Strategic Role of Procurement Function on Private Hospital

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Abstract

Roemani Hospital is one of the private hospitals in the Semarang area. Roemani Hospital procurement activities carried out by the procurement unit. The procurement unit conducts procurement of goods and services to run the Roemani Hospital business process. The Roemani Hospital procurement unit works according to the Roemani Hospital organizing guidelines. However, the performance of the Roemani Hospital procurement unit is only reactive to demand. The procurement unit does not have a strategic role in running the Roemani Hospital business processes. Therefore, it is necessary to assess the procurement maturity level for the Roemani Hospital procurement unit. The assessment was carried out to formulate recommendations for improvement in the Roemani Hospital procurement unit. In this study, the model used is the Supply Management Maturity Model. The model has five assessment characteristics, namely procurement planning, organizational structure of purchasing, process organisation, human resources and leadership, and purchasing controlling. Based on these five characteristics 56 questions were formulated to conduct the assessment. The assessment results show that the Roemani Hospital procurement unit is in stage 2 or Independent. Furthermore, the formulation of recommendations for improvement for the Roemani Hospital procurement unit was carried out.

Keywords

Procurement, Strategic, Maturity.

1. Introduction

Procurement is one of the important activities. An improper procurement process can lead to getting rid of suppliers, wrong suppliers, low supplier-level competitiveness, incorrect requirements, and wrong decision making. Research conducted at several companies in the United States found that around 60% of the budget was spent on procurement activities. It shows that procurement activities are strategic activities in an organization (Rack 1988). Therefore, an effective and efficient procurement process is needed for the organization. An assessment to measure the procurement unit will produce good results for the company.

Performance appraisal is the process of measuring an organization in achieving its goals. Performance appraisal can also be interpreted as a periodic determination of the operational effectiveness of an organization, parts of the organization, and its personnel based on a predetermined vision and mission. The procurement unit also had several problems. The procurement unit has not yet implemented its vision and mission properly. While the vision and mission are the basis of reference and goals of the organization. Vision and mission is also one tool to measure the performance of an organization in carrying out its duties (Keban 2013). Vision and mission are also one measure of the maturity of the procurement unit (Guth 2010). Organizations are operated by human resources, so performance appraisal is actually an assessment of human behavior in carrying out roles in the organization.

The performance appraisal process begins with determining the organization's goals, then analyzing the performance to determine the expectations of the organization's leaders in implementation. Finally, the assessor measures performance and evaluates, then compares it to the work target, then discusses and communicates the results of the assessment, followed by planning for a performance improvement program. In the performance evaluation process, organizations can use a variety of different measures for organizational planning, measurement and evaluation.

Procurement activities at Roemani Hospital are tasked with conducting procurement in order to supply goods and services for Roemani Hospital business process business activities. The procurement unit is responsible for receiving requests for goods from other units at the Roemani Hospital. In addition, the roemani hospital procurement unit is tasked with establishing relationships with suppliers for the benefit of hospital supply. This has become one of the strategic roles of the procurement unit in ensuring the quality and quality of hospital services. One of the special goals of Roemani Hospital is to improve service quality according to standards and meet customer needs. This makes procurement performance a strategic function in hospital business processes. The supply of goods and services in accordance with the quality and accuracy in terms of time and quantity is something that must be planned.

There is a positive relationship between the performance of the procurement unit and the maturity of the procurement agency (Plomp and Batenburg 2009). This indicates that the higher the performance of a procurement agency, the more mature the procurement agency is. So, the assessment of the performance of the procurement agency can be done by measuring the maturity of the procurement agency (Batenburg and Versendaal 2008).

2. Procurement

Procurement is an activity to get the goods needed by the company in terms of their needs and uses, and viewed from the quality, quantity, delivery time, and affordable prices (Yukins and Schooner 2007) Procurement is a process that includes the activities of providing goods and services with the desired amount and quality, originating from the appropriate source, sent to the destination at the right price (Bailey 2015). Procurement is the process of finding, agreeing to terms and obtaining goods or services from suppliers which are usually by tender or through a negotiating process (Weele 2009).

There is a difference between purchasing and procurement. Procurement activities include all processes from supplier selection, making negotiations with suppliers, formulating contracts to purchasing. Whereas the purchase is a part of the procurement activity itself, which is conducting a purchase transaction of goods or services needed by the provider.

Several years ago, procurement was not considered as something important in an organization. The procurement task in this case is only as a part that only discusses the price of the goods that have been negotiated with the supplier and provides a report on the relationship with the supplier. More than 56% of production costs are estimated only from the cost of procurement (Ellram 1992). However, the procurement costs can be saved by increasing the performance of the procurement department. The better the procurement function can be determined including the level of professionalism and procurement position in the company (Gelderman and Weele 2005).

The task of procurement management is to provide input, in the form of goods and services needed in production activities and other activities in the organization / company. In service companies, procurement can be classified into two types, namely capital goods and operational goods. Capital goods are purchases made once and can be used continuously. Operational goods are goods that are held periodically to support the daily needs of the company.

3. Performance Appraisal

Performance is the result of employee work both in terms of quality and quantity based on specified work standards (Mangkunegara 2006). Performance is the result of work that has a strong relationship with the organization's strategic objectives, customer satisfaction, and contributing to the company's economy (Wibowo 2007). Thus, performance is about doing work and the results achieved from the work. Another opinion states that performance is the work accomplished by a person or group of people in an organization/company in accordance with their respective authorities and responsibilities, in order to achieve organizational goals legally , does not violate the law and in accordance with morals and ethics (Nawawi 2006).

Performance appraisal is a manager's activity to evaluate employee work performance behavior and determine further policies (Hasibuan 2000). The evaluation or assessment of the behavior includes the assessment of loyalty, honesty, leadership, cooperation, loyalty, dedication, and employee participation. Performance appraisal is a way of measuring the contributions of individuals in the organization. the importance of performance appraisal is concerned with determining the level of individual contribution to performance expressed in the completion of the tasks for which it is responsible.

4. Supply Management Maturity Model

Maturity Model is a tool to assess the level of maturity of an entity and determine the next steps to achieve a higher level of maturity. Procurement maturity model is a model used to assess the level of maturity of a procurement agency. The level of maturity of a procurement organization is in line with the performance of the procurement organization, so the higher the level of maturity of an organization, the higher the performance of the procurement organization. One of the models for evaluating procurement maturity is Supply Management Maturity Model (Schiele 2007).

In this study the model used is the Supply Management Maturity Model. The characteristics used to assess the level of maturity in this model are based on the classical management function theory, namely planning, organization, leadership, and control. The advantage of this model is how to use it that is empirical and not observation other than that this model has also been shown to show consistent results between maturity and performance. As the other models, this model consists of four stages, i.e.:

- Stage 1 (0-25%): Passive, a particular best-practice activity/tool/method is known within the organisation.
- Stage 2 (25-50%): Independent, a position or person is assigned to perform the task.
- Stage 3 (51-75%): Supportive, the process for completing the task is defined and documented as well as applied.
- Stage 4 (76-100%): Integrative, cross-functional integration in the company is assured while basic requirements are met.

There are five general factors that influence organizational maturity, i.e. procurement planning, organizational structure of purchasing, process organization, human resources and leadership, and purchasing controlling. The five characteristics are further divided into several sub-factors which can be seen in Table 1.

No Characteristics		Indicators	
1	Procurement Planning (PL)	Demand Planning (PL1)	
		Pooling Planning (PL2)	
		Environment Scan (PL3)	
		Innovation Planning (PL4)	
2	Organizational Structure of	Structure and Mandates of Purchasing (OS 1)	
	Purchasing (OS)	Strategic Integration (OS 2)	
3	Process Organization (PO)	Sourcing Strategy (PO 1)	
		Supplier Selection (PO 2)	
		Supplier Evaluation (PO 3)	
		Supplier Development (PO 4)	
		Purchasing Early Involvement in Development Process (PO 5)	
		Early Supplier Involvement Process (PO 6)	
		Process Involvement with Other Function (PO 7)	
4	Human Resources and Leadership (HR)	Job Description and Competencies (HR 1)	
		Personnel Selection and Integration (HR 2)	
		Performance Appraisal and Career Development (HR 3)	
5	Purchasing Controlling (CO)	Controlling System (CO 1)	
		Controlling Process and Structure (CO 2)	
		Controlling Method and Tools (CO 3)	

Table 1. Characteristics of the supply management maturity model.

5. Research Methods

This study uses a model Supply Management Maturity Model (Schiele 2007), cost saving and purchasing absorptive capacity. This model has four levels, namely Passive, Independent, Supportive, Integrative. Data collection is carried out by distributing questionnaires, and interviews or deep interviews about the five characteristics that are assessed i.e procurement planning, organizational structure of purchasing, process organization, human resources and leadership,

and purchasing controlling. The five characteristics are divided into 19 sub factors. Based on the 19 indicators developed into 56 assessment points or aspects and at each point there are 4 answer choices, where each answer choice describes each stage or level of maturity and gives an ordinal scale number. The first choice of answers describes level 1 and gives a value of zero, the second choice of answers describes level 2 and gives a value of one, the choice of the third answer describes level 3 and gives a value of two, the choice of the fourth answer describes level 4 and gives a value of three. The questionnaire filler will choose one choice the answer from each assessment point is in accordance with conditions that are close to the actual condition of the Roemani Hospital procurement unit. The questionnaire can be seen in the appendix. Questionnaires and interviews will be given to the head of the Roemani Hospital procurement unit.

Processing the results of the questionnaire will be assisted with Microsoft Excel software. The results of the questionnaire are calculated on average for each assessment characteristic. The next step is to calculate the overall average to find out the maturity level of the procurement organization by dividing the total average value of each point by the number of assessment points. The results of the calculations are then seen at what interval the maturity level is.

Recommendations are based on the results of data analysis. Making recommendations is done by following good practice or that is at level 4 of the Supply Management Maturity Model. In addition, literature was added to strengthen and find out in detail about these recommendations.

6. Result and Discussion

Data processing is assisted with the help of Microsoft Excel. The first step is to evenly distribute the value of each characteristic and compare it with the interval of maturity level to find out the maturity level of each characteristic. Calculation results can be seen in Table 2.

No	Characteristics	Indicator	Score	Level
		PL1	43%	2
1	PL	PL2		
1		PL3		
		PL4		
2	OS	OS1	44%	2
2	08	OS2		
		PO1		
	РО	PO2		
		PO3	47%	2
3		PO4		
		PO5		
		PO6		
		PO7		
		HR1		
4	HR	HR2	43%	2
		HR3		
		CO1		
5	CO	CO2	59%	3
		CO3		

7.	Table 2.	Result of	each c	haracteristic.

6.1. Procurement Maturity Criteria

In the assessment of procurement maturity, five evaluation criteria are used, i.e procurement planning, organizational structure of purchasing, process organization, human resources and leadership, and purchasing controlling. The following is an explanation of each characteritic.

Procurement Planning

Procurement planning factor obtained a maturity value of 43%. In the procurement planning factor, there are four aspects of assessment i.e. demand planning, poolong planning, environment scan, and innovation planning. Based on these four factors, the lowest value is obtained in the aspect of innovation planning.

In these criteria there are still aspects of the assessment that the results have not been maximized. In the aspect of the process, the assessment is seen from the involvement of the procurement unit in the planning of projects or business processes carried out. In this aspect, the position of the Roemani hospital procurement unit is only as the recipient of the order from each unit. The procurement unit then submits the request to the directors for approval. So, the value for this aspect is one. In the aspect of IT use, the assessment is seen from whether there is an aid of IT tools used in analyzing and managing requests that can be combined. The Roemani Hospital procurement unit has not been able to maximize the potential for technological progress to date. The use of IT tools is still minimal in use. In the combined planning, in analyzing and managing requests still only use Ms Excel's tools. So, the assessment results for this aspect are zero.

In the aspect of resources, the assessment is seen from whether sufficient personnel have been allocated to carry out market analysis. In the Roemani hospital procurement unit, the allocation of personnel to conduct market analysis is still lacking. The Roemani Hospital procurement unit does not yet have a special team or personnel to conduct market analysis. So, the assessment result for this aspect is 0. In the aspect of technology identification, the assessment is seen from how the procurement unit follows the technology trend. In the Roemani hospital procurement unit, technological development does not follow the technology trends. The development of technology regarding procurement items is the responsibility of the related unit. The procurement unit is only limited to knowing the process procedures from other units. So, the assessment results for this aspect are zero.

Organizational Structure of Purchasing

Organizational structure of purchasing factor obtained maturity value of 44%. In the organizational structure of purchasing factor, there are two aspects of assessment, i.e. structure and mandate of purchasing, and strategic integration. From these two factors, the lowest value is obtained in the aspect of strategic integration.

Strategic integration has two aspects of valuation, i.e. the directors' meeting and the decision to make and buy. In the aspect of directors' meeting, the assessment can be seen from the participation of the head of the procurement unit in the directors' meeting. In the procurement unit, the head of the procurement unit always follows the directors' meeting. At the Roemani Hospital, there are regular monthly meetings together with the Section Chief, Subdivision Head (Procurement Unit Head), and the executor. The provisions of the meeting have been ordered in the Roemani Hospital Organizing Guidelines. The meeting discussed the progress of procurement and evaluation performance. So, the results of the assessment for this aspect are one. In the aspect of the decision to make and buy, the assessment is seen from the involvement of procurement unit in making decisions to make or buy. Make or Buy decision in question is the involvement of procurement units in determining procurement unit also has the duty to determine competencies that have an impact on the running business processes. Decision making is discussed together with directors and related units. This has been explained in the Roemani Hospital Organizing Guidelines where the procurement unit is tasked with overseeing quality control of services at the hospital. So, the assessment results for this aspect are one.

Process Organization

Process organization obtained a maturity value of 47%. In the organizational process factor, there are seven aspects of assessment, i.e. sourcing strategy, supplier selection, supplier evaluation, supplier development, purchasing early involvement in the development process, early supplier involvement process, and process involvement with other function. Based on the assessment, the lowest value is obtained from the aspect of early involvement in the development process.

Early involvement in the development process has two aspects of assessment, i.e. the involvement of suppliers at the beginning and the technology system. In the aspect of supplier involvement at the beginning of the assessment, it can be seen from the extent of the supplier's role in its participation in the development process. Based on interviews with the procurement unit, the role of suppliers in the development phase at Roemani Hospital has not been so significant. However, the procurement unit always conducts brainstorming related to the development carried out by Roemani Hospital to suppliers. So, the assessment results for this aspect are zero. In the aspect of the technology assessment

system, it is seen from the extent to which the procurement unit knows the technology roadmaps from suppliers. In this aspect, the procurement unit has conducted an analysis of competent suppliers. This is in line with the supplier selection process that is run. The procurement unit is obliged to know the technology and marketing strategies offered by the supplier. So, the assessment results for this aspect are one.

Human Resource and Leading

Maturity level of human resource and leadership factors is 43%. In the human resource and leadership factors, there are three aspects of assessment, i.e. job description and competencies, personnel selection and integration, and performance appraisal and career development. Based on three factors obtained the lowest value is performance appraisal and career development.

Performance appraisal and career development have three aspects of appraisal i.e. approval of the target, career path, and the feedback process. On approval of the target assessment seen from the extent to which the explanation of the target is explained at the employee level. Explanation of targets has been given to all staff. The decomposition is accompanied by achievements that must be achieved. Every month, a meeting is held to discuss and evaluate the progress of work carried out. This is explained in the Roemani Hospital Organizing Guidelines. So the assessment on this aspect is two. In the career ladder aspects of the assessment are seen from the existence of a structured process relating to developing employees and the appointment of potential candidates. In the Roemani Hospital procurement unit, promotions are not yet very effective. There has been no formal discussion about potential candidates unless there is an empty or abandoned position. So, the results of the assessment on this aspect is zero. In the aspects of the assessment feedback process seen from the existence of formal procedures for delivering responses from employees. At the Roemani Hospital procurement unit, there are regular meetings held every month. The meeting discussed the progress and performance evaluation. On this occasion, each employee can use to deliver responses regarding procurement performance. So, the assessment results on this aspect are one.

Purchasing Controlling

Purchasing controlling factor obtained a maturity value of 59%. In the purchasing controlling factor, there are three aspects of assessment i.e controlling system, controlling process and structure, and controlling methods and tools. Based on three factors, the lowest value is obtained from the aspect of controlling systems.

Controlling system has three aspects of assessment i.e. determining targets, detailing targets, and measurement parameters. In the aspect of determining the assessment target seen from the involvement of the procurement unit in determining the target together with executive management. In this case, the procurement unit is involved in planning the needs of each unit. The plan is based on Roemani Hospital's business targets. The procurement unit collects procurement data from each unit to be compared with Roemani Hospital's business targets together with the directors. So, the results of the assessment for this aspect are two. In the aspects of the assessment target evaluation seen from where the breakdown of business targets is elaborated. In this case, it has outlined the duties and obligations of each employee. It has also been explained the target of each function. Every month it is carried out routinely regarding expenses and achievements that have been made. However, the Roemani Hospital procurement unit does not yet have a structured performance evaluation method. So, the results of the assessment on this aspect are one. On the aspects of the measurement parameters of valuation seen from defining the assessment parameters. The procurement unit has a routine every month to conduct performance evaluations. However, in defining the assessment parameters it has not been clearly described. So the assessment results on this aspect are zero.

6.2. Procurement Maturity

Based on Figure 1, it is shown that the value of maturity level of procurement of Roemani Hospital procurement unit is 48%. This value shows that the Roemani Hospital procurement level is still at stage 2 (independent). This indicates that the Roemani Hospital procurement unit has not been able to thoroughly integrate the company's strategy in carrying out the procurement function. The procurement unit is still focused on reducing costs in carrying out its duties and obligations. At this level, top management has realized the importance of developing professional performance. This value can still be increased again so that it can reach a value of 75-100% (integrative) (Hasibuan 2000).

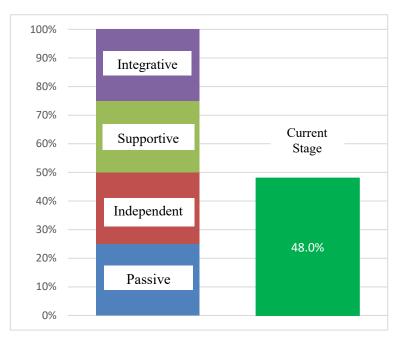


Figure 1. Comparison of current conditions and maturity level.

7. Conclusion

Procurement maturity is a measure of procurement activities included in strategic management decision making. In this study the method used is Supply Management Maturity Model. In the measurement method there are five criteria for measuring the maturity of procurement. These criteria are procurement planning, organizational of purchasing, process organization, human resources and leadership, and purchasing controlling.

Procurement planning has four aspects of assessment, i.e. demand planning, pooling planning, environment scan, and innovation planning. On these criteria, the lowest evaluation aspect is innovation planning. In the organizational structure of purchasing criteria there are two aspects of assessment i.e. structure and mandate of purchasing, and strategic integration. Based on these criteria, the lowest evaluation aspect is strategic integration. Process organization has seven aspects of assessment, i.e. sourcing strategy, supplier selection, supplier evaluation, supplier development, purchasing early involvement in development process, early supplier involvement process, and process involvement with other functions. On these criteria, the lowest valuation aspect is early supplier involvement in development process. In the criteria of human resources and leadership there are three aspects of assessment, i.e. job description and competencies, personnel selection and integration, and performance appraisal and career development. Based on these criteria, the lowest evaluation aspects are performance appraisal and career development. In the purchasing controlling there are three aspects of assessment, i.e. controlling system, controlling process and structure, and controlling methods and tools. On these criteria the lowest evaluation aspect is the controlling system.

Measurement of maturity level is done by advertising a questionnaire containing 56 questions to the Roemani hospital procurement unit. The measurement results of the maturity level of procurement of Roemani Hospital procurement unit shows that the maturity level of Roemani Hospital procurement unit is in stage 2 (independent). These results mean that the procurement unit does not yet have a strategic role in Roemani Hospital business activities. In this case, the Roemani Hospital procurement unit has not been able to fully integrate the company's strategy in carrying out the procurement function. Roemani Hospital procurement unit is still focused on reducing costs in carrying out their duties.

Based on the results of the assessment, recommendations were obtained to improve procurement performance. The recommendations for improvement include carrying out systematic design in innovation, observing provider markets, formulating procurement strategies, designing measurement systems, developing information technology, developing suppliers, and other recommendations such as involving procurement in the decision making process, formulating contract management systems, and making workshop for introduction to the hospital environment.

8. References

Bailey, P. J. H., Procurement Principle and Management, Pearson Education, Harlow, UK, 2015.

- Batenburg, R., and Versendaal, J., Maturity matters: Performance determinants of the procurement business function, European Conference on Information Systems (ECIS) 2008 Proceeding, 2008.
- Yukins, C. R. and Schooner, S. L., Incrementalism: Eroding the impediment to a global public procurement market, *Goergetown Journal of International Law*, vol. 38, pp. 529-576, 2007.
- Ellram, L. M., The role of purchasing in cost savings analysis, *International Journal of Purchasing and Materials Management*, vol. 28, no. 1, pp. 26-33, 1992.
- Gelderman, C. J. and Weele, A. J. V., Purchasing portfolio model: A critique and update, *Journal of Supply Chain Management*, vol. 41, no. 3, pp. 19-28, 2005.
- Guth, R.S., Best implementing: Procurement maturity model, 95th ISM Annual International Supply Management Conference, 2010.
- Hasibuan, M., Manajemen Sumber Daya Manusia, Bumi Aksara, Jakarta, 2000.
- Keban, Y. T, Analisis Pengadaan Barang / Jasa Pemerintah Kota Sukabumi, Pemerintah Kota Bogor, dan Lembaga Kebijakan Pengadaan Barang / Jasa Pemerintah (LKPP), Universitas Indonesia (unpublished), Jakarta, 2013.
- Mangkunegara, Manajemen Sumber Daya Manusia, Remaja Rosda Raya, Bandung, 2006.
- Nawawi, H., Kepemimpinan Mengefektifkan Organisasi, Gajah Mada Press, Yogyakarta, 2006.
- Plomp, M. G. and Batenburg, R. S, Procurement maturity, alignment and performance: A Dutch hospital case comparison, *Proceedings of the 22nd Bled eConference*" *eEnablement: Facilitating an Open, Effective and Representative eSociety*", pp. 203-219, 2009.
- Reck, R. F. and Long, B. G., Purchasing: A competitive weapon, *Journal of Purchasing and Materials Management*, vol. 24, no. 3, pp. 2-8, 1988.
- Schiele, H., Supply management maturity, cost savings and purchasing absorptive capacity: Testing the procurementperformance link, *Journal of Purchasing & Supply Management*, vol. 13, no. 4, pp. 274-293, 2007.
- Weele, A. J. V., Purchasing and Supply Chain Management: Analysis, Strategy, Planning and Practice, Cengage Learning, New York, 2009.
- Wibowo, Manajemen Kinerja, PT. Raja Grafindo, Jakarta, 2007.