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## Designing Accounting Information Systems for Primary Cash Receipts and Expenditures in Open ERP-based Retail Units (ODOO)

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### ABSTRACT

Over time, this type of cooperative business slowly begins to lose its existence due to increasingly fierce business competition. This is because the role of cooperatives, which is identical to the provision of basic foodstuffs for the needs of the community, has now been taken over by the existence of supermarkets both in cities and in the regions. This is due to the influence of the industrial technology revolution 4.0 which requires business people to continue to be able to improve services and offer technology-based convenience so that it has an impact on customer satisfaction. This literature review aims to describe the role of the use of information technology systems for accounting for primary cash receipts and disbursements in cooperatives.

### 1. Introduction

The monetary crisis that occurred in 1997-1998 has severely slumped Indonesia's economic growth, even reaching minus 13 percent (Merdeka, 2018). As reported by the Indonesian Information Portal, 2019, the depreciation of the rupiah exchange rate even reached 600% in less than one year, starting at IDR 2,350 to IDR 16,650 per 1 USD. This of course has led to a scarcity of liquidity, an increase in the rate of import inflation due to the sharp rise in the dollar exchange rate to congestion in the real sector in the form of the closure of factories whose raw materials are imported (Portal Informasi Indonesia, 2019).

As the pillars of the Indonesian economy,

cooperatives have played a major role in the revival of the Indonesian economy during the New Order era. During the 'krismon' period, many banks refused to make loans, so they flocked to cooperatives (Merdeka, 2018). With the support of this cooperative, MSMEs can stay alive so that the wheels of the economy can continue to run. According to data from the results of a 1998 survey of 225.000 MSMEs during the monetary crisis, it was found that as many as 4% of MSMEs did not stop their business, 64% did not change their turnover, 31% of their turnover decreased, and 1% developed (Media Indonesia, 2015). In addition, Paragraph 1 of Article 33 of the 1945 Constitution states "The economy is structured as a joint effort



based on the principle of kinship" which explains that the appropriate business entity is a cooperative (Pradnyawati et al., 2019). It is this role that makes the cooperative continue to gain trust (trust) and a positive response from the community, whose members are mostly micro and small businesses. It is evident from the number of cooperatives that increased sharply by 52.20% in 1999 with a total of 89.939 units, previously only 59.092 units in 1998 (Central Bureau of Statistics, 2016).

However, over time, this type of cooperative business slowly began to lose its existence due to increasingly fierce business competition. The reason is, the role of cooperatives which is identical to the provision of basic foodstuffs for the needs of the community, has now been taken over by the existence of supermarkets both in cities and in the regions (Antara News West Sumatra, 2019). It can be seen from the number of active cooperatives that decreased in 2019 by 123.048 units, while in 2018 the number reached 126.343 units (Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, 2019). This is due to the influence of the industrial technology revolution 4.0 which requires business people to continue to be able to improve services and offer technology-based convenience so that it has an impact on customer satisfaction. The problems often faced by cooperatives according to Antara News West Sumatra, 2019 are weak management, mastery of technology and marketing and low entrepreneurial competence. However, actually this type of cooperative business has tremendous potential as a pillar of the Indonesian economy. This is evidenced by the increasing contribution of cooperatives to the national economy. In 2014, the contribution of cooperatives to Indonesia's GDP was only 1.71%, and increased sharply in 2018 to 5.1% (Semarang Bisnis, 2019). In addition, the Minister of Cooperatives and SMEs has also made licensing easier and the conditions for establishing cooperatives with the aim of restoring the glory of cooperatives (Ministry of Cooperatives and Small and Medium Enterprises, Republic of Indonesia,

2020). This effort will be even more perfect if it is accompanied by the implementation of technology in the type of cooperative business. Therefore, adequate innovation and technology is needed for cooperatives to be able to compete and optimize their potential.

### **Technological innovation in cooperative accounting**

This innovation in technology will produce fast and accurate information that will facilitate decision making. This is evidenced by the emergence of various applications (software) to support more efficient delivery of information. The accuracy of this information also affects the effectiveness of the company. When the company becomes more effective and efficient, it will increase the company's competitiveness in the business market so that the company will continue to exist (Saadiyah, 2015). However, on the other hand, the development of this technology can also spur an increasingly complex business competition. The increasingly complex business competition requires all types of businesses to think more creatively to maintain their business existence, including the type of cooperative business.

One of the information managed by the cooperative is information related to the management of cash in and cash out. The role of cash is very important because it is directly involved in transactions or operational activities of the company (Pradnyawati et al., 2019). Transactions within the company are mostly dominated by cash receipts or disbursements. So that an accounting system is needed related to the accounting cycle for cash receipts and disbursements designed in such a way as to suit the company's needs so that any changes related to cash can be monitored and recorded properly. One of the most liquid types of assets, namely cash, is an object that is very easy to divert because it can be transferred quickly and is required by everyone (Makunah, 2015).

Regarding cash fraud that occurs, one of the



actions that companies must take to minimize it is to create an accounting information system related to cash inflows and cash out. So that all transactions or suspicious activities related to cash can be monitored and followed up immediately. That way the accounting information system for cash receipts and disbursements will improve internal control in a company (Hidayat, 2015).

The definition of cash in the narrow sense means money. In the accounting context, the term cash itself has a fairly broad meaning, including checks, banknotes, coins, money orders, deposits in banks, and everything that is equated with money (Jusup, 1994, p. 18). According to Gitosudarmo, 1992, p. 61 cash is the value of cash available and stored in the company along with other items as well as a means of payment for financial needs which has the highest level of liquidity. In contrast to Baridwan, 2001, p. 85 which defines as a means of exchange that is used as a measure in accounting. Companies rely heavily on accounting information systems as one of the safeguards for the company's assets while also being able to support the company's main activities related to cash to be carried out more effectively and efficiently (Puspita, 2015).

Cash receipt is an activity of receiving / entering / adding cash to a company / organization due to a transaction from both cash and credit sales (Arum and Nugroho, 2017). According to Mulyadi, 2010, p. Most of the 455 sources of cash receipts from a trading company came from cash sales transactions. Meanwhile, cash disbursement is a unit that involves several parts, forms and records and involves various procedures and tools that are interrelated with each other and are used by companies to handle cash disbursements (Esteria, 2016). Cash disbursements within the company are usually carried out by means of checks and through petty cash funds for small nominal disbursements. Petty cash in a company is a cash post that is specially provided to pay for relatively small expenses so that it will be uneconomical if paid by check (Sumurung and Ilat, 2016).

According to Greece (2019), a cooperative is a unique economic entity because of the involvement of its members as owner and business actor. As a system, there are three sub-systems that form business interactions in cooperatives, namely individuals as members as owners, groups represented in member meetings where members are representatives of owners, and tools for carrying out joint economic activities which are also called cooperative companies. (Arifin, 2013, p. 34). As a form of business, of course cooperatives need to increase innovation and have a good information system to be able to compete in the midst of globalization. This good information system is able to improve the performance, effectiveness, efficiency and integration of all transactions in cooperative operations so that they can process data quickly and precisely in order to get maximum results (Firdaus and Widayasastrena, 2017).

Enterprise Resource Planning (ERP) is a management information system that is well integrated so that it can accommodate all kinds of information system needs in each department in the company specifically (Aziza and Rahayu, 2019). As an integrated information system, ERP facilitates communication within the company with its technological sophistication. This system has a variety of modules that can be tailored to the needs of its users. Some examples of ERP-based applications include: OpenERP or Odoo, Oracle, SAP (System Application and Product in data processing), IFS (Industrial and Financial System) and so on.

Saadiah (2015) has conducted research related to ERP implementation at MSMEs in Semarang and the results show that the implementation of an Enterprise Resource Planning (ERP) system which is supported by the accuracy of selecting software and hardware is proven to be able to improve marketing performance. Other research conducted by Hanifa (2017) is related to the implementation of ERP with the object of the Employee Cooperative of PT. XYZ uses the ERP-based Odoo application which proves that the use of the Odoo application is sufficient to



help the business processes of the PT. XYZ and facilitate coordination and communication between users, resulting in fast decision making. In addition, the implementation of ERP for cooperatives has also been carried out by Firdaus and Widyasastrena (2017) which proves that the Information Systems for Cooperatives and MSMEs that utilize ERP can help expand market share as well as produce accountable financial reports. The benefits of ERP are also revealed in the research of Deshmukh et. al (2015) where ERP is one of the solutions for Small and Medium Enterprises (SMEs) in India to face global challenges, considering that these SMEs represent the spinal cord of the Indian economy.

### **Cash receipt cycle**

This cash receipt system is in principle the same as the income cycle (Mulyadi, 2016, p. 379). The source of the company's own cash receipts can come from cash sales and collection of accounts receivable or credit sales. Cash sales, carried out by the company by requiring the buyer to pay the price of goods first before the goods are handed over by the selling company to the buyer, after the money is received by the company, the goods are then handed over to the buyer and cash sales transactions are then recorded by the company (Puspita, 2015). Cash receipts are cash received by the company in the form of cash or securities that can be used immediately, originating from company transactions or cash sales, payment of receivables or other transactions that can increase company cash (Esteria, 2016).

### **Cash disbursement cycle**

The cash disbursement accounting system is a process, a method, an act of issuing a means of exchange that is accepted for debt repayment and can be accepted as a deposit to the bank in an amount equal to its nominal, as well as deposits in the bank or other places that can be retrieved at any time (Sutrisno, 2013). The cash disbursement procedure needs to be designed in such a way that

only those expenditures that have been approved and are true for company activities are recorded in the company's books (Rahayu, 2010). Company cash disbursements are made using checks (for large amounts) and through petty cash funds (for small amounts).

### **ERP (enterprise resource planning)**

Enterprise Resource Planning (ERP) is an information system that can integrate various areas of company functions such as the warehouse department, production department, finance department, marketing department and human resources so that information can be conveyed quickly (Sadiyah and Mudiantono, 2015). The ERP system aims to integrate information that has been obtained from various different applications into one universal database system (Wijayaningtyas, 2018). ERP makes decision making in a company faster and more efficient because all data are accurately integrated.

The basic concept of ERP according to Aziza and Rahayu (2019) is as follows:

- a. ERP consists of a commercial software package that ensures integration of all information flows in the company, including finance, accounting, human resources, supply chain, and consumer information.
- b. An ERP system is a configurable package of information systems that integrates information and information-based processes within and across functional areas within an organization.

The modules in this ERP are designed in such a way that they can be adapted to the business processes of companies that follow the value chain or supply chain consisting of activities starting from logistics of raw materials, production, logistics of finished materials, sales. and marketing and so on (Lestari, 2017). The use of hardware (hardware) and software (software) is obligatory in the development and implementation of ERP (Greece, 2019). At this time there are several ERP-based applications



including: OpenERP or Odoo, Oracle, SAP (System Application and Product in data processing), IFS (Industrial and Financial System) and so on.

### **Odoo**

Odoo is the most admired free open source ERP application in the world as seen from its significant development (Fitrah et al, 2016). Likewise, Aziza and Rahayu (2019) state that Odoo is the easiest all-in-one management software in the world. Odoo serves to meet the needs of the company in helping the company's business process performance (Anderson, 2011). Odoo has provided various integrated modules such as accounting and finance, invoicing, sales, and so on.

The advantages of implementing Odoo according to Aziza and Rahayu (2019) are:

- a. An attractive interface and not too complicated for new users
- b. Software that is easy to develop because it uses HTML-PHP as its programming language.
- c. Easy access anywhere and can be via tablet or smartphone
- d. Suitable for small and large scale businesses.

### **Business process modeling notation (bpmn)**

According to Ismanto et al, (2020) Business Process Modeling Notation (BPMN) is a standard that functions to model business processes by providing graphic notation in explaining a business process. BPMN describes a business process in the form of a diagram which is based on flow chart techniques and is assembled in such a way as to create graphical models of business operations where there are activities and flow controls to explain and define work sequences (Yohana, 2018) . The Business Process Management Initiative (BPMI) was developed by BPMN, this is a standard from the Object Management Group whose function is as a communication tool between business and technical users (Lodhi et al., 2011). The BPMN diagram consists of elements. This element is divided into four categories, namely Flow Object, Connecting

Object, Swimlanes, and Artifact (Mautofani and Rottie, 2018).

### **Flow object**

#### **Event**

Represented in the form of a circle and describes what happened at that time. There are two types of events, namely start, intermediate, and end. These events affect the process flow of the process and usually cause an event (trigger) or an impact (result). Each event represents the start of a business process, a business process interruption, and the end of a business process. Each type of event itself is divided into several types, for example message start, which is symbolized like a start event but gets an additional envelope symbol in it, which means that the event message starts with the entry of the message.

#### **Activity**

Represents the work (task) that must be completed. There are four kinds of activities, namely task, task looping, sub process, and subprocess looping.

### **Connecting object**

Connecting objects are the flow of messages between processes where one event is related to each other and represents the relationship. There are 3 types of symbols or pictures in writing connecting objects, namely:

- a. Sequence flow, representing the default choice for running processes.
- b. Message flow, representing the flow of messages between processes.
- c. Association, is used to connect elements with artifacts.

### **Swimlanes**

This element is used to visually categorize all the elements in the diagram. There are two types of swimlanes, namely pool and lane. The difference is



the lane is located inside the pool to categorize the elements in the pool to be more specific.

**Artifact**

This element is used to explain the diagram. This element consists of three types, namely: data object, used to explain what data is needed in the process; group, to group a number of activities in a process without affecting the ongoing process; and annotation, which are used to provide notes to make the diagram easier to understand.

Research conducted by Saadiyah (2015) shows that ERP implementation has an effect on improving marketing performance at MSMEs in Semarang. Similar to research conducted by Firdaus and Widyaastrena (2017) that ERP is able to overcome the problem of presenting cooperative and MSME financial reports and can produce accountable financial reports. Not much different, in the research of Deshmukh et. al (2015) stated that ERP is one of the solutions for Small and Medium Enterprises (SMEs) in India to face global challenges, considering that these SMEs represent the spinal cord of the Indian economy. In addition, Fitrah and Liansari's (2016) research states that the design of

the Open ERP Odoo system in the solar module business line in this electronics company can facilitate all information transfer quickly and in real time as well as management supervision in one database. The implementation of Odoo was also carried out in Hanifa's research (2017) where the information system in the PT. Employee Cooperative warehouse. XYZ facilitates coordination and communication between users, resulting in fast decision making. Other research related to the implementation of Odoo was also carried out by Aziza and Rahayu (2019) where the Odoo ERP system sales module design can reduce problems and help make work easier because all processes and data are stored automatically and integrated. Meanwhile, with regard to cash receipts and disbursements, research conducted by Hidayat (2015) and Pradnyawati et al (2019) shows the same results that there is a need for segregation of duties for each section, especially those related to cash, both the cash in cycle and the cash out cycle. In addition, the documents related to these two cycles are also important to pay attention to their completeness, which is aimed at improving internal control.



Figure 1. Start, intermediate, end event elements



Figure 2. The activity element



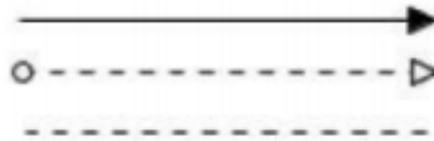


Figure 3. Sequence flow, message flow and association elements

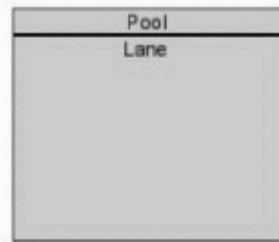


Figure 4. Pool and Lane



Figure 5. Object, group and annotation data elements

## 2. Conclusion

The use of technological innovation in the form of an ERP-based accounting information system (ODOO) can be used to achieve the advancement of cooperatives in Indonesia.

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