

ANALYSIS OF CAUSES AFFECTING DELAY IN PROCUREMENT OF GOODS AND SERVICES IN THE PROCUREMENT DEPARTMENT

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ABSTRACT

The procurement function plays a role in obtaining goods and services by meeting several criteria, namely the right procedure, the right quality, the right quantity, the right price, and on time to meet all the needs of both raw materials and supporting materials. However, in practice, there are problems that occur, namely delays in procurement that are not in accordance with the lead time recorded in the procurement document. The object of this research is PT XYZ, Bandung, Indonesia. The purpose of this study is to find out how the procedure for the procurement of goods and services. In addition, in order to find out the causes that affect the delay in the procurement of goods and services at PT XYZ. The analytical method used is a qualitative research method with analytical techniques using fishbone diagram and pareto chart. Based on the pareto chart concept, by solving 20% of the problems, 80% of the problems can be solved. The results of this study are that there are 2 causes of delays in the procurement of goods and services are late payments (13.29%) and goods with a high level of urgency (11.30%).

Keywords: Procurement, Delay, Pareto Chart, Fishbone Diagram.

I. INTRODUCTION

Manufacturing companies are companies that have activities in the form of purchasing raw materials which are then processed and then sold. One of which is a manufacturing company and a research place is PT XYZ which is engaged in aerospace spare parts.

In manufacturing companies, logistics management is important in carrying out a supply chain process, which in the process of the supply chain function to design, execute, monitor as effective and efficient in the process of procurement, management, storage of goods and services, also information from the starting point to the end point with the aim of meeting the needs of its customers and increasing customer satisfaction.

Functions that support logistics system according to Suntoro (2020), as follows:

1. Material handling
2. Packing
3. Inventory forecasting
4. Production planning and scheduling
5. Procurement
6. Customer Service
7. Location Selection

In this research, the main focus is the procurement function that plays a role in obtaining goods and services by meeting several criteria, namely the right procedure, the right quality, the right quantity, the right price, and the right time to meet all the needs of both raw materials and supporting materials.

In the implementation of the general procurement function, the Procurement division at PT XYZ accepts requests for procurement of goods or services, then a request for quotation is made to the vendor which is equipped with terms and conditions, then the PIC from Procurement division creates a form called a purchase order which is submitted to the vendor as proof of approval for the given offer. If the vendor confirms to procure goods and services according to the terms and conditions recorded on the purchase order, then the PIC from the Procurement division at PT XYZ just needs to wait for the goods and services to arrive.

However, reality in the process of implementing the procurement function, there is a problem that occurs, it is a procurement delay that does not match the lead time recorded in the purchase order. Current problems require an analysis of the causes of delays in the procurement process.

Based on this background, the problems of this study were formulated, including:

1. What is the procedure for procuring goods and services at PT XYZ?
2. What causes delays in the procurement of goods and services at PT XYZ?
3. What is the solution to the problem of delays in the procurement of goods and services at PT XYZ?

II. LITERATURE REVIEW

Logistics

Logistics is a part of supply chain management process which has some functions such as planning, implementing, and controlling effectively and efficiently for the movement from the point of origin to endpoint or point of consumption with the purpose to fulfil the customer needs. (Siagian, M. and Yolanda, 2005).

The mission of logistics is to get the right goods, at the right time, in the right amount, in the right conditions, at an affordable cost, while still contributing profits to logistics service providers (Kasengkang, Nangoy, and Sumarauw, 2016). The function of logistics is a continuous process that relates and supports each other.

Procurement

According to Prasetyo (2013), procurement is a process to obtain goods and services with the best possible expenditure, in the right quality and quantity, at the right time and in the right place to generate profits or benefits directly for the government, companies, or for individuals carried out through a contract.

the function of procurement is to manage and organize the fulfillment of the required supply regarding the type, quantity, quality, place and time they want in an efficient manner.

The procurement process is:

- Process the PO (*Purchase Order*), to carry out the process of procuring goods and services.
- Expenditure process, the process of monitoring the expedition of goods starting from the PO in approval until the ordered goods arrive at the time and place that have been approved.
- Receiving process, is the process of receiving goods in accordance with the PO.

Purchase Order Process

Purchase order is a proof of order or a letter of order that must be made prior to receipt of goods (Berata, 2014).

Dewi and Kristanto (2013) explained that purchase order is a written request to supplier on-time delivery of raw materials ordered on a certain date.

Sulistiyantoro (2020) explained that purchase order is now also an important thing. Purchase order itself is an order made by the buyer addressed to the seller that uses as evidence.

Lead Time

According to Prasetyo (2013), lead time is a term commonly used in the manufacturing industry. The meaning of lead time is the time it takes for a company to fulfill an order or the amount of time that passes between when a process starts and when it is finished.

In the manufacturing industry, especially at PT XYZ, lead time is very important, each department must be able to fulfill all processes in accordance with the specified time so that the company can achieve its targets by using labor and machines more efficiently and effectively.

III. METHODS

The research method that used is a qualitative research method with analysis techniques using the pareto chart and the fishbone diagram. Qualitative methods are research procedures that produce descriptive data in the form of written or spoken words from people and observable behavior (Moleong L,J, 2007).

Data collection techniques in this study using observation methods by observing directly the state of the company, interviews to reliable informants, documentation and triangulation techniques by determining problems, entering the field, determining the data source, conducting data analysis, conducting data validity tests, to make conclusions that must be shown by researchers.

The pareto chart is an image that sorts the data classification from left to right according to the order of highest to lowest ranking so that important problems are found to be resolved immediately (Ariani, W. Dorothea, 2004). pareto chart is used to identify vital problems by applying the 80:20 rule of comparison, meaning that 80% improvement can be achieved by solving 20% of the problems (Yamit, 2010). With the help of a pareto chart, it is more effective to focus on the causes that have the greatest impact on the event rather than reviewing the various causes.

Fishbone diagrams depict lines and symbols that show the relationship between a problem. This diagram is used to determine the consequences of a problem for further action to be taken. The causes of this problem can also come from various main sources, such as working methods, materials, measurements, employees, the environment, and so on (Ariani, W. Dorothea, 2004).

IV. RESULT AND DISCUSSION

Procurement Procedure

The following is the procurement procedure at PT XYZ:

Explanation:

1. Purchasing receives Purchase Requisition from the user, Purchaser will select potential vendor to get quotations, discuss on the availability of material, minimum order quantity, price, delivery time, etc. the Purchase Requisition should be approved by Head of Department (related manager) so Purchaser can process the required items.
2. Purchasing will process based on PR that have received. Vendor will be selected from approved vendor list whom has the best quality, price, delivery time, etc. Purchasing will follow up to the vendor for the quotations.
3. Review the quotation and if okay, then go to the next step. If not okay, return to step 2 to select the other vendor.
4. Purchasing will issue the Purchase Order that contains information: order number, Vendor name and address, date of order, item description, quantity, price, delivery conditions, payment terms, and estimation time of arrival.

5. Purchase Order that has made should be approved by Director.
6. Purchasing will send the Purchase Order to the Vendor by fax or email.
7. Purchasing has responsibility to follow up the Purchase Order that they have sent to the vendor until the desired goods or services are delivered.
8. Receiving and incoming of goods delivered is performed by warehouse section. Purchasing will receive the information of received goods and service from warehouse section by email.
9. The received goods and services will be checked by warehouse personnel and QA division. If the goods are okay, then warehouse personnel have to confirm it to Purchase Order. if the discrepancies are found, then the NC form will be made by QA division and the returned goods will be arranged by warehouse personnel.
10. After the goods and services passed inspection, and are booked into the warehouse. The requested item will be handover to the user by warehouse personnel.

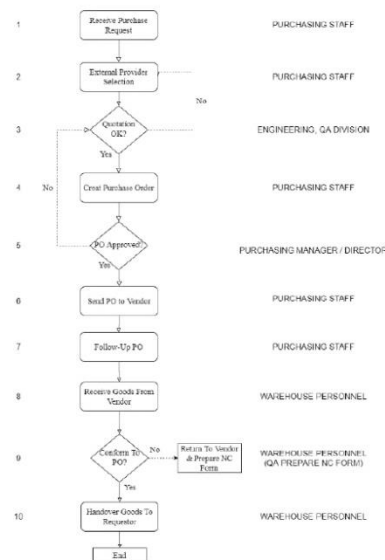


Figure 4.1 Procedure for Procurement

Causes of Delays in Procurement of Goods and Services

Before knowing what factors cause delays, researchers want to know how many Purchase Orders are experiencing delays in the arrival of goods and services. This is based on Purchaser Order data from the Department of Goods and Services for the period March 2020 - March 2021

Table 4.1 Total Purchase Order at the Procurement Department in March 2020 - March 2021

DESCRIPTION	TOTAL PO	PERCENTAGE
COMPLETED PO	548	64%
DELAYED PO	307	36%

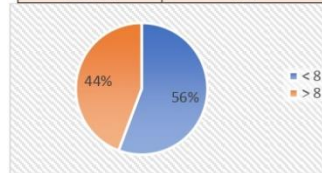
TOTAL OF PO	855	100%
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(Source: Data Collection)

As can be seen from table 4.1 above, that the delay in the procurement of goods was 307 POs or as much as 36% of the POs made by Purchasing. POs that experience delays have various turnaround times, with the following detailed lead time data:

Table 4.2 Procurement Lead Time in March 2020 – March 2021

TIME LEAD	TOTAL PO
1 – 7 days	171
8 -14 days	43
15 – 30 days	52
> 30 days	41
TOTAL	307



(Source: Data Collection)

Figure 4.2 Percentage of Lead Time

From the data table above, it can be seen that as many as 56% were late for no more than 7 working days and 44% were more than 7 working days. The high number of delays in the procurement of goods and services at PT XYZ is the basis of this research. The factors that affect the delay in the arrival of goods are quite diverse.

The delay factor is obtained from the results of observations and interviews with administrator from purchasing at PT XYZ. After the cause was found, the researcher then asked using a questionnaire to all staff in the procurement department, amounting to 9 people, where each point of the delay factor was scored with the following details:

- 5: Very High
- 4: High
- 3: Enough
- 2: Low
- 1: Very low

Staff in the Purchasing Department are asked to choose which causes they think are most dominant or occur frequently and the following are their opinions:

Table 4.3 Causes of Delay

No	Description	Total Score	Percentage
1	Delay in Payment	40	13.29%
2	Items with a high level of urgency	34	11.30%
3	PR approval takes a long time	32	10.63%
4	Approval PO takes a long time	32	10.63%

5	Hard to find items	30	9.97%
6	The PO has been revised so that the procurement process is hampered	29	9.63%
7	Delay in Delivery from the Vendor	29	9.63%
8	Indented goods	27	8.97%
9	There is a problem with the ERP system	26	8.64%
10	Goods Come Gradually (Partial)	22	7.31%
Total		301	100.00%

(Source: Data Collection)

After knowing which causes are dominant according to employees, the researcher can make a pareto chart to find out which causes need to be fixed first. Here is a pareto chart:

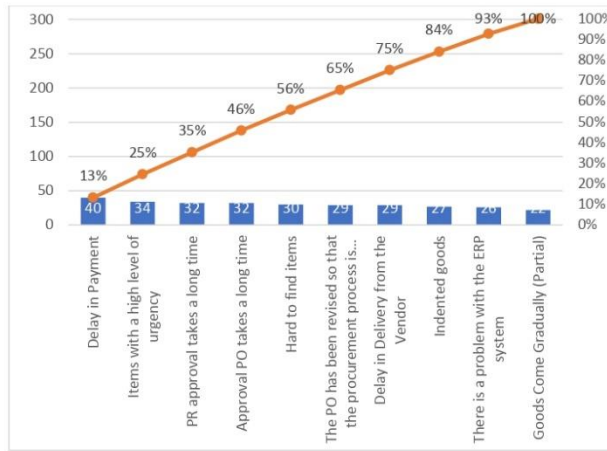


Figure 4.3 Pareto Chart

Based on the data above, it can be concluded that the largest value as a factor in the delay in the arrival of goods and services at PT XYZ is delay in payment for 13.29% and the second factor with a high value is items with a high level of urgency for 11.30%. The principle of the pareto chart is that 80% of the problems come from 20% of the causes, so that if you can solve 20% of the problems then you can solve 80% of the problems. Although the concept of pareto charts that simply by completing 20% of the problems that can solve 80% of problems, do not rule out the possibility that the head of department can see other reasons for delays in the arrival of goods and services at XYZ.

The following is a fishbone diagram that has been made of the factors causing delays in the procurement of goods and services from PT XYZ:

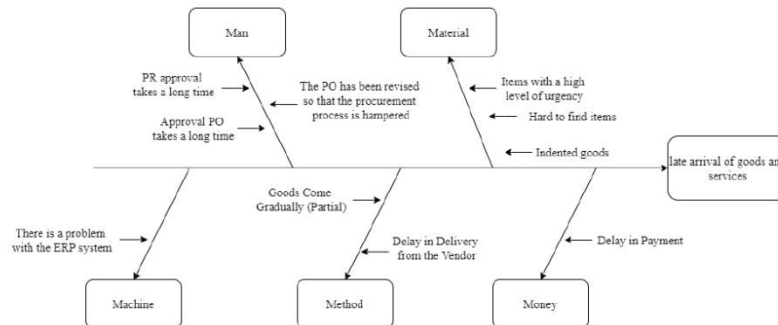


Figure 4.4 Fishbone Diagram

From the diagram above, the researchers conducted the following analysis:

Man category

Problem:

PR approval takes a long time

Process of approval PR takes a long time, after having an interview with the head of department, said that the process can take 1 to 2 days depending on each request. The head of department said it was very important to check the requested item and make sure the goods and services were according to what had been planned on each ongoing project.

PO approval takes a long time

In this process, the approval made by the director of PT XYZ for the PO is not always done every time. This PO approval process can take up to 5 working days so that the requested goods and services arrive late.

The PO have been revised so the procurement process is hampered

In this case, revising PO is might happen. For example, the requested item is not available but a replacement item with the same function and same specification is available as the one requested. In order to matching the documentation with the actual goods and services, it is necessary to revise the PO. However, when the PO is revised, re-approval is required which is lead to delays in procurement of goods and services.

Solution:

Solution for PR request and PO approval are very likely to be improved in time, therefore, all the steps in standardized procedures need to be improved in terms of accelerating PO approval under 5 working days, the shorter time of PO approval can be a very effective solution for PT XYZ. Next, PT XYZ must focus more on ensuring that the requested goods and services are in accordance with the demand. Mariana and Abrian (2020) explained that every purchase request that is processed must be based on needs, such as Market List (ML), Store Request (SR), and Purchase Request (PR). at PT XYZ, PR and PO Approval have been carried out systematically. Where the e-procurement system has been integrated with the approval system. Therefore, the system can reduce processing time and shorten the procurement process (Ang, Ong A. and Sundjaja, Arta M. 2018). Therefore, by fixing the time of PO approval below 5 working days can improve the process and time more effectively.

Material Category

Problem:

Items with high level of urgency

When there is a demand for goods with a high level of urgency, the required lead time is also faster than usual, the possibility for delay is also higher.

Hard to find items

There are some times when a requested item is not available or difficult to find. For example, there is a request for chemical which is difficult to purchase because the procurement process requires a special permit.

Indented Items

Indented items take some time for the production process until the goods are ready to be shipped. After the estimated lead time on the Purchase Order is adjusted to the procurement time for the indented item, the possibility of delays still exists. For example, PT XYZ gets information from vendor that the time they needed for produce the goods is 2 months, but in reality, they need additional time so the delay is happen.

Solution:

In this case, the main problem is caused by lead time which are difficult to predict due to several factors. This can be done by determining the exact lead time estimate, the procurement department and the requesting department need to determine an accurate and mutually agreed lead time, therefore, the delays can be reduced or eliminated. According to Prasetyo (2013), users must pay attention for safety stock before submitting a request. As a result, request can be made without haste and reduce delays.

Machine Category

Problem:

There is a problem with the ERP system

Problems with ERP are inevitable it doesn't happen often, but it might happen. For example, there are problems with the network or human error while inputting requests and these problems take time to fix systemically. The ERP system used at PT XYZ is a new system. Lack of training on new ERP systems makes human errors frequently happen and become a factor in delays.

Solution:

It is very important to do socialization for work processes in ERP. Scheduled training should be carried out so that users can also understand how to work properly. According to Wicaksono, Mulyo, and Riantono (2015) explained that the main goal in ERP implementation is to improve and strengthen the effectiveness of resources within the company, where these resources are human resources who use the ERP system. An explanation of the overall functions of the ERP system is very important given to all users, therefore users can maximize the use all function that related to their work.

Method Category

Problem:

Goods come gradually (partial)

Goods that come gradually can be one of the factors of delay. In general, deliveries are carried out gradually because the vendor cannot fulfill the full demand within the given lead time. Therefore, there will be some delays in procurement when the full quantity of goods is arrived.

Delay in delivery by vendor

Goods that sent late by vendor occur in some vendors who only send their goods when there is a delivery schedule, therefore the goods arrive late. If we ask to be delivered outside of the delivery schedule of the vendor, the vendor will ask for considerable additional cost.

Solution:

Ensuring delivery schedules from vendor is very important. Therefore, the lead time can be adjusted. Purchasing PICs need to do regular follow up to vendors to reduce the delays. According to Prasetyo (2013), it is very important to ensure a goods and reliable delivery service in the delivery of goods as well as make a clear work contract and ask for a guarantee from the delivery service to send the goods on time. This explanation reinforces the solution that PIC from purchasing needs to be firm to vendors and delivery service so that they can send goods according to the agreed time in the PO document.

Money Category

Problem:

Delay in payment

The payment submission process is still the responsibility of the PIC from purchasing because the PIC more understand the lead time of each request in the PO. Delay occur if the PIC does not follow up the payment with the finance department.

Solution:

Internal control needs to be improved. PIC from purchasing needs to follow up on the released PO because this is still the responsibility of a PIC. PIC from purchasing can submit a payment due date that has been determined or agreed with the vendor so that the finance department can make payments on time and goods can be delivered on time too. According to Khairun, Maryani, and Nurmala (2017) explained that in the element of internal control, payments are made by the debt function in accordance with the agreed terms and payment due dates that have been determined by the vendor. In this case, it is the responsibility of PIC from purchasing to communicate with the vendor, so PIC needs to confirm when the payment need to be done to finance department. The payment section is certainly an integral part of the system, so the payment process according to the schedule must be the main focus.

V. CONCLUSIONS

From the results of research and discussion conducted by researchers, it can be concluded that:

1. The procedure for procuring goods and services at PT XYZ begins with receiving purchase requisitions from PIC PR, then processed by purchasing staff from vendor selection, quotation requests, making POs, following up POs to vendors until goods are received.
2. Delays in the procurement of goods and services at PT XYZ are caused by several factors, including delay in payment, items with a high level of urgency, PR approval and PO approval takes a long time, hard to find items, the PO has been revised, and need to re-approval by the director so that the procurement process is hampered, delay in delivery from vendors, indented goods, there is a problem with the ERP system, and goods come gradually.
3. The effect of this delay for the company is the delay in the procurement of goods and services which can affect the production schedule because it cannot meet the existing lead time.
4. Recommendation that can be presented in this research is Although the level of urgency for each request is different, it is necessary to pay attention to each PO released and make it a priority, so as to reduce delays in the procurement of goods and services from various factors.

REFERENCES

- 1 Ang, Ong A. Sundjaja, Arta M. "The Development of E-Procurement System for an IT Consultant Company" *Journal*, (2018), 51-58. Print.
- 2 Ariani, W. Dorothea. (2004) "Pengendalian Kualitas Statistik", Andi, Yogyakarta.
- 3 Berata, Komang O. (2014) "Ekspor Import I", Published by Swadaya Group.
- 4 Dewi, Sofia P. Kristanto, Septian B. (2013) "Akmuntansi Biaya", Published by Inmedia.
- 5 Kairun, Maryani, Nurmala. "Evaluasi Prosedur Pembelian Barang Dagang Pada PT CLTM Bandar Lampung" *Journal*, (2017). Print.
- 6 Kasengkang, Rio A. Nangoy, Sientje, Sumarawu, Jacky. "Analisis Logistik (Studi Kasus Pada PT Remenia Satoni Tepas-Kota Manado)." *Jurnal Berkala Ilmiah Efisiensi* 16.01 (2016): 750-759. Print.
- 7 Mariana, Abrian, Youml "Analisis Pengendalian Barang Kebutuhan Food and Beverage Departemen di Kyrriad Hotel Bumiminang Kota Padang", (2020). Print.
- 8 Moleong, L.J. (2007) "Qualitative Research Methodology", Published by PT Remaja Rosdakarya Offset, Bandung.

- 9 Prasetyo, Wiranto D. "Analisis Penyebab Mempengaruhi Terjadinya Keterlambatan Pengadaan Barang Pada Departemen Pengadaan Barang dan Bahan Baku di PT. Pupuk Kaltim." (2013). Print.
- 10 Siagian, M. Yolanda. (2005) "Aplikasi Supply Cham Management dalam Dunia Bisnis", Published by PT Grasindo Jakarta.
- 11 Sulistyantoro, Hariyo. "Juridist Review of Purchase Order as Collateral Guartee." International Journal Of Law and Legal Ethics 1.1 (2020). Print.
- 12 Sutoro, (2020) "Fundamental Manajemen Logistik", Published by Kencana.
- 13 Suryalena. "Enterprise Resource Planning (ERP) Sebagai Tulang Punggung Bisnis Masa Kini", Jurnal Aplikasi Bisnis (2013). Print
- 14 Wicaksono, Aries. Mulyo, Hery H. Riantono, Ignatius E. "Analisis Dampak Penerapan Sistem ERP Terhadap Kinerja Pengguna" Journal (2015). Print.
- 15 Yamit Z. (2010) "Manajemen Kualitas Produk dan Jasa" Ekonesia FE UII, Yogyakarta.