

## **IMPLEMENTATION OF INVENTORY ACCOUNTING INFORMATION SYSTEMS AT PHARMACY (Case Study at Tirta Pharmacy)**

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**Abstract :** The purpose of this research is to provide an overview of the systems and procedures for cash receipts and disbursements associated with merchandise inventory. This research was a qualitative study to describe the business flow of incoming and outgoing items by looking at the accounting information system design. The object of this research was Tirta Pharmacy located in Jember Regency, East Java. The type of data in this study was primary data in the form of observations and interviews with pharmacists in Tirta pharmacy. Data analysis was carried out in this study in order to analyze obstacles and problems regarding financial reports, the functions of the data obtained, and procedures related to the design of accounting information systems with the aim of implementing a good financial statement accounting information system and can improve efficiency and stabilization of operational activities, especially in the drug supply division at Tirta Pharmacy.. The results of this study propose systems and procedures for cash receipts and disbursements, as well as suggestions for using information technology in carrying out company operational activities.

**Keywords:** *Accounting Information System, Business Process Management Inventory*

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### **1. Introduction**

The Covid19 pandemic which has been running for more than a year has greatly impacted several business sectors. The Covid-19 virus spreading has the greatest impact on the financial and investment business sector including the most affected such as aviation, tourism, hotels, restaurants, shipping and transportation (Djalante et al., 2020). However, with the increased needs of self-protection from Covid-19 infection, the health sector has become the sector with most benefits came from this pandemic.

Based on a report from a private pharmacy in Jakarta, since the entry of Covid-19 infection in Indonesia, the daily turnover of pharmacy has reached 66% compared to several months earlier (Lidyana, 2020). This is due to the increasing demand for masks, hand sanitizers and vitamins in the community. Unfortunately, the availability of these items is actually experiencing shortages in Indonesia (Saraswati, 2020). One of the influencing factors including the imbalance in the level of need and availability of pharmacy in the supply of drugs and medical devices. This can be caused by a poor accounting information system in pharmacy management. Accounting information systems are very useful in pharmaceutical management in the pharmacy business to

track drug supplies and sales. A good accounting information system makes it possible to manage drug payments, lease payments, payroll to automated financial reports so as to get a clear financial vision (Landry and Dalli, 2017).

So far, there are still many private pharmacy in Indonesia that use a manual financial reporting system. Transaction data processing starting from recording into journals to financial reporting is done manually so that errors are still found in writing and calculating data. In addition, the manual system in inventory, especially during transactions, allows errors in entering stock records, making it difficult to monitor the availability of drugs and medical devices in pharmacy. The lack of a warning system for the availability of drugs and medical devices can lead to slow distribution of drugs and medical devices in pharmacy. Directly this will also affect the turnover of the pharmacy. Therefore, it is necessary to use a good accounting information system in pharmacy management, especially in the midst of the current global pandemic of Covid-19 infection.

Therefore, every business organization needs an information system that the organization uses for decision making. Information systems have become a tool for every company to improve the effectiveness and efficiency of a company's performance.

Accounting information systems are needed to produce financial information and assist in decision making. A good accounting system is expected to help companies manage company finances and be able to produce reasonable and trustworthy financial reports. To be able to compete with other companies, an information system is needed that can improve the quality of the company. The quality of a company will affect the company's image in the eyes of users of financial statements. For this reason, companies must be able to create a good accounting information system to support the company's daily activities.

Tirta pharmacy is a general trading shop, which sells medicines from suppliers and consignments. Currently the accounting system used is still done manually (Desmahary and Kuswara, 2016) so that there is a drawback, namely there is a calculation error or human error (Rahmawati, 2015) in recording transaction data, it takes a long time to create and search for financial data (Utami and Hidayat, 2018), monitoring drug availability (Supriyati, 2013), financial reports will take a long time (Rahmawati, 2015), and have not applied account code classification (Nisa, 2015). Thus the author will describe the inventory accounting information system at the Tirta Pharmacy, Jember Regency.

## **2. Theoretical Review**

### **2.1. Accounting Information System**

A system is a set of two or more interrelated components that interact to achieve a goal. Most systems are made up of smaller subsystems that work together to support bigger systems.. Each subsystem is designed to achieve one or more organizational goals. Subsystem changes cannot be made without considering the effects on other subsystems and on the system as a whole. Meanwhile, data are facts that are collected, recorded, stored and processed by information systems. Businesses need to collect several types of data, such as the activities that took place, the resources that were affected by the activity, and the people who participated in those activities. Data that has been arranged and processed to provide meaning and help the decision-making process is referred to as information.. As the quantity and quality of information grows,

consumers tend to make better decisions.. Then the accounting information system is a system that collects, records, stores, and process data to produce information for decision makers. These include people, procedures and instructions, data, software, information technology infrastructure, and internal control and security measures (Romney & Steinbart, 2014, p. 5).

## **2.2. Business Process Management Notation**

Business Process Management Notation (BPMN) is a tool used to describe the flow or process that is currently running in a business. BPMN is used to make it easier for system designers to analyze weaknesses in a business unit. According to Bizagi (2016) BPMN is a graphic notation that describes the logic of the steps in a business process. This tool is specifically designed to link the sequence of processes and messages that flow between the activities of each participant. The language used by this tool enables all parties involved to understand clearly, completely and efficiently. Not only that, BPMN communicates the processes that exist in the organization and defines the notation and semantics of the Business Process Diagram.

## **3. Research Method**

This research was a qualitative study to describe the business flow of incoming and outgoing items by looking at the accounting information system design. The object of this research was Tirta Pharmacy located in Jember Regency, East Java. The type of data in this study was primary data in the form of observations and interviews with pharmacists in Tirta pharmacy. Data analysis was carried out in this study in order to analyze obstacles and problems regarding financial reports, the functions of the data obtained, and procedures related to the design of accounting information systems with the aim of implementing a good financial statement accounting information system and can improve efficiency and stabilization of operational activities, especially in the drug supply division at Tirta Pharmacy.

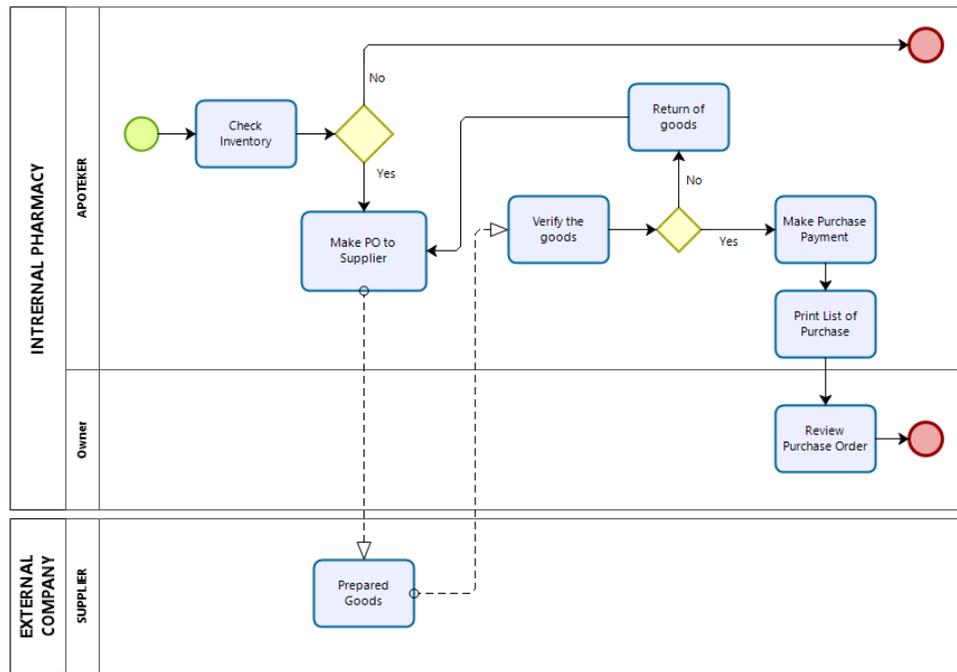
## **4. Result and Discussion**

### **4.1. Result**

#### **4.2.1 Cash Disbursements**

The cash disbursement information system that occurs at Tirta pharmacy is actually almost the same as the accounting information system that occurs in business units in general, but there are things that cause it to be inefficient in terms of implementing the procedure. Not only that, but records and controls are still low, so that cash disbursement activities do not run well.

From the above discussion, the researcher proposes a cash disbursement system and procedure using the Business Process Management Notation model. The following is illustrated in figure 1. Cash disbursement systems and procedures:



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Figure 1 Cash Disbursement System and Procedure

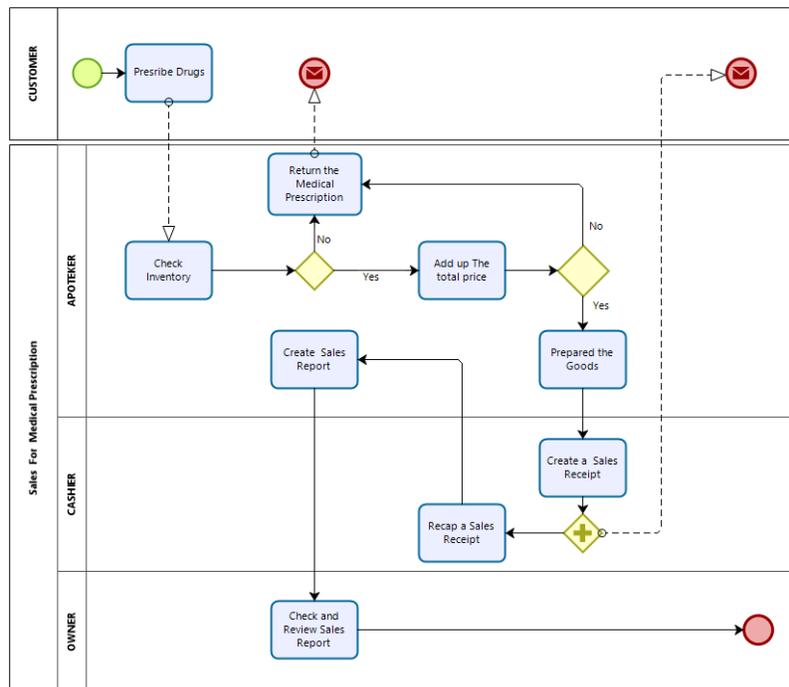
#### 4.2.1 Cash Receipts

The cash receipt accounting information system at Tirta pharmacy has run with its problem in transaction recap checking which has conducted by pharmacists and pharmacy owners. This is often a problem of control over inventory disbursement. There was a difference in inventories due to lack of control and recording by using semi-manual method.

The author provides a solution for cash receipt procedures so that the process runs better and can be controlled. Cash receipts are divided into two ways, such as:

##### 1. Cash Receipts Using a Doctor's Prescription

The differences between pharmacy and conventional store is a doctor's prescription existence, most of the sales made by a pharmacy are made by using a prescription because there are terms and conditions for the drugs.

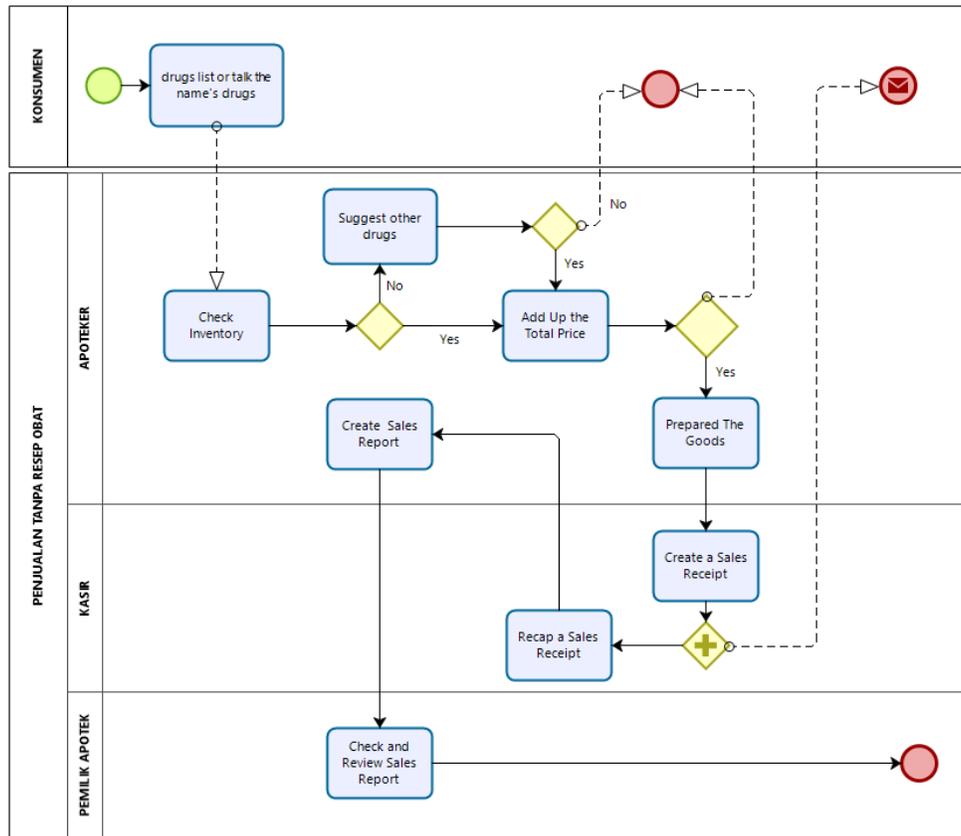


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Figure 2 Cash Receipt System and Procedure Using Doctor's Prescription

## 2. Cash Receipts without a Doctor's Prescription

Not only by using a doctor's prescription, drug selling was carried out in the pharmacy without a prescription with limited over-the-counter drug terms and conditions.



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Figure 3 Non Prescription Cash Receipt Systems and Procedures

#### 4.2. Discussion

Tirta pharmacy is a private trading company engaged in the drugs selling in Jember district. At the time of this report, the inventory of items sold has reached more than 500 items. This includes lozenges, coated tablets, syrup / suspense / emulsion, dry syrup, effervescent tablets, buccal, and sublingual tablets.

The warehouse part is the part that has the right to handle the supplies needed by all users in the company. The warehouse department has to be able to control the availability of inventory because if there is a shortage of items supplies that are often used, it will disrupt the course of the company's business activities. Therefore, to avoid this, the warehouse administration officer must be able to calculate the minimum standard of stock where this standard is used as a reference for deciding when to make a purchase request. In the inventory system that is owned by the warehouse department, if the status of the items is orange, the warehouse administration officer must immediately make a list of requests for purchase of items.

The explanation above is a description of the inventory procedures that have been implemented by the company to date. The purpose of this procedure is so that purchasing activities can run smoothly and efficiently so that it does not take too much time so as not to

interfere with the company's business activities, prevent fictitious purchases, and avoid wasting costs. In the procedures that have been made, the company has clearly divided the duties of each division involved in inventory management activities so that there is no overlapping of positions. The existence of this purchasing procedure is one part of the internal control system owned by Tirta pharmacy.

The scope of the inventory procedure includes procuring, receiving, storing and distributing items. First, procuring these items is intended so that the need for items does not lead to a shortage of items supply and hamper the productivity later and makes scheduling of supporting materials ordering. Second, activities in receiving items include making work orders by pharmacists, checking items with pharmacists, entering incoming items as stock. And third, the activities of storing items include the placement of items which are classified based on the type of items and specifications, and finally, the activities of items distributing, which include verification of transaction evidence to items display.

Based on the proposed accounting information system application, there are several recording features that are able to overcome weaknesses in the accounting information system at Tirta Pharmacy. As for the advantages of the proposed accounting information system, such as being able to provide an effective and efficient process in processing financial activities and making it easier for users because the data can be processed automatically by the proposed database. A well-integrated accounting information system will provide higher quality report output with a reporting concept that can be modified according to user needs. Faster reporting time will make it easier for the leadership to make decisions for the progress of the company.

In accordance with the advantages of the proposed accounting information system, this paper recommends Tirta pharmacy to switch from an accounting recording system that uses notes and transaction books to ERP or automated information technology that will make it easier to input existing financial transaction activity data. at the company. This writing leads to the application of an accounting information system by implementing the features of the proposed program so that manual recording processes are not required. According to Friedrich (2011) Implementation is an action that leads to the goals proposed by a person or group in connection with certain obstacles in order to find a way out to achieve the expected goals.

## **5. Conclusion**

Based on the analysis conducted by the author to the Tirta Pharmacy, it can be concluded that:

1. The cash disbursement accounting information system had control problems on documents archiving and control to the inventory. So the authors suggested a system solution and cash disbursement procedures that become the basis of operational activities at the Tirta Pharmacy.
2. The accounting information system for cash receipts had problem in monitoring the items delivery, so there were differences and miscommunication between pharmacists and pharmacy owners. So the authors suggested a cash receipt system and procedure which is divided into two parts, such as the cash receipts system and procedures with a doctor's prescription and cash receipts without a doctor's prescription.

3. Overall the implementation of ERP (Enterprise Resource Planning) or automatic computing systems could overcome the problems of financial records to make the company's operational activities become more effective and efficient.

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