Construction Bidding Process in Aceh Province

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Abstract. The problem of construction bidding process, according to current regulations it is called a tender, is an issue that is integrated with the development of facilities and infrastructure in a region. The bidding process is linked to the success and failure of a development, especially in Aceh. The tender of these providers is a process of bidding the executors of a development/infrastructure which has a major impact on the speed of regional development or can be a factor inhibiting/delaying development. The purpose of this research is to analyze the causal factors that make a development successful or an obstacle to the provider bidding process in the construction of construction facilities and infrastructure in Aceh. The research method is a descriptive method by combining qualitative and quantitative methods. The qualitative method was carried out through observation and interviews, while the quantitative method was carried out through distributing questionnaires to respondents and then processing the data with statistics. The results showed that the first dominant factor influencing the provider bidding process at UKPBJ Aceh Province was the information system with the highest score of 32.7674. The second factor is facilities and infrastructure (X6) with a value of 24.9302, followed by the third factor is Transparency (X7) with a value of 24.7209. The winning factor for tender participants is the bidding document factor of 87.3%, the information system factor is 73.5% and the transparency factor is 84.7%. Factor affecting failure of the bidders is Bidding Documents (X4), Election Schedule (X5), Distribution of Tasks (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X2), Standards Used (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X3).

Keywords : Bidding, provider, development, construction, successful

INTRODUCTION

One of the supporting elements in development activities in Indonesia is the procurement of goods/services in which there is a process called the Provider Bidding activity. The bidding of this Provider is a mandate from government regulations that must be carried out in every development that uses the budget from the APBN/APBD, including the Procurement of Goods/Services where part or all the funds come from domestic loans and/or domestic grants received by the Government and/or Regional Government and/or Procurement of Goods/Services using the budget from APBN/APBD which is partly or wholly financed from foreign loans or foreign grants. This is considered important and interesting to analyze, which is very useful for construction business actors and other elements. The Provider Bidding activity can be one of the causes of the success or failure of an urban planning activity in a region.

We can see these activities starting from the process of bidding providers who are late that can influence and have a major impact on the implementation of a regional/regional development, including the quality of buildings, the acceleration of the development of an area and the fulfillment of the facilities and infrastructure of a city. There are several elements that can be analyzed in the activity of bidding these providers, which in the future can be found some conclusions and formulas that can encourage the success of an urban and regional planning development in Indonesia, especially Aceh Province can be achieved better.
In a number of examples, one of them was the follow-up project for the construction of the Sawah Block SDN Block, Sigli City District, Pidie, which failed to tender in 2018 for around Rp. 2.2 billion (two point two billion rupiah). The two-storey building of the Sawah Block SDN was carried out using the 2017 Aceh Special Autonomy Fund (DOKA). In 2018 the Government of Aceh plotted the continuation of the project for the Sawah Sigli SDN Block building with the DOKA budget. However, the continued tender process for the Sawah Block SDN building project failed to take place. The tender process was carried out in the province. (Source: https://aceh.tribunnews.com).

Providers as regulated in Article 17 of the Regulation of the President of the Republic of Indonesia Number 16 of 2018 concerning Government Procurement of Goods/Services as follows: (1) Providers as referred to in Article 8 letter I must meet the qualifications according to the goods/services procured and in accordance with the provisions of laws and regulations -invitation. (2) The Provider as referred to in paragraph (1) is responsible for: a) the implementation of the Contract; b) quality of goods/services; c) the accuracy of calculating the amount or volume; d) timeliness of delivery; and e) the accuracy of the place of delivery.

Research conducted by Nasution (2012) shows that committees and providers agree that e-procurement can increase transparency, accountability, market access and business competition, procurement efficiency, monitoring and auditing, and access to information. Research by Rinaldy et al (2019) regarding Analysis of the Factors Influence of Conflict (Dispute) on the Success of Construction Projects in Aceh Province found that conflict factors that have a significant influence on the success of construction projects in Aceh Province are contract and specification factors, as well as project condition factors with $t_{count} > t_{table}$ and $\text{sig.} < 0.05$. However, of these two factors, the conflict factor that has the most influence on the success of construction projects in Aceh Province is the project condition factor.

Sugiyanto (2020) argues that a project is a business activity that is complex, non-routine in nature, has limitations on time, budget, resources, and has its own specifications for the product to be produced. With the existence of limitations in working on a project, an organization in the project is needed to manage the resources (equipment, budget, and manpower) owned so that they can carry out synchronous activities so that the project objectives can be achieved. Project organization is also needed to ensure that the work on the project can be completed in an efficient manner (cost underrun), on time (on schedule), and in accordance with the expected quality (on specification).

This study focused on what are the dominant factors that influence the provider bidding process at UKPBJ Aceh Province; factor in winning bidders in participating in the tender of providers at UKPBJ Aceh Province; and the failure factor for bidders to participate in the tender of providers at UKPBJ Aceh Province. The purpose of this research was to find out the dominant factor, the winning factor for tender participants and the cause of the failure of the tender in UKPBJ Aceh Province.

**Materials And Methods**

This study was done in a descriptive method by combining qualitative and quantitative methods. The qualitative method was carried out by submitting questionnaires electronically to the Tim Working Group and Structural Officers at the Bureau of Procurement of Goods and Services of the Aceh Regional Secretariat relating to provider bidding activities, and taking several samples from construction providers who took part in activities at LPSE Aceh Province.

The quantitative method was carried out by taking data on the executors/construction tender winners in the Province of Aceh obtained from the Electronic Procurement Service at the Bureau of Procurement of Goods and Services of the Aceh Regional Secretariat. This study started from determining the research locations, types and sources of data, population and sample, data collection methods, data processing, validity testing, reliability testing, and lastly, analyzing data.

Data was collected through a data request letter from the Faculty to the data source at the Aceh Provincial LPSE which has a server on Floor 2, Building F of the Aceh Governor's Office and at the Aceh Transportation Service at
the Aceh Communication Information and Telematics UPTD, and also through relations with colleagues who are authorized to provide those data. The data taken was expected to be provided in the form of a *Ms Excel* format to make it easier for the researcher to process data using the application in the website LPSE Aceh Province (https://lpse.acehprov.go.id/) sourced from a server belonging to the Bureau of Procurement of Goods and Services of the Aceh Regional Secretariat or from the Aceh Transportation Service through the Aceh Communication Information and Telematics UPTD.

Research variables are used with the aim that the process of identification and analysis carried out in this study becomes more focused and directed. Variables are defined as everything that is used as an object of study, it can also be interpreted as factors that play a role in an event or symptom to be studied. The variables in this study consisted of the independent variable (X) factors that influence the provider bidding process and the dependent variable (Y), namely the success of bidding construction providers. The variables and targets to be studied can be described as follows:

![Research variables](image)

**Figure 1. Research variables**

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Target</th>
<th>Data Type</th>
<th>Is</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System</td>
<td>Services and display systems used by the Tim Working Group</td>
<td>Disturbance Data and Questionnaires</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Task Distribution</td>
<td>Distribution of tasks based on knowledge / other factors</td>
<td>Questionnaire</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Standard used</td>
<td>The use of evaluation standards used</td>
<td>Questionnaire</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bidding Document</td>
<td>Procedures for preparing Bidding Documents</td>
<td>Questionnaire</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Election Schedule</td>
<td>Improper/rush/slow schedule preparation</td>
<td>Questionnaire</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Facilities and infrastructure</td>
<td>The comfort level of the facilities and infrastructure used by the election working group</td>
<td>Questionnaire</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Transparency</td>
<td>Transparency, Intervention that occurs in the determination process</td>
<td>Questionnaire</td>
<td></td>
</tr>
</tbody>
</table>

Source: Analysis results, 2023
Measurement of answers from respondents perceptions using a Likert scale as described in the following table:

<table>
<thead>
<tr>
<th>No</th>
<th>Perception</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Low Impact (BSR)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Low Impact (BR)</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Moderate Influence (BS)</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Influential (B)</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Highly Influential (SB)</td>
<td>5</td>
</tr>
</tbody>
</table>

The validity test steps are as follows:

- Each question contained in the questionnaire was tested with the help of SPSS ver. software. 22;
- The output of the software is the $R_{count}$ value compared to the $R_{table}$ value;
- When the value of $R_{count} > R_{table}$ then the statement can be said to be valid, whereas if the value of $R_{count} < R_{table}$, then the statement is invalid; and
- If there are invalid statement items, then the statement is aborted and valid statements are continued at the next stage, namely the reliability test.

Reliability test to know and be said reliable or called reliable with the criteria: When $Cronbach\ Alpha > 0.6$ then the variable is reliable; and When $Cronbach\ Alpha < 0.6$ then the variable is not reliable.

**Results**

Based on the results of data processing carried out through statistics, it shows that all statement items that have been given to respondents have $R_{count} > R_{table}$, so that the statements are all valid. All statements are valid, then proceed with the reliability test. The reliability test showed that all variables in the questionnaire had a $Cronbach\ Alpha > 0.6$. Therefore, the reliability test performed on all variables is all reliable, so that it can be continued in data analysis.

![Table 3. Reliability test](image)

Table 3 shows that the results of the reliability test show that all variables in the questionnaire have a $Cronbach\ Alpha > 0.6$, which is equal to 0.693. This shows that everything is reliable.

**Dominant Factors Influencing the Provider Bidding Process at UKPBJ Aceh Province**

Dominant variables that influence the Aceh Government goods/services procurement process by means of e-procurement have been identified through descriptive statistics. This dominant variable is assigned to one of the variables that has the highest mean. In this case the mean for each variable can be seen in Table 4.

![Table 4. Mean variable of Aceh government procurement of goods/services](image)
Table 4 shows that of the 7 variables, the information system variable has the highest mean, which is 32.7674. Furthermore, the variable facilities and infrastructure, the dominant variable applied in the procurement of goods/services for the Aceh government by e-procurement at the Goods/Services Procurement Work Unit (UKPBJ) of Aceh Province, is the information system factor. The information system factor is a fulfillment of information needs that can be accessed at any time (real time) by providers participating in tenders in the Government of Aceh. The information system factor as the dominant factor is the result of the implementation of all its indicators. The implementation of this information system factor is several information or offers available according to the time and date in the document, fast distribution of information from the committee to the provider or vice versa, timely information according to the schedule for the stages of the procurement process, and information about policies, regulations, and guidelines presented applications with the latest developments.

The next dominant factor is facilities and infrastructure (X6) with a value of 24.9302, followed by the Transparency factor (X7) with a value of 24.7209. The fourth dominant factor is the Bidding Document (X4) with a value of 24.6279, followed by the dominant fifth factor is the Standard Used (Specially for UKPBJ and Working Group Officials) (X3) with a value of 21.2442. The sixth and seventh factors are the Bidding Schedule (X5) and Task Distribution (Specially for UKPBJ and Working Group Officials) (X2) with values of 14.2791 and 14.2326, respectively.

**The winning factor for bidders in participating in the bidding of providers at UKPBJ Aceh Province**

The regression coefficient test was carried out to determine the direction of the relationship between the independent variable and the dependent variable whether it is positive or negative and to predict the value of the dependent variable if the value of the independent variable increases or decreases. While the analysis of the coefficient of determination was carried out to determine the effect of the independent variables jointly on the dependent variable.

The influence of the procurement of goods/services from the Aceh Government LPSE by e-procurement on the winning bidders at the Aceh Province UKPBJ, has been analyzed through multiple linear regression. This analysis has two outputs, namely the regression coefficient and the t-test. The regression coefficient can see the form of positive or negative influence and the amount of influence exerted. The t-test can see the factors of the bidders participating in the bidding of providers at the Aceh Province UKPBJ e-procurement method have a significant or not significant effect on the bidder's win. The multiple linear regression coefficients and t tests that have been analyzed can be seen in Table 5.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Say.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>78,735</td>
<td>109,273</td>
<td>.721</td>
</tr>
<tr>
<td></td>
<td>Information System (X1)</td>
<td>735</td>
<td>.171</td>
<td>1,76</td>
</tr>
</tbody>
</table>

Table 5. Multiple linear regression output
Table 5 the output of multiple linear regression provides information about the regression equation and whether there is any influence of the variable success in bidding construction providers and the distribution of tasks partially (by themselves) on the standard variables used, bidding documents and tender schedules. The formula for the multiple linear regression equation in this analysis or research is as follows:

\[ Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7; \]
\[ Y = 78.735 + 0.735 + 0.278 + 1.614 + 1.027 - 1.694 + 0.847 \]
\[ Y = 81.6293 \]

This positive influence means that if the factors for procuring goods/services for the Aceh government through e-procurement are increased, it will be one of the factors for winning bidders in participating in the tender of goods/services providers at UKPBJ Aceh Province. The magnitude of the probability of winning the tender for these service providers is proportional to the regression coefficient generated by each factor in the procurement of goods/services for the Aceh government.

In this case, the winning factor for bidders participating in the tender of providers at UKPBJ Aceh Province is the bidding document factor of 87.3%, the information system factor is 73.5% and the transparency factor is 84.7%, the task distribution factor and the standards used are 27.8% and the facilities and infrastructure factor is 16.94%, the election schedule factor is 10.27%, and the accountability factor is 3.2%. Therefore, the interpretation is that an increase in all factors for the procurement of goods/services for the Aceh government is followed by the winning of bidders in participating in the tender of goods/services providers at UKPBJ Aceh Province.

### Factors Causing the Failure of Tender Participants to Participate in the Bidding of Providers at UKPBJ Aceh Province

The term a failed tender appeared for the first time in Article 9 of Presidential Regulation Number 12 of 2021 concerning Amendments to Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services (PS 12/21), states that one of the duties and authorities of the Budget User (PA) is to declare the tender failed. The causes of the failure of the bidders to participate in the bidding of providers are in accordance with Presidential Regulation (paragraph 2 Article 51 PS 12/21) states that a tender is declared a failure in terms of:

Table 6. Summary of models

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>df1</td>
</tr>
<tr>
<td>1</td>
<td>.937</td>
<td>.878</td>
<td>.869</td>
<td>4.57153</td>
<td>.878</td>
</tr>
<tr>
<td>2</td>
<td>.936</td>
<td>.877</td>
<td>.869</td>
<td>4.56032</td>
<td>-.001</td>
</tr>
</tbody>
</table>
a. Predictors: (Constant), Transparency (X_7), Facilities and Infrastructure (X_6), Voting Documents (X_4), Election Schedule (X_5), Distribution of Tasks (Specifically for UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_2), Standards Used (Especially for UKPBJ Officials and Working group procurement of goods and services/Pokja) (X_3)

b. Predictors: (Constant), Transparency (X_7), Bidding Documents (X_4), Election Schedule (X_5), Distribution of Tasks (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_2), Standards Used (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_3)

c. Predictors: (Constant), Election Documents (X_4), Election Schedule (X_5), Distribution of Tasks (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_2), Standards Used (Especially for UKPBJ Officials and Working Groups) (X_3)

Source: Analysis results, 2023

Table 6 explains that the coefficient of determination for model 3 is 0.869 (Adjusted R Square). This means that 86.9% of the influence of Bidding Documents (X_4), Election Schedule (X_5), Distribution of Tasks (Especially UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_2), Standards Used (Especially for UKPBJ Officials and Working Groups) (X_3) on the Causes the failure of bidders to participate in the tender of providers at UKPBJ Aceh Province. Based on the results of the research that has been done, it can be seen that the regression coefficient value is 0.878 (R Square) has a strong relationship between Bidding Documents (X_4), Election Schedule (X_5), Task Distribution (Specifically for UKPBJ Officials and Working Groups) (X_2), Standards Used (Especially for UKPBJ Officials and Working Groups) (X_3) to the causes of failed bidders in LPSE Aceh Province.

**CONCLUSION**

Conclusions and suggestions are presented in accordance with the findings of the research studies that have been carried out, namely:

1. The dominant factor that influences the provider bidding process at UKPBJ Aceh Province is the information system with the highest mean of 32.7674. The next dominant factor is facilities and infrastructure (X_6) with a value of 24.9302, followed by the Transparency factor (X_7) with a value of 24.7209. The fourth dominant factor is the Bidding Document (X_4) with a value of 24.6279, followed by the dominant fifth factor is the Standard Used (Specially for UKPBJ and Working Group Officials) (X_3) with a value of 21.2442. The sixth and seventh factors are the Tender Schedule (X_5) and Task Distribution (Specially for UKPBJ and Working Group Officials) (X_2) with values of 14.2791 and 14.2326, respectively.

2. The winning factor for bidders at the Aceh Province UKPBJ was the bidding document factor of 87.3%, the information system was 73.5% and the transparency factor was 84.7%, the task distribution factor and the standards used were 27.8% and the facilities and infrastructure factor, infrastructure by 16.94%, election schedule factor by 10.27%, and accountability factor by 3.2%.

3. Factors that influence the failure of bidders to participate in the tender of providers at UKPBJ Aceh Province are Bidding Documents (X_4), Tender Schedule (X_5), Task Distribution (Specially for UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_2), Standards Used (Especially for UKPBJ and Working group procurement of goods and services/Pokja Officials) (X_3) with a coefficient of determination of model 3 of 0.869 (Adjusted R Square) or by 86.9%.

**ACKNOWLEDGMENTS**

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https://aceh.tribunnews.com


