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Strategy Procurement and Affecting Factors to Increase SCM Performance in Pt. XXX

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Abstract:- The purpose of this study was to determine the procurement strategy and the factors that play a role in improving SCM performance at PT XXX. Respondents in this study were 95 people. The data analysis technique used quantitative and qualitative analysis. The results showed that material management had an effect on E procurement and SCM performance. Where material management in a good company will be able to improve the performance of supply chain management owned by the company. Procurement affects supply chain management performance. The better the E procurement, the better the supply chain management performance will be. The R Square value for the E-procurement variable obtained is 0.429 or 42.9%. These results show that material management together has an influence of 42.9% on E-procurement, while the remaining (1-R Square) 57.1% is a large contribution of influence given by other factors that do not need to be increased. The value of R Square for the SCM Performance variable obtained is 0.674 or 67.4%. These results show that material management and E-procurement together have an influence of 67.4% on SCM Performance, while the remaining (1-R Square) 32.6% is a large contribution of influence given by other factors that are not necessary. reviewed. Based on the Internal External Matrix, PT XXX with a score of IFE (2.89) and EFE (3.08) is in the upper quadrant IV. PT XXX is currently in a stable position which also has the potential to grow. Companies in this position have strategies that are generally defensive and keep them afloat. It is recommended to continue to improve on the internal sides so that they can maximize the procurement of performance. The results of the QSPM show that alternative strategies that are prioritized are optimizing prices and maximizing offers from suppliers or vendors for the implementation of procurement at PT XXX.

Keywords:- *Procurement strategy, Material management, E-procurement, Supply chain management performance*

I. INTRODUCTION

PT XXX is a company engaged in oil drilling. In this company, there is still no comprehensive or comprehensive performance measurement system, but so far it only displays performance that focuses on each department so that it is less effective and efficient. The company's overall performance also decreased. In monitoring, a performance control mechanism is needed to monitor each of the company's supply chain performance indicators, where it should also be noted that there are performance indicators that must be monitored not only by 1 channel but must be monitored jointly by 2 or more parts in the network.[1] "Supply Chain Management is a solution where the author tries to unify the existing aspects of all activities, namely since the material comes from the supplier, then the material is processed into a finished product until the product is distributed to consumers so that integrated results are obtained. Supply chain performance will direct the company and provide benefits, both for the company itself, suppliers and consumers.

One that affects supply chain performance is e-procurement. E-procurement aims to assist supply chain management professionally in connecting the necessary components, to increase the speed of information transfer and reduce processes that do not provide added value [2], which are necessary to achieve supply chain management efficiency as a competitive advantage of enterprise operations [3] by focus on process cost efficiency and procurement costs.

E-Procurement is a form of implementing the concept of e-Governance in the procurement sector. E-Procurement is the use of information technology, especially web-based applications in the stages of the goods/services procurement process. There are two forms of e-Procurement that have been implemented and developed in Indonesia, namely electronic auctions (e-Tendering) and electronic purchases (e-Purchasing). E-Tendering is used for procurement of goods/services through auction, while e-Purchasing is used for procurement made through purchase (negotiation).[4]

E-procurement has provided benefits, namely direct benefits (improved data accuracy, increased efficiency in operations, faster application processes, reduced administrative costs and reduced operating costs) and indirect benefits (e-procurement makes procurement more competitive, improves customer services, and improve relationships with partners) [5].

The electronic procurement system for goods and services (e-Procurement) at PT XXX certainly still has shortcomings because it has just been implemented or implemented, especially on access to users in the e-Procurement system who do not yet have standards or rules that are in accordance with technical procedures in the e-Procurement system. The process of procuring goods and services. This is because PT XXX is still new in implementing the e-Procurement system. So the features in the e-Procurement system still have to be developed and equipped to optimize the function of the e-procurement system used. However, this e-Procurement system has provided convenience and many benefits to procurement providers in carrying out the process of procuring goods and services at PT XXX.

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In addition to the procurement strategy, a factor that influences the implementation of e-Procurement is material management. Material management is one of the factors that can affect e-procurement and supply chain management performance. Materials Management is a function that is responsible for coordinating planning, sourcing, purchasing, storing and controlling material optimally so that it can meet customer needs. Materials Management can also be interpreted as a scientific technique related to planning, organizing and controlling the flow of materials from initial purchase to arrival at their destination.

Based on the literature review and previous research, the following hypothesis can be formulated:

A. Effect of Material Management on E-procurement

Electronic Procurement System or e-Procurement is a means to procure government goods/services electronically. This eProcurement utilizes communication and information technology facilities.

In the study, that 85% felt the adoption of e-procurement significantly contributed to improvements in efficiency, achieving supply chain management, increasing customer satisfaction, reducing operational tasks, time effectiveness, and reducing transaction costs. The obstacles for each company are different in adopting e-procurement, 40% assess the fear of changing to a new system which is considered a major obstacle, while 28.6% say using the new system is not an obstacle. Some companies consider that inadequate financial support, lack of interoperability and standards with traditional communication systems, lack of commitment and support from top management, and security issues are the main obstacles in implementing or adopting e-procurement. More than 60% of respondents see the critical success factors in e-procurement adoption lie in centralized control, communication between participants, clear accountability, expert system information, and streamlining workflow systems approval and involvement of top management.[6]

H_1 : It is suspected that Material Management has an effect on E-procurement

B. Effect of Material Management on SCM Performance

The purpose of supply chain management is to integrate the company's main business processes starting from upstream and downstream relationships and even to end users, through the provision of products, services and information that provide added value for consumers and other stakeholders. [7]. Philosophically, supply chain management uses a systematic approach to view the supply chain as an integrated whole, not as a collection of fragments that operate independently. The results of the study conclude that Material Management has an effect on SCM Performance [8]

H2: It is suspected that Material Management has an effect on SCM Performance

C. Effect of E-Procurement on SCM performance

E-Procurement (Electronic Procurement) electronic procurement is the implementation of the procurement of goods and services using an electronic network (internet network) or electronic data interchange (EDI), where this system seeks to regulate business transactions through computers and the procurement process for goods and services is carried out online. . The results of the study stated that the amount of use of e-procurement was based on the number of documents, types of documents, transactions carried out and the process of exchanging documents electronically [7].

Supply Chain Management includes planning and managing all activities related to the procurement and conversion of company resources and logistics management. The success of SCM in achieving its current goals cannot be separated from information system technology that creates collaboration, coordination and integration in SCM so that it becomes more efficient and effective. One of the strategies carried out by SCM in the midst of development and competition in the increasingly rapid industrial world and the weaknesses of conventional procurement systems is to implement e-procurement. The process of procuring goods/services with the e-procurement system utilizes communication and information technology facilities that are used to support the public tender process electronically. With this electronic auction system, it is hoped that it will be able to answer all the challenges that occur today and realize the procurement of goods/services that are efficient, effective and transparent. This is also reflected in the responses of respondents who agreed that e-procurement has helped the process of goods and services procurement activities better related to the ease of submitting and retrieving bid documents on-line. The results of the study concluded that e-procurement has an effect on SCM Performance [9].

H3: It is suspected that E-Procurement has an effect on SCM performance

The theoretical framework that describes the influence of funding and investment decisions on competitiveness is as follows (Figure 1):

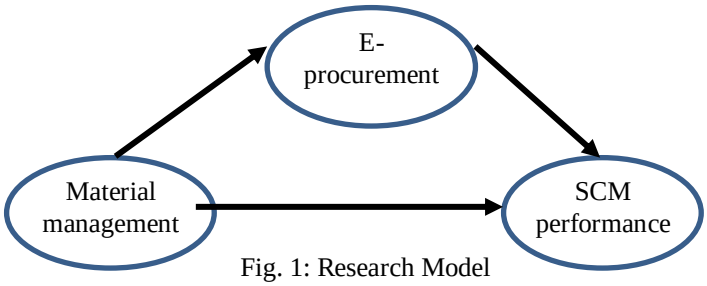

Fig. 1: Research Model

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II. RESEARCH METHODS

This study uses a mix method approach, namely quantitative and qualitative. The research site is PT XXX with a research sample of 95 respondents. It is hoped that from the 95 (ninety-five) employees the required data can be revealed, then it can be used as a basis for sharpening further studies so that a comprehensive and valid interpretation can be taken.

The data analysis used in this study is descriptive statistical analysis and quantitative analysis using the Structural Equation Modeling (SEM) method from the SmartPLS statistical package.

III. RESULTS AND DISCUSSION

A. Descriptive Statistical Analysis Results

In this chapter, researchers will describe the results of research on the effect of procurement strategies and material management on E-procurement and their implications for supply chain management performance at PT XXX. The main data source used in this study was a questionnaire distributed to 95 employees and partners at PT XXX. In this study, there are 2 independent variables, namely the procurement strategy consisting of 19 statement items, material management consisting of 14 statement items, the intervening variable namely E-procurement consisting of 10 statement items and the dependent variable, namely SCM Performance consisting of 11 statement items. Furthermore, the data that has been collected is then coded and processed using descriptive analysis to determine respondents' responses to each variable studied, then continued with Structural Equation Modeling (SEM) analysis using Partial Least Square (PLS).

Based on the results of descriptive analysis describes the responses of respondents regarding that the average for the Material Management variable is 3.73 or agrees. The value of 3.73 is in the good category. Thus the Material Management variable is in the good category.

Based on the processing results presented in the table above, it can be seen that the average for the E-procurement variable is 3.63 or agree. The value of 3.63 is in the good category. Thus, the E-procurement variable is in the good category.

Based on the processing results presented in the table above, it can be seen that the average value for the SCM performance variable is 3.29 or quite good. the value obtained is 3.29. Thus the SCM Performance variable is in the fairly good category

B. Results of Statistical Calculations Using Path Analysis

In this study, the model was tested by showing the R2 value in the endogenous latent construct. The hypothesis in this study will be tested using the path coefficient values and p-values which are presented as follows.

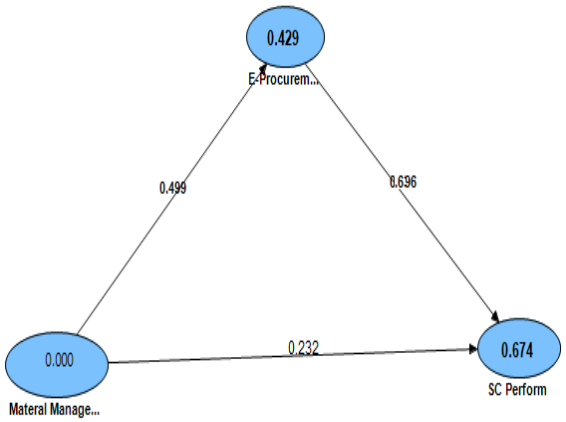

Fig. 2: Structural Model

Construct Relationship	*Path Coefficient*	*T Statistics*
Material management → *E-procurement*	0.499	6.854
Material management → SCM *Performance*	0.232	3.888
E-procurement → SCM *Performance*	0.696	14.028

Table 1: Correlation Coefficient Value

Based on statistical parameters, it shows that tcount of 6854 is greater than ttable of 1.96 at a significance level of 5%. This means that Material management has a significant effect on E-procurement. Thus Ha is accepted and Ho is rejected.

Based on statistical parameters, it shows that tcount of 3.888 is greater than ttable of 1.96 at a significance level of 5%. This means that Material Management has a significant effect on SCM Performance. Thus Ha is accepted and Ho is rejected.

Based on statistical parameters, it shows that the tcount of 14,028 is greater than the ttable of 1.96 at the 5% significance level. This means that E-procurement has a significant effect on SCM Performance. Thus Ha is accepted and Ho is rejected.

Laten Variable	R^2
Material management → *E-procurement*	0.429
Material management dan *E-procurement* → *SCM Performance*	0.674

Table 2: Determinant Coefficient Value (R^2)

In the table above, it can be seen that the R Square value for the E-procurement variable obtained is 0.429 or 42.9%. These results show that material management together has an influence of 42.9% on E-procurement, while the remaining (1-R Square) 57.1% is a large contribution of influence given by other factors not examined. Then the value of R Square for the SCM Performance variable obtained is 0.674 or 67.4%. These results show that material management and E-procurement together have an effect of 67.4% on SCM Performance, while the remaining (1-R Square) 32.6% is a large contribution of influence given by other factors not examined.

C. Discussion of Hypothesis Test Results

a) Influence of Material Management on E-procurement
The results showed that magerial management had an effect on eprocurement. This shows that the implementation of material management at PT XXX currently has an impact on the implementation of eprocurement.

Electronic Procurement System or e-Procurement is a means to procure government goods/services electronically. This e-Procurement utilizes communication and information technology facilities.

The material management of both goods and services currently carried out by the Procurement division of PT XXX has not been maximized, so it does not have a significant effect on the implementation of E-procurement at PT XXX. This is possible because PT XXX is still new in managing the Rokan block which was previously managed by PT Chevron Pacific Indonesia, to be precise on August 9, 2021, it has been managed by PT XXX. With the new management, it requires readjustments to the governance of the provision of goods and services by PT XXX.

b) Effect of Material Management on SCM Performance
The results show that material management has a significant effect on supply chain management performance at PT XXX. This means that the application of good material management will improve supply chain management performance. The purpose of supply chain management is to integrate the company's main business processes starting from upstream and downstream relationships and even to end users, through the provision of products, services and information that provide added value for consumers and other stakeholders. Philosophically, supply chain management uses a systematic approach to view the supply chain as an integrated whole, not as a collection of fragments that operate independently.

The results of this study are not in accordance with research conducted [7] which concluded that Material Management on SCM Performance.

c) Effect of E-Procurement on SCM performance
The results show that e-procurement has a significant effect on supply chain management performance. E-Procurement (Electronic Procurement) electronic procurement is the implementation of the procurement of goods and services using an electronic network (internet network) or electronic data interchange (EDI), where this system seeks to regulate business transactions through computers and the process of procurement of goods and services is carried out online.

The results of the study [5] stated that the amount of use of e-procurement was based on the number of documents, types of documents, transactions carried out and the process of exchanging documents electronically. In this study, the amount of use of e-procurement is influenced by the number of documents, the number of jobs being auctioned and the amount of processing that is carried out electronically. The basis for determining this measurement is based on the process of procurement of goods and services according to the stages of procurement of goods and services at PT XXX.

Supply Chain Management includes planning and managing all activities related to the procurement and conversion of company resources as well as logistics management. The success of SCM in achieving its current goals cannot be separated from information system technology that creates collaboration, coordination and integration in SCM so that it becomes more efficient and effective. One of the strategies carried out by SCM in the midst of development and competition in the increasingly rapid industrial world and the weaknesses of conventional procurement systems is to implement e-procurement.

The process of procuring goods/services with the e-procurement system utilizes communication and information technology facilities that are used to support the public tender process electronically. With this electronic auction system, it is hoped that it will be able to answer all the challenges that occur today and realize an efficient, effective and transparent procurement of goods/services. This is also reflected in the responses of respondents who agreed that e-procurement has helped the process of goods and services procurement activities better related to the ease of submitting and retrieving bid documents on-line.

The results of this study are not in accordance with the research that concluded e-procurement on SCM Performance [8].

Based on the results of the SWOT analysis, PT XXX also mapped the analysis using the TOWS Matrix to see the right strategy in combining the elements: Strengths, Weaknesses, Opportunities, and

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Threats. The main strategies generated from the TOWS matrix are as follows.

- Optimizing the price of goods by maximizing supply. With the presence of competent human resources, especially in negotiating, as well as good team work, the price of goods can be optimized by offering a minimum price, because the company does not have parameters for the price of goods.
- Employee training and improved coordination between procurement teams
- Optimization of existing relationships
- Maintain good coordination with users and optimize the use of e-procurement.

Based on the results of the analysis, it can be determined the coordinates on the Cartesian diagram which aims to obtain the right strategy in the process of procuring goods and services at PT XXX. The results of determining the coordinates on the Cartesian SWOT diagram are as follows:

Coordinate (x) : score *strength –weakness*
(x) : 2.35-0.54 = 1.81
Coordinate (y) : score *opportunity-threat*
(y) : 2.16-0.92 = 1.96

The results of the IFAS and EFAS analysis that have been carried out show that the main strategy in the process of procuring goods and services at PT XXX is a growth strategy. The strength factor of PT XXX can take advantage of the existing opportunity factors to be an advantage for the implementation of the procurement of goods and services in the company.

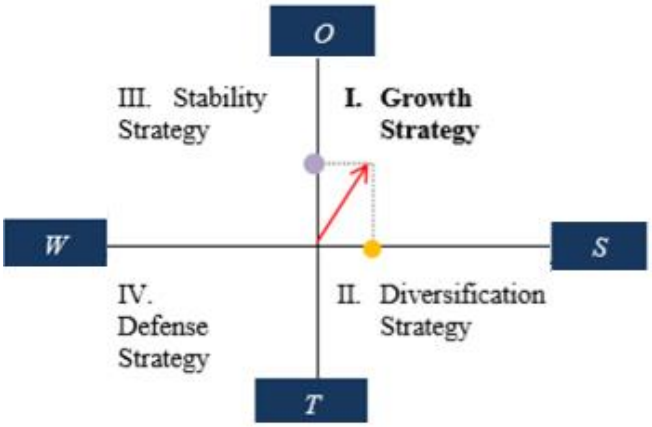

Fig. 3: Strategic Position on the Cartesian SWOT Chart

Furthermore, based on the SWOT analysis, a strategy is made based on the perspective of the balanced scorecard in the Procurement Department.

No.	*Financial*	Justification
1	Optimizing the price of goods by maximizing supply (S1,S2,O2,O5)	With the presence of competent human resources, especially in negotiating, as well as good team work, the price of goods can be optimized by offering a minimum price, because the company does not have parameters for the price of goods
	Optimizing coordination with local users (W1,T2,T3)	Optimizing coordination with users regarding incomplete administrative issues to minimize the direct appointment process in order to get a good price competitor.
2	*Customer*	
	Maintain good coordination with users (W1, T2, T4)	Maintain good coordination with users, so that problems such as administration that is often incomplete or sudden requests can be handled properly
	Improve Customer Satisfaction (S1,S2,O2)	With the presence of human resources who are competent in negotiating and coordinating teams between procurement functions, they are classified as good, they must be able to provide satisfaction to customers (users), especially in terms of time, quality, and price.
3	*Internal Business*	
	Optimization of existing relationships (W2,W3,O1)	Optimizing existing relations between PT XXX, to minimize problems in the absence of a specially formed team to evaluate vendor performance due to inadequate human resources
	Optimizing the use of e-procurement (W4,T5)	Optimization by adding human resources who are experts in the field of e-procurement operations so that time in the procurement process is more effective
4	*Learning and Growth*	
	Improve employee performance (S1, W5, O4)	The existence of competent human resources supported by a reward and punishment system can be optimized by improving the performance of procurement employees with special training
	Expanding relationships between companies (O3, T1)	The existence of a broad relationship between fellow PT XXX should be more points to know the market price

Table 3: Strategy based on SWOT analysis in balanced scorecard perspective

In the SWOT/TOWS matrix analysis strategy in the discussion of the previous sub-chapter, there are alternative strategies that require an analysis of which decisions are more priority to be carried out. This decision analysis is necessary because these strategic alternatives cannot be carried out simultaneously in terms of involving resources and the focus of the work team, which must focus on one priority. Decision Analysis Quantitive Strategic Planning Matrix - QSPM in this case can be used to formulate which strategy options are more priority. Two strategic options that must be decided as a priority are as follows.

- Alternative strategy 1: Optimizing price and maximizing supply
- Alternative strategy 2: Improving employee performance.

In the process of analyzing the QSPM decision, the two alternative strategies are compared by giving an attractiveness score (AS) on external and internal key factors relevant to the choice of strategy, then multiplied into a total attractiveness score (TAS).

Based on the results of the QSPM analysis, it was found that the total attractiveness score – TAS continued to optimize prices and maximize offers of 5.84, which was bigger than TAS for an increase in performance of 4.21.

The results of this analysis are obtained from discussions taking into account the current situational conditions. The results of the QSPM show that alternative strategies that are prioritized are optimizing prices and maximizing offers from suppliers or vendors for the implementation of procurement at PT XXX. Meanwhile, alternative strategies for improving the performance of employees in the procurement department are lower, with a note that it will still be carried out over a longer period of time by conducting periodic training. In the discussion, it was also stated that it is possible to re-analyze the future period with the developing situation.

IV. CONCLUSION

This study tries to answer the research objectives, namely to analyze the procurement strategy and the factors that play a role in SCM Performance at PT XXX. Based on the results of the study, it can be concluded as follows.

- Material management affects E-procurement. This shows that material management at PT XXX can play a significant role in the implementation of E-procurement.
- Material management has an effect on supply chain management performance. Where material management in a good company will be able to improve the supply chain management performance owned by the company.
- E-procurement has an effect on supply chain management performance. The better e-procurement it will have an impact on increasing supply chain management performance.
- Based on the Internal External Matrix, PT XXX with a score of IFE (2.89) and EFE (3.08) is in the upper quadrant IV. PT XXX is currently in a position of stability which also has the potential for growth. Companies in this position have a strategy that generally is primarily to survive and maintain stability. It is recommended to continue to improve on the internal sides so that they can maximize procurement performance. The results of the QSPM show that alternative strategies that are prioritized are optimizing prices and maximizing offers from suppliers or vendors for the implementation of procurement at PT XXX. Meanwhile, alternative strategies for improving the performance of employees in the procurement department are lower, with a note that it will still be carried out over a longer period of time by conducting periodic training. The discussion also conveyed the possibility of needing to re-analyze the future period with the developing situation.

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