

The Analysis of Business Process Management Notation (Purchase Order) in Small Medium Enterprise: A Case Study

Khoirin Azaro¹, Kurnia Ekasari², Andi Indrawan³

Politeknik Negeri Malang
Malang, Indonesia

¹khoirinazaro97@gmail.com

²kurnia_es@yahoo.com.au

Abstract— This is the field of study that deal with business process management. This turns out to be problematic because to get successful business need appropriate business process management. The way to describe a business process is making a business process modeling notation (BPMN). BPMN make business process easier to understand for all users in the organization. Small and medium enterprise (SME) also needs to designed BPMN to achieve business effectiveness. This study use qualitative approach, data collected from interview and observation in Swamart Swalayan as small retail enterprise. The overall goal of this work was to find out the evaluation purchase order system and existing supplies at Swamart Supermarkets by using BPMN. From the result, Swamart Supermarket have some problem in handling the inventory. Improvement of inventory management and duties segregation are needed by Swamart Swalayan to achieve better goals.

Keywords — Business Process Management, Business Process Management Notation, Small Medium Enterprise, Inventory

I. INTRODUCTION

Designing the appropriate business processes is the main key to build a successful business. This is because good business processes can help a company avoid bad workflows and mistakes in performing tasks [1]. Business processes are interrelated activities that can be carried out sequentially or parallel and can be carried out by systems or humans inside or outside the organization to achieve the desired goals [2]. Business processes are various interconnected activities that involve parts of the organization and outside the organization to achieve goals and produce the desired output. Business processes are at the core of the running of a company, therefore every company will have a business process that is tailored to its needs. A well-built system for building business processes will have a good impact on the company. Moreover, with the arrival of these unstoppable technological advances, business processes must be aligned with technology to increase profits, company growth, and innovation [3]. In fact, there are still many companies that have not thought about a clear change in business processes for the better, because basically changing the business process also depends on environmental conditions and the company's willingness to change [4]. In order for a well-designed business process to be realized, support from various groups in the business or organization must be strong, because a good business process cannot be realized by one party alone. A company or organization will not achieve a good business process if the director does not support it nor will it run without the support of employees who carry out business operations.

Describing a business process can be carried out by making a business process modeling notation (BPMN). BPMN is a standard with its role to make business process modeling by using graphical notation to provide an explanation of the current business processes [5]. BPMN is used as the de facto standard for modeling business processes in industry [6], so BPMN becomes the connecting standard for process designing and its implementation. Business Process Modeling Notation (BPMN) is a method developed by the Business Process Modeling Initiative, which is used to design complex systems [7]. BPMN is a standard from the Object Management Group (OMG) which aims to present a notation that can be understood by all business users from the initial drafters, developers and by managers and supervisors of the business process [8]. BPMN is used as the



de facto standard for modeling business processes in industry [6], so BPMN becomes the connecting standard for process design and implementation. BPMN is becoming more widely used due to the presence of supporting software in making BPMN which is increasingly sophisticated, making BPMN easier to use in designing integrated business processes and can be used directly for design by programmers who will develop or design business processes. The purpose of BPMN is to make it easier for all users to understand the exist processes in the organization.

BPMN in the Small Micro and Medium Enterprises Unit (in Bahasa called UMKM) also needs to be designed in order to achieve business effectiveness because its existence is beneficial to the community, especially the environment around UMKM. One of the examples is Swamart Supermarket UMKM which was the object of this research. Supermarket Swamart is a modern retail store with 22 employees selling food, beverage, kitchen ingredients and daily necessities. Supermarket Swamart does not know yet how important BPMN is to improve business activities. Some of the problems that often occur at Swamart Supermarkets are about purchase order to inventory handling problems. Whereas in the retail business, inventory is the key to success in running a business in order to achieve maximum profit. Inventory is a resource that must be managed properly, because in this retail business, inventory is a capital in business activities. The business process activities will be disrupted if there is no inventory [9]. Differences in the number of items records with the real often inventory amount often occur, the items have run out, entered the expiry date and the large number of damaged items were the problems experienced by this Swamart supermarket business. Swamart supermarkets also do not know how to find the causes and solutions to various problems, especially those related to the process of items purchasing to inventory handling that are currently occurring in its business processes. Therefore, this study was aimed to evaluate the purchase order system and existing supplies at Swamart Supermarkets by using BPMN.

II. METHOD

The research types were classified into four groups, such as classification based on benefits, objectives, time dimensions and data collection techniques. The first was classified based on benefits, where this type of research belonged to applied research because it tested the usefulness of theory in a particular field or it was purposed to apply theory to produce solutions to solve the existing problems. Second, the classification based on the objective aspect, this research included exploratory research, where exploratory research is generally an exploratory research. Third, based on the time dimension, this research was belonged to case study research, which required an analysis of the existing problems and this research observed and analyzed cases carefully until finished. Case study is an intensive and detailed and in-depth research on a particular object [10]. Fourth, based on data collection techniques, data collection techniques are the most strategic steps in research [11], where this research collected data by observing and interviewing the Swamart Supermarkets.

III. RESULT AND DISCUSSION

The most challenge in overseeing retail stock is to match replenishment and request, that's giving things on the shelf justified by an up and coming customer request [12]. Business process problems identification of in the purchase order (PO) section in Swamart supermarkets was carried out by describing BPMN. It aimed to see which processes or parts should be evaluated so that suggestions for business processes at Swamart supermarkets can be generated.

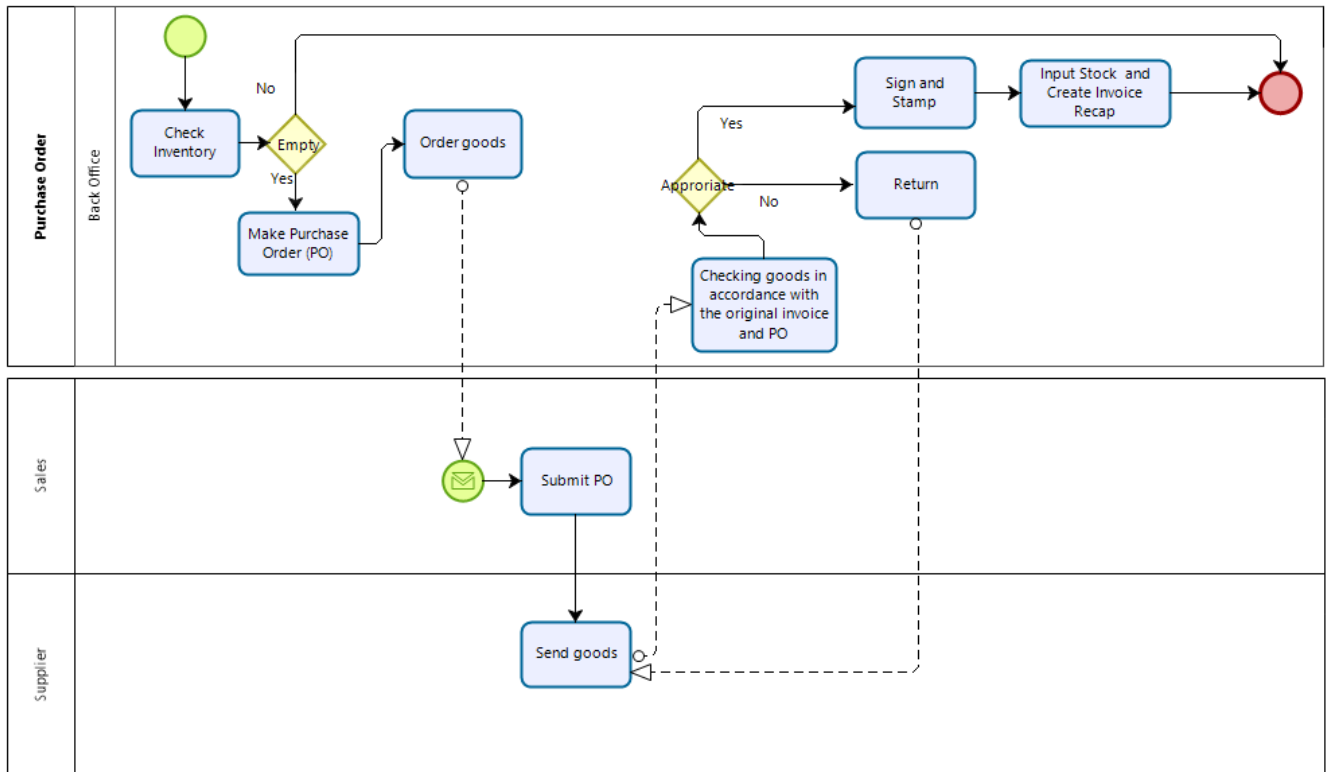


Figure 1. BPMN Purchase Order As Is

Based on BPMN that has been described, the process of purchase orders and receipt of items is carried out by one department, namely the back office. The Back Office has the authority to place orders for items, receive items, and even has the authority to make payments. This has resulted in the Back Office being a part that has a lot of responsibility and is vulnerable to frauds that occur. From the description of BPMN's as is, purchase order business process, it is necessary to separate the tasks between the purchase order division, the consignee and the payment department. The delegation of many responsibilities will certainly break the concentration of the back office in carrying out their duties. The first problem that often occurred was the emptiness of items caused by several reasons including the negligence of employees in checking items which results in empty stock of items owned. This often happens because the types of products in supermarkets currently have reached ten thousand products, so in practice there are always several types of products that are overlooked by employees, this also occurs because there is no automation of the software for notification when the number stocks was running low. Moreover, for now, the process of stocks monitoring the is still being carried out by checking one by one by typing the name of the item you want to see in the software, so there was no automatic notification from the software when the product inventory was running low.

Moreover, based on the interviews result with Swamart Supermarket employees, it was known that there are often differences in the number of items with existing records. The difference in the number of items often ranges from two to six items. Whereas the accuracy of inventory recording is an important performance in the retail business [13]. In order for inventory management to be effective, the store is required to keep records of their inventory [14]. Most retailers rely on automated ordering and filling systems or at least information from systems to provide information on what, when and how much to order. This automatic system can be implemented with the help of software, one of which is ERP. The main key for retail in making a purchase order is based on the inventory records or inventory records in the software used, if the inventory records are inaccurate, the retailer will have excess or shortage of items. Lost inventories causes unmet demand by customer, and the negative impact of that include diminished client loyalty and increase employee's responsible for



searching lost inventories [15]. The inaccuracy in the calculation of items that occurs is one of the impacts of the many important roles given to the back office, which has resulted in several negligence. Arriving items are not counted carefully but rather quickly, this is also one of the consequences of long queues from other suppliers. In addition, the items to be inputted in the software used are often not calculated based on the number of items, but by looking at the number of items listed on the invoice paper from the supplier only. Or in other words, the process of counting incoming items tends to be less precise in its calculations, this can lead to a mismatch between the inventory records and the actual number of incoming items.

In addition to the mismatch problem between the number of items that exist and the inventory records, the number of products in the thousands results in many items that have no control over their expiry date. This results in, when the items are removed from the warehouse, many items were almost expired or passed the expiry date, even though some suppliers only deal the items returns with month earlier of the expiry date, if they have passed this limit, the supplier does not want to accept the return. When this happens, it is a loss for supermarkets. To avoid these things, regular checking needs to be done more thoroughly and there needs to be a reminder of the expiry date on the software so that such negligence can be avoided, and this can also ease the work of employees.

During the observation process, employees of the Back Office often forget to return the items to the suppliers when they came for delivering items, as well as the supplier, because the back office was crowded so that suppliers often look in a hurry so they forget to return the items that have been informed at the previous time. whereas items return are also one of the causes of losses from business processes, where items that should have been sold and the money can be re-used to run the business, turn into idle money until suppliers come on another day, moreover some suppliers only made deliveries once every two weeks, this for sure resulted in losses and extra costs as well for the storage of damaged products. Losses caused by the large number of items that need to be returned include, for example, buyers who will buy items tend to cancel their intention to shop at Swamart Supermarkets because they are not available due to damage so that the potential for customers to buy other items is also lost, besides that there are additional costs due to handling damaged items are one of the things that need to be repaired further in order to avoid unnecessary costs. Another problem related to office layout also occurs, namely the location of the warehouse which is one door to the back office which creates a density of people passing by, be it the back office employees themselves, sales, suppliers, collectors or employees of the operational department which in turn will cause chaos and congestion in the office.

Debt payments to suppliers at Swamart Supermarkets are also still very vulnerable to fraud and negligence, unpaid invoices will be recapitulated on a paper containing a recap of the day and date of payment to the supplier. In association with invoice recapitulation making that was calculated on a paper, for sure it will be more vulnerable to have errors, both wrong payment dates or errors in recapitulating the amount owed payment. These errors can affect the Swamart Supermarkets performance in the suppliers point of view. Whereas in building a retail business, a solid cooperation is needed in establishing good relationships with suppliers. In addition, transfer payment method is also still used by the owner, this implicitly explains that there are no financial officers or trusted people who are truly trusted to be in charge of managing the financial or accounting systems at the supermarket.

VI. CONCLUSIONS

Swamart Supermarket have some problem especially in handling the inventory, among others are emptiness of items, differences in the number of items with records, forget to return the items to the supplier, debt payments to suppliers at Swamart Supermarkets are also still very vulnerable to fraud and negligence. In addition, all of that case that mention above are part of back office's employee responsibilities. Swamart Supermarket could do the segregation of duties especially in back office's job to decrease the problem in management inventory, so that Swalayan Supermarket could improve management inventory there. Good management inventory will increase Swamart Supermarket performance.

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