesis can be determined, namely

H4: E-Procurement Strengthens the Relationship Between System Procurement and Construction Project Success.

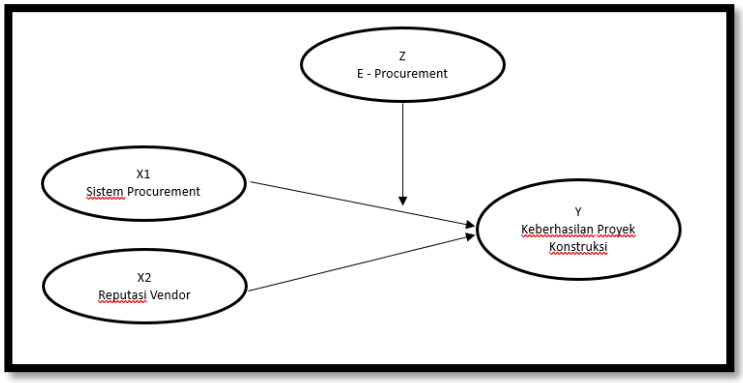

Figure 1. Conceptual Framework

METHOD

This research is a quantitative research with structural equation modeling analysis method. The research design uses causality which aims to test the direct effect and moderating effect between variables.

This research has four variables. First, the independent variable Procurement System, the construction of the Jakarta RDF Plant Project is one of the realizations of the Jakarta Provincial Government's solution to the waste problem. This development involves the role and performance of Procurement in a large enough scope as a determinant of the running of this

project, the Procurement System Variable is measured by 4 Indicators, namely, Fullfillment of needs, Cost Efficiency, Processing time, Regulatory compliance. These variable indicators are formed from the coding process in qualitative research that has been done before. Data sources come from youtube, online news and from research article publications. Coding that is confirmed at least three times, is used as a measurement indicator on this variable (Sitorus & Tambun, 2023).

Second, the independent variable Vendor Reputation, in realizing the availability of project materials and work, KSO Wika - Jaya Konstruksi as the Construction Services of the construction of this project certainly cooperates with various material and work vendors to meet the needs of the project both consumable materials to a large scope. The Procurement Division is a team that has responsibility for any procurement, in determining vendors as procurement providers there is a process of determining vendors, one of which has a large benchmark is vendor reputation. The Vendor Reputation variable is measured by 4 indicators, namely, brand image, well known to customers, easy to remember, widely known (Zamzamy et al., 2021).

Third, the dependent variable E - Procurement, the government's efforts in implementing digital transformation in the procurement system, by making the process more efficient, show that this system creates many positive things and is a modern solution in overcoming procurement problems, especially in administering procurement In the procurement process, e-procurement is also a set of tools used to improve procurement processes, management and strategies. The e-procurement system has many vendors or suppliers with invariable product categories and many payment options. There are four indicators used to measure e-commerce purchasing parameters: transparency, efficiency, monitoring and auditing processes, and direct data access. (Az-zahra et al., 2024).

Fourth, the moderating variable of Construction Project Success, Project success depends on being completed on time, within budget, and meeting requirements. Although from the perspective of the final product or outcome, customer satisfaction is a measure of project success and a reflection of how the final product is viewed and received. Increasing the intensity of the use of project cost management tools and techniques can improve project success. These techniques include the processes of planning, estimating, budgeting, and controlling costs to ensure that the project is completed at the set cost. The success of a construction project can be assessed based on three indicators: meeting the schedule, completing the work within cost, and meeting quality standards (Zulaecha et al., 2021).

The analysis is done through several steps. First, provide the demographic data of the respondents. This includes the number of respondents by gender, job division, and age group. The population of this study is the employees of KSO Wika - Jaya Konstruksi at the RDF Plant Rorotan Project Jakarta. This study uses a non-probability sample, which is part of purposive sampling, where researchers intentionally select sample participants based on characteristics or characteristics relevant to the research objectives (Trianasari et al., 2025).

The Slovin formula was used to calculate the number of samples in this study, namely:

$$n = \frac{N}{1 + Ne^2}$$

The sampling calculation for this study is as follows because the margin of error in this study is 10%, or 0.1.

$$n = \frac{498}{1 + 498\ (0.1)^2}$$

$$n = \frac{498}{5{,}98}$$

$$n = 83{,}28$$

According to the calculation results, the minimum number of samples collected for this study was 83.28 samples or rounded up to a minimum of 85 samples. Second, descriptive statistics which contain information on minimum data, maximum data, and average data (mean). Third, the validity test and data reliability test which aims to see the feasibility of research instruments and the consistency of answers from respondents (Heryanto et al., 2023). Fourth, test the strength of the model with the r square test, f square test, and q square test, and test the goodness of fit by looking at the SRMR and NFI scores or looking at the score of the root mean square theta (Ghozali & Latan, 2015). Fifth, hypothesis testing and the regression equation formed, along with its explanation (Lo et al., 2020). Sixth, discussion of research results consisting of interpretation and comparison with the results of previous studies. The research data was processed using Smart PLS software.

Table 1. Operational Variables

Variable		Indicator	Scale
X1	Sistem Procurement	1. Fulfillment of needs 2. Cost Efficiency 3. Processing time 4. Regulatory compliance	Likert
X2	Vendor Reputation	1. Brand image 2. Well known to customers 3. Easy to remember 4. Easily recognized	Likert
Y	Construction Project Success	1. Meet the quality level of specifications 2. Meet the predetermined schedule 3. Completion according to costing	Likert
Z	E – Procurement	1. Transparency 2. Efficiency 3. Realtime Access to Information 4. Monitoring and Audit Process	Likert

RESULTS AND DISCUSSION

This research uses a random sample of questionnaires consisting of students and the surrounding community, as many as 100 respondents of RDF Plant Jakarta project employees from KSO Wika - Jaya Konstruksi.

With 28 female respondents, or equal to 28 percent, and 72 male respondents or equal to (72%) people. This study consists of four groups based on the age of the respondents: the age group under 20 years old consists of 6 people or 4%, the age group 20 to 25 years old consists of 27 people or equal to 27%, the age group 26 to 30 years old consists of 43 people or 43%, and the age group above 30 years old consists of 30 people or 30%.

Division respondents Engineering as many as 35 people or equal to 35%, Finance as many as 13 people or equal to 13%, Procurement as many as 7 equal to 7%, Commercial as many as 8 people or equal to 8%, Project Control as many as 19 people or equal to 19%, and HSE Division as many as 18 people or equal to 18%.

Data quality in this study uses Partial Least Square (PLS) analysis, which is a Structural Equation Model (SEM) equation model with a variance-based approach or component-based structural equation modeling. The software used is SmartPLS (Partial Least Square).

Smart PLS Descriptive Statistical Test

According to Ghozali (2018: 19) descriptive statistics are analytical techniques that describe or describe research data through minimum, maximum, average (mean) values, standard deviation, sum, range, kurtosis, and distribution skewness. Descriptive analysis techniques used in this study are the minimum, maximum, mean, and standard deviation values of each variable, namely the Procurement System (X1), Vendor Reputation (X2), Construction Project Success (Y), and E-Procurement (Z).

Table 2. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean
Procurement System	100	1	5	4.41
Vendor Reputation	100	1	5	3.54
Constructions Project Success	100	1	5	3.75
E- Procurement	100	1	5	3.59
Valid N	100			

Source: SmartPLS Data Processing Results, 2025

Based on the results of the Descriptive Statistics Test, we can describe the distribution of the data obtained as follows: The Procurement System based on the data above is described that the minimum value is 1 while the maximum value is 5 and the average value is 4.41 this variable has a higher value than other variables so that it can be the first reference for the company. The Vendor Reputation variable from the data above is described that the minimum value is 1 while the maximum value is 5 and the average value is 3.54 this variable needs to be increased again in order to reach the maximum value. The Construction Project Success Variable from the data above is described that the minimum value is 1 while the maximum value is 5 and the average value is 3.54. maximum value of 5 and an average value of 3.75, this variable also needs to be increased again to reach the maximum value. The E-Procurement variable from the above data is described that the minimum value is 1 while the maximum value is 5 and the average value is 3.59, it is necessary to increase this variable in order to reach the maximum value.

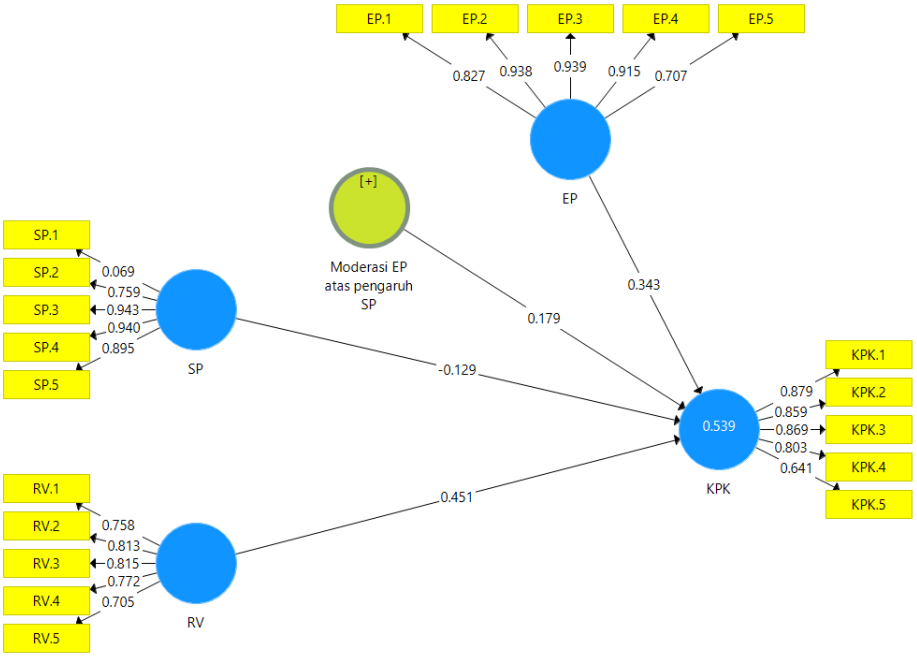

Figure 2. Loading Factor Results

Based on the loading factor results above, it shows that all numbers are above 0.05. This means that all indicators are valid. Thus it can be concluded that all indicators of this research variable are valid. Furthermore, the reliability test is carried out which is useful for knowing the consistency of the research respondents.

Validation and Reability Test

Processing of research data begins with testing the validity of research reliability data. The validity test is to see the research instrument, especially the statement of the question in the research questionnaire whether it is feasible or not to represent the variable under study, while the reliability test is to see the consistency of the respondents' answers, serious or not in answering the research questionnaire. The reliability test is a measurement that shows the extent to which the measurement is without bias (error free) and therefore guarantees consistent measurements across time and across various items in the indicator. In PLS this test can be done using the method, namely:

1. Cronch's Alpha: measures the lower limit of the reliability value of a variable and is acceptable if the value is> 0.6
2. Composite Realiability: measures the real value of the reliability of a variable and is acceptable if the value is> 0.7
3. Average Variance (AVE) is acceptable if the value is above 0.5

Table 3. Validation and Reability

Matrix	Cronbach's Alpha	rho_A	Composite Reliability	Average (average extracted)
SP	0.838	0.949	0.876	0.631
RV	0.864	0.991	0.881	0.599
KPK	0.869	0.869	0.907	0.665
EP	0.917	0.920	0.939	0.756
EP*SP	1.000	1.000	1.000	1.000
Valid N				

Based on the data above, the results of the validity test were carried out by testing the comparison of the square root of the AVE with an AVE value greater than 0.5 indicating that the validation test passed correctly. Therefore, the indicators used must be valid and show sufficient convergent validity. The results obtained also show that the rho-A score and composite reliability are greater than 0.7, which means that the reliability test meets the criteria.

It can be concluded that the Procurement System variable is realible and reliable where the variable Croncbach's Alpha value is 0.838, the composite Reability value is 0.876 and the Average Variance Extracted (AVE) value is 0.631 which means that the variable is acceptable, then the Vendor Reputation variable is realible and reliable where the variable Croncbach's Alpha value is 0.864, the composite Reability value is 0.991 and the Average Variance Extracted (AVE) value of 0.599 which means that the variable can be accepted.

Then the Construction Project Success variable is realibel and reliable where the Croncbach's Alpha variable value is 0.869, the composite reliability value is 0.869 and the Average Variance Extracted (AVE) value is 0.665 which means that the variable can be accepted as a research variable. Furthermore, the E-Procurement variable is realizable and reliable where the Croncbach's Alpha variable value is 0.917, the composite reliability value is 0.920 and the Average Variance Extracted (AVE) value is 0.756, which means that the variable is consistent in research so that this variable can be accepted.

Then the moderating variable on the influence of the procuremet system has the same Cronbach's Alpha, Composite Reability and Average Variance Extrade (AVE) values of 1.000,

1.000, 1.000 meaning that this variable provides consistent results in research and this variable can be accepted.

The structural model test or inner model shows the relationship or estimation strength between variables measured using 3 criteria, namely R-square, F-Square, and Estimation For Path Coeffecient. The following are the results of testing the researcher's hypothesis. R-square is an index that shows the extent to which a measuring device to determine how much endogenous variables are influenced by other variables.

Based on the data presentation above, it can be seen that the R-square value for the construction project success variable is 0.539 This achievement explains that the percentage of the success factor can be explained by the influence of the procurement system, vendor reputation, and e-procurement by 53.9% seen from the R-adjust value because the value is more than 33%, which is 0.526 or 52.6%, so the resulting construct is strong.

In the F-square there is an influence between variables with effect size, the F-square value is 0.02 (small) to 0.15 very small 0.15 (medium), and a value of 0.35 (large). if the value compared is less than 0.02 then it can be ignored or not accepted. So based on the F-square value table above, which has a large effect size with criteria> 0.35 is the Vendor Reputation variable which has a value of 0.258> 0.35.

In the moderating effect, the path coefficient states that from the picture above, a hypothesis is obtained: Moderation E - Procurement (Z) on the effect of Procurement System (X1) on Construction Project Success (Y) has an insignificant effect.

Hypothesis Test

Furthermore, testing of the five hypotheses in the study in the table below, based on the data processing carried out, the results can be used to answer the hypothesis in this study. Hypothesis testing in this study was carried out by looking at the T-statistics value and the P-value. The research hypothesis can be declared accepted if the T-statics value> 1.96 and P - Value <0.05. The following is a picture and table of research results that have been tested sing PLS so that significant data and insignificant data can be seen.

Table 3. Hypothesis Test

	Hypothesis	Nilai Koefisien	Sampel Mean	Standars Deviation	T Statistic	P value	Descriptive
H1	Sistem Procurement >> Keberhasilan Proyek Konstruksi	-0.129	-0.133	0.060	2.163	0.031	Diterima
H2	Reputasi Vendor >> Keberhasilan Proyek Konstruksi	0.451	0.470	0.108	4.182	0.000	Diterima
H3	E - Procurement >> Keberhasilan Proek Konstruksi	0.343	0.331	0.126	2.734	0.006	Diterima
H4	Moderasi E - Procurement >> Sistem Informasi >> Keberhasilan Proyek Konstruksi	0.179	0.184	0.081	2.224	0.027	Diterima

Based on the results of the data above, it can be concluded that the hypothesis test obtained is that of the 4 hypotheses proposed in this study, 4 variables are accepted

Proof of the First Hypothesis the Effect of Procurement System on Construction Project Success

The results of the path coefficient based on the T - Statistic value show that the effect of the Procurement System on the Success of Construction Projects has a significant effect with

a T - Statistic of 2.163> 1.96 and the original sample value is negative, namely -0.129 the first hypothesis is accepted even though the original sample value is negative but the T - Statistic value is higher than the T table which shows this hypothesis is accepted.

In the Procurement System variable is the strongest variable which is in 4th place in influencing the success of the Construction Project. This is consistent with the results of research from previous journals conducted by (Dwijendra et al., 2023). Which states that the Procurement System has a positive effect on the Success of Construction Projects, especially in the Design and Build System such as the construction of the Jakarta RDF Plant. In this case it can be concluded that the Procurement System variable can affect the success of construction projects, so this variable has the power for a company in choosing what kind of procurement system for construction project development.

Proof of the Second Hypothesis The Effect of Vendor Reputation on Construction Project Success

The results of the path coefficient based on the T - Statistic value show that Vendor Reputation on the Success of construction projects has a significant effect with a T - Statistic of 4.1832> 1.96 which means that based on this the second hypothesis is accepted. The original sample value is positive, namely 0.451 which shows the effect of Vendor Reputation on Construction Project Success is Positive. Therefore, the second hypothesis is considered reasonable or important. In other words, the evidence shows that vendor reputation has an effect on the success of construction projects. The vendor reputation variable is the 1st strongest variable in influencing the success of construction projects, so it can be used as a reference for contracting or construction companies to consider vendor selection through vendor reputation for their projects.

This is consistent with previous journals conducted by (Nurahman, 2021) which argues that Vendor Reputation tends to have a significant factor in the success of construction projects. Vendor reputation has a role as a benchmark for companies in choosing the right vendor, in accordance with existing provisions, quality and timeliness is something that vendors offer in the process of determining whether it is appropriate and can be won as a provider of goods or services in the project or not.

Proof of the Third Hypothesis The Effect of E-Procurement on the Success of Construction Projects.

The results of the path coefficient based on the T - Statistic value show that E - Procuremnet on the success of construction projects has a significant effect with a T - Statistic of 2.734> 1.96, which means that based on this the third hypothesis is accepted. The original sample value is positive, namely 0.343 which shows the effect of E-Procurement on the success of construction projects is positive. Thus the third hypothesis is accepted or significant. This means that the results of the proof show that E Procurement has an influence on the success of construction projects. The E-Procurement variable is the 2nd strongest variable in influencing the success of construction projects, so it is beneficial for construction companies to manage a more up-to-date procurement system, so that it can more easily manage project procurement data electronically.

This is consistent with the results of research from previous journals conducted by (Kusnadi et al., 2023) which states that one of the digital business concepts is e-procurement, which comes in the form of internet-based applications to provide efficient procurement systems.

E-Procurement Strengthens the Relationship Between Procurement System and Construction Project Success

The results of the path coefficient based on the T - Statistic value show that E - Procurement Strengthens the Relationship Between Procurement Systems and Construction Project Success has a significant effect with T - Statistic 2.224> 1.96 which means that based on this Hypothesis 4 is accepted. The original sample value is positive, namely 0.179, which shows the direction of E-Procurement strengthening the relationship between the Procurement System and the Success of Construction Projects is positive. Thus the fourth hypothesis is accepted or significant. This means that the results of the proof show that E Procurement strengthens the relationship between the Procurement System and the success of construction projects. This variable is the strongest variable that is in third place in influencing the success of construction projects. So it can be seen that construction companies can increase the use of E - Procurement as a new system in managing project procurement.

This is consistent with the results of research from previous journals conducted by (Sarbagita et al., 2021) said Project capacity in terms of time, cost, and quality is defined as project success. where these three components have involvement with the procurement system, how procurement can provide timely and inexpensive procurement according to the project budget and quality in accordance with construction qualifications. So that by implementing the E - Procurement system in the procurement process can have the effectiveness of the procurement process.

CONCLUSION

The results of the first hypothesis test indicate a significant relationship between the procurement system and construction project success. This is supported by a T-Statistic value of 2.163, a P-Value of 0.031, and a coefficient value of -0.129. Although the coefficient indicates a negative relationship, the result is statistically significant. Therefore, the procurement system can be used as a reference for construction companies when planning and developing projects to ensure better project outcomes. The second hypothesis test shows that vendor reputation has a positive and significant influence on construction project success, with a T-Statistic of 4.182, a P-Value of 0.000, and a coefficient of 0.451. This suggests that companies should consider the reputation of vendors when selecting tender winners, as it can lead to more effective and reliable procurement of goods and services in construction projects. The third hypothesis test demonstrates a positive relationship between e-procurement and construction project success. With a T-Statistic of 2.734, a P-Value of 0.006, and a coefficient of 0.343, the findings indicate that e-procurement plays a significant role in enhancing project outcomes by improving procurement efficiency, transparency, and accountability. Finally, the fourth hypothesis test reveals that e-procurement strengthens the relationship between the procurement system and construction project success. This is evidenced by a T-Statistic of 2.224, a P-Value of 0.027, and a coefficient of 0.179. This means that e-procurement not only contributes directly to project success but also enhances the effectiveness of the procurement system in achieving successful construction project delivery.

Recommendation

Based on the results and analysis conducted in this study, it is acknowledged that there are several limitations that need to be addressed in future research. Therefore, the following suggestions are proposed to improve both the academic and practical aspects of this research:
for Future Researchers, Future researchers are encouraged to integrate quantitative and qualitative approaches to obtain more comprehensive and accurate findings. By incorporating the perspectives and experiences of respondents—particularly RDF Plant Jakarta employees who interact directly with vendors and project procurement—researchers can gain deeper

insights. In addition, future studies should consider including additional factors that may influence the success of construction projects but were not explored in this study. These may include Project Planning, Human Resources, Health, Safety and Environment (HSE), Collaboration, and Quality Control, which are essential to fully reflect the dynamics that contribute to project success. For KSO Wika - Jaya Konstruksi Based on the results of the lowest loading factor indicator "fulfillment of needs" from the procurement system variable, the Company can pay further attention to the administrative process for the approval of procurement request letters from various divisions according to their needs to make it faster, Based on the results of the lowest loading factor indicatosar "widely recognized" from the Vendor Reputation variable, where the company in ensuring quality in procurement, both quality and delivery, can see through the historical reputation of a vendor in working on construction in its field, Based on the results of the lowest loading factor indicator "Monitoring and audit process" by considering the E-Procurement variable, the company can ensure that the use of E Procurement is right on target and functional for the monitoring and audit process, it is expected that the company uses good and integrated E-Procurement tools and realtime data entry on the existing system, Based on the results of the lowest loading factor indicator "Completion according to cost determination" of the Construction Project Success variable where, project completion must be with costing and procurement of goods according to the needs of the project so that there is no excess material in the warehouse.

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