Analysis of Procurement Technology Implementation on
Procurement Practice and Performance
Case Study at PT. Semen Tonasa

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Abstract
Modern era as now, human life cannot be separated from dependence on a technology called the internet. The internet has mastered almost all aspects of human activities, ranging from sending letters, looking for information, and other activities. Especially in the field of business, this technology is very influential, as well as the procurement of goods and services has been done a lot online or commonly known as E-Procurement. This study aims to and analyzes the effect of E-Procurement technology on procurement performance, the effect of E-Procurement technology on procurement practices, and the effect of procurement practices on procurement performance. To implement these objectives the data collection techniques were used through questionnaires. The analysis technique used is path analysis and data evaluated in the first place using the classical assumption test (normality test, multicollinearity test, heteroscedasticity test, and linearity test). The results found that the use of e-procurement had a positive and significant effect on procurement performance and procurement practices at PT. Semen Tonasa in Pangkep Regency. Procurement practices have a positive and significant impact on procurement performance.

Keywords: e-procurement technology; procurement practices; procurement performance

INTRODUCTION
The dynamics of a rapidly developing business environment is one of the factors causing business competition to become tighter. In this condition, companies are required to be always agile in making adjustments and making improvements to be able to win the competition. Adjustments and improvements made must be directed at efforts to increase competitive advantage in all fields. Supply Chain Management (SCM) involves all approaches that are used efficiently to integrate activities within the company's value chain (Porter, 2004) so that products/services are sent to customers in the right amount, the right location, the right time right, and at optimal costs. Value chain concept is a systematic approach that aims to develop a company's competitive advantage. This concept describes a set of activities in an industry or company in delivering products and or services that are of value to the market.

Activities in the value chain are divided into main activities (primary activities) and support activities (support activities). The main activities are divided into five, namely inbound logistics, operation management (operations management), outbound logistics, marketing and sales (marketing and sales), and services (services), while supporting activities are divided into four, namely corporate infrastructure (firm infrastructure), management resources (human resource management), technology (technology), and procurement (procurement). The combination of carrying out main and supporting activities will determine the company's total costs and will affect the company's profit.
Procurement (procurement) is a process to obtain goods or services. Procurement will provide benefits if the goods and services are available appropriately and are purchased at the best cost to meet needs, both in terms of quality, quantity, time and location (Weele, 2010). The procurement process (procurement) to obtain goods or services must be done transparently, effectively and efficiently in accordance with the needs and desires of its users (Christopher & Schooner, 2007). Procurement is all activities that involve the activity of obtaining goods including purchases, as well as inward logistic activities such as transportation of incoming goods and storage in warehouses before the goods are used. Procurement or procurement of goods is not only limited to purchasing activities or purchases that have been seen by most people (Kalakota & Maria, 2010). One strategy in carrying out the activities of procurement of goods and services (procurement) can be done by using E-Procurement. In the modern era like now, human life cannot be separated from dependence on technology called the internet. The internet has mastered almost all aspects of human activities, ranging from sending letters, looking for information, and other activities. Especially in the field of business, this technology is very influential, as well as the procurement of goods and services has been done a lot online or commonly known as E-Procurement. E-Procurement is a system of procurement of goods or services using electronic media such as the internet or computer networks. E-Procurement is defined as the use of information technology to facilitate business-to-business (B2B) transactions for purchases of materials / goods and services (Wu, 2010). E-Procurement is the process of procuring goods or auctions by utilizing information technology in the form of a website (Kalakota & Maria, 2010).

E-Procurement is an integration and electronic management of all procurement activities including purchase requests, granting rights, ordering, delivery and payment between buyers and suppliers (Chaffey, 2007). E-Procurement is an information system application to coordinate the process of purchasing purchases, managing inventory, selecting suppliers, and approving processes of important business with organizations related to utilizing the internet or intranet. E-Procurement is an effective tool to reduce corruption. (Neef Dale, 2001). E-Procurement is a system of procurement of goods or services using electronic media such as the internet or computer networks. E-Procurement is implemented in the online buying and selling process to make it more efficient and effective. E-Procurement reduces processes that are not needed in a business process. In practice, E-Procurement reduces paper usage, saves time and reduces labor usage, and influences procurement practices and procurement performance.

Results of research conducted by Quesada, Marvin & Rene (2010) whose research found that e-procurement has a direct influence on procurement practices and also affects procurement performance. Then other researchers namely Aryati & Leviadi (2019), Herawati (2018), Rahardian and Gapur (2015) who found that e-procurement had a positive and significant effect on procurement performance. Furthermore, from the results of research conducted by several previous researchers, the researchers conducted a test of the effect of e-procurement on procurement practices and procurement performance. The difference between the research conducted by the researcher and the previous research is that the previous researcher did not conduct a mediation test, whereas what the researcher did was to test the use of e-procurement on procurement performance and procurement practices as a mediating variable.

PT Semen Tonasa is a cement company with the largest market share in Eastern Indonesia (KTI) which is part of the largest cement holding in Indonesia, the Semen Indonesia Group. In carrying out procurement activities, PT Semen Tonasa has been using the SAP system since 2010 and then refined it into an E-Procurement application since 2017, where the number of procurement requests in 2019 has experienced a significant increase in line with company development to maintain business processes into operational excellence, improve performance and maintain market share. In addition, the actual number of procurement requests that have become Purchase Orders (POs) over the past 3 years, despite an increase, is still below the 100% target. Then seen from the lead time of the procurement process (PR to PO) during the last 3 years
fluctuating even though in 2019 it was higher than 2018, but still in line with the expected target. Lead time is expected to be faster and better from year to year. Problems faced by PT. Semen Tonasa that the efficiency produced during the last 3 years fluctuated, even in 2019 has decreased significantly compared to the efficiency produced in the previous year.

LITERATURE REVIEW

Theoretical studies used as a basis for the assumptions of this study are still using theoretical studies related to the research variables used, namely:

Definition of Implementation

Implementation is an action or implementation of a plan that has been prepared in a mature and detailed manner. Implementation is usually done after planning is considered perfect. According to Usman (2014: 70), implementation is leading to the activities, actions, actions or mechanisms of a system, implementation is not just an activity, but a planned activity and to achieve the objectives of the activity.

Implementation is the expansion of activities that adjust the process of interaction between goals and actions to achieve them and require a network of implementing, effective bureaucracy. Policy implementation is the implementation of basic policy decisions, usually in the form of laws, but can also take the form of important executive orders or decisions or judicial body decisions.

Definition of E-Procurement Technology

The digital age as it is today, high technology standards required by an organization to support its organizational activities, of course starting from the hardware component to the software must be able to meet the standards set. The E-Procurement System will undergo vertical and horizontal integration throughout the system at the company, it is very important that the system to be built is well-received in terms of technical, content and procedural / process standards. (Prabir & Sahu, 2012). E-Procurement (Electronic Procurement) electronic procurement is the implementation of procurement of goods and services using electronic networks (internet networks) or electronic data interchange (EDI) in (Siahaya, 2013: 78). According to Presidential Decree No. 54 of 2010 concerning Guidelines for Procurement of Goods / Services stating that electronic Procurement or E-Procurement is the Procurement of Goods / Services implemented using information technology and electronic transactions in accordance with statutory provisions. E-Procurement is an electronic procurement of goods and services where the system tries to regulate business transactions through computers and the process of procurement of goods and services is done online (Muhtar, 2011 in Setyadiprajita et al. (2014). E-Procurement as an auction system in procurement goods using internet-based technology, information and communication (IC) facilities.

Definition of Procurement of Goods and Services

Procurement of goods and services is identical to the existence of a variety of new facilities, various buildings, roads, hospitals, office buildings, stationery, to English courses conducted in a government agency. According to the Republic of Indonesia Presidential Regulation Number 54 of 2010 concerning Guidelines for Procurement of Government Goods/Services, it is stated that procurement of government goods/services is an activity to obtain goods/services by Ministries/Institutions/Work Units of Regional Apparatuses/other Institutions whose processes start from the planning of needs to the completion of all activities to obtain goods/services. Government procurement of goods and services is actually a very important part in the process of implementing development. For the government, the availability of goods and services in each government agency will be a determining factor for the successful implementation of the tasks and functions of each work unit. Without adequate facilities and infrastructure, of course the implementation of government tasks will be disrupted and will not achieve maximum results.. Wardiyanto (2012) provides a definition of the procurement of public goods / services are goods
whose use is related to the interests of the public, both in groups and in general.

**Procurement Practices**

Procurement of goods and services literally means an offer to submit prices and buy up jobs for the supply of goods/services. According to Yahya and Susanti (2012) that from this grows understanding that there are two interested parties. The first party is a government agency, BUMN, or private company that offers procurement of goods and services. The second party is a personal or contractor company that offers to meet the demand for the procurement of goods and services, so that there arises what is called the practice of procurement. According to research conducted by Quesada (2010) that procurement practices are measured by several indicators, namely: information gathering, supplier contact, contracting, requisitioning, and intelligence/intelligence analysis).

**Procurement Performance**

Procurement performance is a result of work that has been achieved in handling a procurement of goods or services in an agency or organization. There are five aspects of evaluating procurement performance, namely: productivity, service quality, responsiveness, responsibility, and accountability. In addition, the transparency aspect is also important in implementing procurement performance. Performance so far is still based on financial measures which include the percentage of budget absorption and the efficient use of the budget. Performance is considered good if the absorption of the budget gets closer to 100%. The results of the reporting of procurement activities cannot yet be used as material for analysis to find out the deficiencies that occur in the implementation of procurement to become material for improvement of the procurement process in the following years. When using this measure, the question will arise whether the greater budget absorption indicates better procurement performance. Because this measure will contradict the demands of procurement efficiency where the return of the remaining large budget shows the procurement process is proceeding efficiently so as to produce winners with the lowest responsive bid prices. This shows that the two measures have not been able to reflect the actual procurement performance so that other criteria are more representative. In accordance with the principles of procurement, procurement performance can actually be measured through several criteria, namely efficiency, effectiveness, fair competition, transparent, open, non-discriminatory and accountable.

**RESEARCH METHOD**

**Location and Research Design**

This research was conducted at PT. Semen Tonasa is right in the Procurement Unit. The selection of research sites is based on the existence of business processes that describe the conditions and research problems that are formulated in the background. In addition, due to consideration of the ease of obtaining data and information, and consideration of costs and research time. The design of this study belongs to the type of causal research that is to identify causal relationships between variables, researchers look for the real type of facts to help understand and predict relationships.

**Population, Samples and Sampling Techniques**

Population refers to the whole group of people, events or things of interest that an investigator wants to investigate and develops a view regarding what is being studied. The population in this study is the number of Purchase Requests (PR) for goods and services for the need for overhaul production in 2020 which amounted to 367 PR. While the sample according to Sugiyono (2016) the sample is part of the number and characteristics possessed by the population. To determine the number of samples from a population, if the population size is known then the formula used is the Slovin formula. From the calculation of Slovin obtained 78.58, the number of samples in this study was rounded to 79 Purchase Request (PR) which will be used in the process of overhauling production in 2020.
Data Collection Method

For data collection techniques in this study was carried out using a questionnaire distribution technique. Questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer (Sugiyono, 2016). In this case the respondent in question is the Procurement Unit personnel of PT. Semen Tonasa that uses the E-Procurement application. The scale used in the questionnaire is a Likert scale. Likert scale is used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena (Sugiyono, 2016). With a Likert scale, the research variables will be measured and translated into indicator variables. Then the indicator is used as a starting point for arranging instrument items which can be statements. The answer to each instrument that uses a Likert scale has a gradient from very positive to very negative.

Data Analysis Method

Data analysis techniques used in this study were to use analytical tools, namely:

1. Analysis of the description of research variables, which provides a description of the respondents' perceptions of each item statement on each research variable.
2. Test the research instrument
   To test this research instrument, the following test instruments are used:
   a. Validity test
      Validity test is an analysis used to determine the accuracy of an item in measuring what it wants to measure. Priyatno (2017: 64) that if the value is positive and r-count > r table then the item can be declared valid, if r-count < r table then the statement item is declared invalid.
   b. Reliability test
      The reliability test is used to determine the consistency of the measuring instrument on the questionnaire. Prayitno (2017: 78) that to determine whether the instrument is reliable or not, a 0.60 limit is used.
3. Classical Assumption Test
   a) Normality Test
      Normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution or not, because it is known that the t and F tests assume that the residual value follows the normal distribution. The way to find out whether residuals are normally distributed or not, one of them is by using Kolmogorov Smirnov technique. The application of Kolmogorov Smirnov is if the significance is below 0.05, it means that the data to be tested has a significant difference from the standard normal data, meaning the data is not normal.
   b) Multicollinearity Test
      Multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). A good regression model should not occur correlation between independent variables. To detect the presence or absence of multicollinearity in the regression model in this study by looking at the value of VIF (Variance Inflation Factor) and tolerance of each independent variable, if the VIF value <10 and tolerance is greater than 0.10, it can be concluded that the data are free from multicollinearity symptoms.
   c) Heteroscedasticity Test
      Heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. In the heteroscedastisity test used by the glacier method that is regressing the independent variable with absolute residual value. Prayitno (2017: 126) that if the value is significant between the independent and absolute variables absolute residual value. Prayitno (2017: 126) that if a significant value between the independent variables and absolute residuals is obtained more than 0.05 then there are no symptoms of heterokedasticity.
d) Linearity test
Linearity test is used to determine the linearity of data, that is whether two variables have a linear relationship or not. According to Prayitno (2017: 96) that if significantly greater than 0.05, the data can be said to be linear.

4. Path Analysis
Analysis of the data used is path analysis. Path analysis is used because in this study consists of more than one independent variable, one intermediate variable, and one dependent variable. Path analysis is a technique for analyzing cause and effect relationships that occur in multiple regression if the independent variables affect the dependent variable not only directly but also indirectly. Through this path analysis, it will be found which path is the most appropriate and brief an independent variable to the dependent variable. This method has been widely applied by researchers (e.g. Maharani, Maupa & Aswan, 2020; Afriani, Laba & Aswan, 2020; Jusni, Aswan, Syamsuddin & Possumah, 2019)

5. Determination coefficient
The coefficient of determination (R2) shows how much influence the independent variable has on the dependent variable. The coefficient of determination (R2) has a value between zero and one, used to measure the extent to which the model's ability to explain variations of the dependent variable. The greater the value, the greater the independent variable is able to explain the dependent variable well, and vice versa. The more the coefficient of determination (R2) approaches number 1, then the independent variable provides almost all the information needed to predict variations in the dependent variable.

6. Test Statistics F
The F Statistical Test basically shows whether all the independent variables entered in the model have a joint influence on the independent variables. For the overall test, it can be seen from the annova table that the F value will be obtained and the probability (sig) results will be obtained. If the sig value <0.05 then the decision is H0 is rejected and Ha is accepted meaning is significant.

7. Test Statistics t
The t test statistic basically shows how far the influence of one independent variable individually in explaining the dependent variations. If the probability value of 0.05 is smaller or equal to the probability value of Sig or (0.05 ≤ Sig), then H0 is accepted and Ha is rejected, meaning that it is not significant. If the probability value of 0.05 is greater or equal to the probability value of sig or (0.05 ≥ Sig), then H0 is rejected and Ha is accepted, meaning that it is significant.

8. Correlation Test
In the path analysis method to determine the degree of relationship between independent variables (independent) with the dependent variable (dependent).

9. Research Hypothesis Testing
Hypothesis is a statement that is still temporary or a statement based on certain knowledge that is still weak and must be verified. Thus the hypothesis is a temporary conjecture that will later be tested and proven true through data analysis.

1) Research Hypothesis Test Model 1
   a. Testing the Model 1 Hypothesis Overall
      In this overall test will be tested simultaneously how much influence the variable Use of E-Procurement Technology (X), on Procurement Performance (Y). The structural equation of model 1 with the effect value p of the independent variable on the dependent variable is obtained from the value of beta (β) in the analysis carried out so as to form the structure of the model 1 equation as below: Y = ρX + ρy X + ρy ε1

2) Research Hypothesis Test Model 2
   a. Testing Model 2 Overall
In the overall test will be tested simultaneously how much influence the variable Use of E-Procurement Technology (X), on Procurement Practices (Z). The structural equation of model 2 with the influence value ρ of the independent variable on the dependent variable is obtained from the value of beta (β) in the analysis carried out so as to form the structure of the model 2 equation as below: 

\[ Z = \rho X + \]

EMPIRICAL RESULTS
Path Test Results Using SPSS
Path testing is done using regression analysis. Before the path test analysis is conducted, the results of the processed regression data will be presented first as shown in the table as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Path Test</th>
<th>Model</th>
<th>Standardized Coefficient</th>
<th>Standard Error</th>
<th>T-Calculation</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Influence of Technology</td>
<td>Constant</td>
<td>1,427</td>
<td>0,262</td>
<td>5,450</td>
<td>0,000</td>
</tr>
<tr>
<td></td>
<td>E-Procurement and Procurement practices</td>
<td>Technology</td>
<td>0,236</td>
<td>0,062</td>
<td>3,129</td>
<td>0,002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-Procurement</td>
<td>0,673</td>
<td>0,056</td>
<td>8,923</td>
<td>0,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Procurement practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td>0,791</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td>0,626</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Influence of Technology e-procurement towards</td>
<td>Constant</td>
<td>2,734</td>
<td>0,429</td>
<td>6,368</td>
<td>0,001</td>
</tr>
<tr>
<td></td>
<td>Procurement practices</td>
<td>Technology</td>
<td>0,369</td>
<td>0,117</td>
<td>3,486</td>
<td>0,001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-Procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td>0,369</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td>0,136</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed using SPSS

Based on the results of testing the regression data with SPSS, the path test image will be presented as follows:

\[ \Sigma 1 = \sqrt{1-0,136} = 0,929 \]

\[ \Sigma 1 = \sqrt{1-0,626} = 0,611 \]

![Figure 1. Full Model of Path](image)

Source: Processed data

Based on the results of the path test, the regression equation can be performed as follows:

1. **The influence of e-procurement technology and procurement practices on procurement performance at PT. Semen Tonasa**

   To find out the extent of the influence of e-procurement technology and procurement practices on the performance of the procurement of goods and services at PT. Semen Tonasa in Pangkep Regency, several tests can be carried out, as follows:

a) **Regression Equations**

   Based on processed SPSS data on the effect of e-procurement technology and procurement practices on procurement performance at PT. Semen Tonasa in Pangkep Regency obtained the following regression equation: 

   \[ Y = 1,427b_0 + 0,236X_1 + 0,673X_2 \]

   From the results of the
regression equation above, the interpretation results can be described as follows that the value of \( b_0 = 1.427 \) or a constant value, this shows that with the existence of e-procurement technology and procurement practices, the performance of procurement of goods and services at PT. Semen Tonasa, Pangkep Regency is 1,427%.

Then for the value of \( b_1 = 0.236 \), this shows that the use of e-procurement (X1) technology has a positive effect on procurement performance. Or in other words if the score of respondents' responses regarding the use of e-procurement technology is improved, the procurement performance will also increase by 0.236%. Then the value of \( b_2 = 0.673 \) which means that procurement practices have a positive effect on procurement performance. This shows that if procurement practices are improved, it will affect the performance of procurement of goods and services at PT. Semen Tonasa of 0.673%.

b) Hypothesis Testing
Hypothesis testing in this study can be classified into two tests namely the F test and t test. This F test is used to determine whether all independent variables together have a significant influence on the dependent variable. The test is done by comparing the probability value with the standard value at the error level of 5% (\( \alpha = 0.05 \)), if the probability value is smaller than the standard value, this means that the independent variables together have a significant influence on the dependent variable. Based on the F test results obtained \( \text{sig} = 0.000 \), because the sign value is smaller than 0.05, it can be concluded that e-procurement technology and procurement practices influence simultaneously or simultaneously the performance of the procurement of goods and services at PT. Semen Tonasa in Pangkep Regency. Then to determine the effect of each variable, the t test was used. Testing is done by comparing the probability value with the standard value with an error rate of 5% (\( \alpha = 0.05 \)). Based on statistical tests that can be described as follows:

1) Significant test of e-procurement technology
   From the results of regression testing the sign value is obtained. for e-procurement technology by 0.002, because of the sign value. 0.002 <0.05, this means that e-procurement technology has a significant effect on the performance of the procurement of goods and services at PT. Semen Tonasa in Pangkep Regency.

2) Significant test of procurement practices
   Based on the results of regression testing the sign value is obtained. for procurement practices of 0,000, because of the sign value. 0,000 <0.05, this means that procurement practices significantly influence procurement performance at PT. Semen Tonasa in Pangkep Regency.

c) Correlation Test and Determination Coefficient
To determine the relationship or correlation between e-procurement technology and procurement practices on procurement performance at PT. Semen Tonasa in Pangkep Regency can be seen from the correlation value or the value of R. Where the results of the correlation analysis obtained \( R = 0.791 \), this shows that e-procurement technology and procurement practices have a strong relationship or correlation to procurement performance at PT. Semen Tonasa in Pangkep Regency. Then to determine the effect of variations of other variables, it can be seen from the coefficient of determination, which obtained an R-square value of 0.626, this shows that the percentage of influence of the independent variables (e-procurement technology and procurement practices) is able to explain 62.6% of variable variations procurement performance. While the remaining 37.4% is influenced by other variables not included in this research model.

2. The influence of e-procurement technology on procurement practices at PT. Semen Tonasa
a) Regression Equations
The regression test results using SPSS that have been presented then obtained the following
regression equation: \( Y = 2.734b_0 + 0.369 \, X_1 \). From the results of the regression equation above, it can be interpreted that: \( b_0 = 2.734 \), this shows a constant value, which means that with the application of e-procurement technology, procurement practices are 2.734. Then the value of \( b_1 = 0.369 \), this shows that e-procurement technology has a positive effect on procurement practices. Or in other words that the better the improvement of e-procurement technology, the procurement practices at PT. Semen Tonasa will increase.

b) Hypothesis testing

Based on the results of the F test hypothesis, the value of sig = 0.001 is obtained, because of the sign value. 0.001 < 0.05, it can be concluded that e-procurement technology has a significant effect on the practice of procurement of goods and services at PT. Semen Tonasa in Pangkep Regency. Then to determine the effect of e-procurement technology variables partially (t-test) on procurement practices, the sig value for the application of e-procurement technology is obtained at 0.001, because of the sign value. 0.001 < 0.05 (standard value), this means that e-procurement technology has a significant influence on procurement practices at PT. Semen Tonasa in Pangkep Regency.

c) Correlation Test and Determination Coefficient

To find out the relationship between e-procurement technology and procurement practices, \( R = 0.369 \) is obtained, this means that e-procurement technology has a weak relationship with procurement practices. Then the Rsquare value of 0.136, which means that 13.6% of the variation in the influence of procurement practices is influenced by e-procurement technology, while the remaining 86.4% is influenced by other factors not included in this research model.

DISCUSSION

In connection with the description above, then a discussion of the results of the research will be presented which can be described one by one as follows:

1. **Effect of e-procurement on procurement performance at PT. Semen Tonasa, Pangkep Regency**

The results of the analysis of research data that have been done show that the use of e-procurement in the implementation of procurement of goods and services has been done well, where PT. Semen Tonasa in communicating electronically using E-mail, internet search engines and exchanging electronically with video conferencing is somewhat underway, while the results of exchanging information with transaction support are already good because PT. Semen Tonasa has implemented e-Tendering in the procurement of goods and services. The findings in this study are the effect of e-procurement on procurement performance, the results of which show that the use of e-procurement technology has a significant/significant influence in improving the performance of procurement of goods/services, especially at PT. Semen Tonasa in Pangkep Regency. The results of the study found by Aryati (2019) showed that e-procurement affects the performance of goods/services procurement. While Rahadian and Gapur (2015) found that there was a positive influence of e-procurement on the performance of goods and services procurement. From the findings made by Aryati (2019), and Rahardian and Gapur (2015) are in accordance with the results found by researchers.

2. **The effect of the use of e-Procurement on Procurement Practices**

The results of the analysis of research data through the use of e-procurement technology for the procurement of goods and services at PT. Semen Tonasa has been categorized high. This can be seen from the use of electronic communication which is already relatively high and the use of electronic communication media generally in procuring goods/services at PT. Semen Tonasa is the most concerning communication media is email and also through internet search engines and electronic data exchange. Where the use of video conferencing media in communicating electronically is less often done by employees.
That can be seen by the counterparty / supplier. Then efforts to improve the qualifications and documents can be done using a system that is equipped with monitoring the position of documents of goods / services, the need for PT. Semen Tonasa utilizes and enhances the reliability of E-connection with the results of this study are: In order to improve the effectiveness of the procurement performance, while the results of research conducted by researchers that procurement practices have a positive and significant effect on the practice of procurement of goods and services. Thus this research is in line with research conducted by Quesada, et. al. (2010) found that procurement practices have an influence on procurement performance, while the results of research conducted by researchers that procurement practices have an influence on procurement performance. This means that the procurement practices carried out by PT. Semen Tonasa has a significant influence on improving the performance of goods / services procurement. Results of research conducted by Teo and Lai (2009) that e-procurement provides benefits namely: increasing data validity, increasing efficiency in the procurement process.

3. Effect of procurement practices on procurement performance

Results of the analysis of procurement practices carried out by the company PT. Semen Tonasa in Pangkep Regency has done well. This can be seen regarding the Information Gathering and Supplier Contact (For Pre-Contract Request) has been implemented well because PT. Semen Tonasa obtains qualified and qualified suppliers, and besides obtaining priority from qualified suppliers.

Then in terms of handling the contracting in the procurement of goods / services at PT. Semen Tonasa has been implemented well because it is supported by the existence of quality standards that are as expected and in procurement practice has the ability to speed up delivery schedules. Furthermore, it can be seen from the requisitioning in the implementation of goods / service procurement practices that are useful to help arrange orders correctly and in addition can improve the analysis of material orders. The findings obtained in this study indicate that procurement practices have a positive and significant effect on the practice of procurement of goods and services. This means that the procurement practices carried out by PT. Semen Tonasa has a significant influence on improving the performance of goods / services procurement. Results of research conducted by Teo and Lai (2009) that e-procurement provides benefits namely: increasing data validity, increasing efficiency in the procurement process. Thus this research is in line with research conducted by Quesada, et. al. (2010).

CONCLUSION

Based on the results of analysis and discussion of the study, the conclusions that can be given in this study are as follows: The use of e-procurement has a positive and significant effect on procurement performance at PT. Semen Tonasa in Pangkep Regency. The results of this study indicate that the use of e-procurement has a positive and significant effect on procurement practices at PT. Semen Tonasa in Pangkep Regency. The results of this study indicate that procurement practices have a positive and significant effect on procurement performance at PT. Semen Tonasa in Pangkep Regency. From the results of the conclusions, as for the suggestions that can be given in connection with the results of this study are: In order to improve the effectiveness of the procurement of goods and services and increase transparency and fairness in the implementation of procurement of goods / services, the need for PT. Semen Tonasa utilizes and enhances the reliability of E-Tendering applications as a medium in conducting goods and services procurement transactions. Then to get a more competitive price quote and increase fairness in the negotiation process, it is recommended to increase the use of E-Auction in the negotiation stages of the procurement of goods and services at PT. Semen Tonasa. Besides that, it is suggested to develop and improve the payment processing application using E-Invoice, bearing in mind that the payment process is still done manually (hard copy). The process of inputting billing documents and completeness of payment documents can be done using a system that is equipped with monitoring the position of documents that can be seen by the counterparty / supplier. Then efforts to improve the qualifications and
competencies of partners / suppliers in the practice of procurement of goods / services at PT. Semen Tonasa, it is better to conduct vendor / partner performance evaluation online and socialize feedback on the results of the performance evaluation. Always reviewing SOP (Standard Operating Procedure) of Goods and Services Procurement. Semen Tonasa in the context of evaluating procurement practices and performance. Improving the qualifications of PT. Semen Tonasa by carrying out benchmarks and attending certified competency training, one of which is from the Government Goods / Services Procurement Policy Agency (LKPP). Then other suggestions are suggested for further researchers to add other factors that influence procurement practices and the performance of procurement of goods and services.

REFERENCES


