LITERATURE REVIEW

Accounting Information System

Accounting information system has an important role in providing information for the decision-making process in a particular business. The information received will be processed to give accurate and timely information to the users.

According to Rama and Jones (2008:5), accounting information system is:

*Accounting information system is a subsystem from Management Information System, (MIS) which provides an accounting and financial information, also other information from the process activity of accounting transaction used for users. Accounting information system gathers information from the business activity done in its revenue cycle, expenditure cycle, production cycle, payroll cycle, and financial cycle.*

In addition based on Hall (2010:7), the definition of Information System is:

*A set of formal procedures for which data are collected, processed into information and distributed to the user. The information system accepts input, called transactions, and the transactions fall into two classes: financial and nonfinancial transactions, which are converted through various processes into output information that goes to users.*

Furthermore, Romney and Steinbart (2012:30) explain that:

*Accounting is data identification, collection and storage process as well as an information development, measurement, and communication process. By definition accounting is an information system, since an accounting information system collects, records, stores, and processes accounting and other data to produce information for decision makers.*

Based on those definitions it can be concluded that Accounting Information System is a set of data coming from the components inside a business, which is identified, recorded, collected, stored, and processed the data from the existing transactions into information that will be useful for the decision-makers.

Business Process

Business Process is working systems that cover the five (5) business cycles used to achieve the company’s goal. Those cycles are:
1. Revenue Cycle
   According to Romney and Steinbart (2012:352), Revenue cycle:

   *Is a recurring set of business activities and related information processing operations associated with providing goods and services to the customer and collecting cash for payment from those sales…Revenue’s cycle primary objective is to provide the right product in the right place at the right time for the right price.*

   There are four basic revenue cycle activities namely Sales Order Entry, Shipping, Billing, and Cash Collection (Romney and Steinbart 2012: 353).

   a. **Sales Order Entry**
      Firstly, revenue cycle will start by receipt an order from the customer. In sales orders entry process consists of three steps: taking customer’s order, checking and approving customer credit, and checking inventory availability.

   b. **Shipping**
      The activity done is by filling the customer orders and shipping the desires merchandise. The process was consists of: picking and packing the order, and shipping the order.

   c. **Billing**
      Here the activity is to involve billing from customers. Where the process is by making an invoice and updates the account receivable.

   d. **Cash Collection**
      The final step in revenue cycle is collecting and processing payments from customers.

   In short those four basic activities above show the things that are included in the revenue cycle, which is 1) where this cycle will get input, 2) what kind of steps should be taken, and 3) how the output will be produced from the activity. These activities receive data as an input for the entities and give output or produce information to the other entities. This kind of information resulted is used to provide information needed both for the revenue cycle itself and as a cross information to another cycle.

   Here are examples of how the cross information work from the revenue cycle to the expenditure cycle. One activity included in the spending cycle is making a purchase for the material. Before making a purchase, this cycle needs information of the material to initiate the purchase. The information of material can be seen from the result of the sales transaction that happens in the revenue cycle. That is why; the sales
transaction information from the revenue cycle will be needed by the expenditure cycle to initiate the purchase.

2. **Expenditure Cycle**

According to Romney and Steinbart (2012:391), Expenditure cycle is:

> a recurring set of business activities and related information of processing operations associated with the purchase of and payment for goods and services... The primary objective in the expenditure cycle is to minimize the total cost of acquiring and maintaining inventories, supplies, and the various services the organization needs to function.

There are four basic expenditure cycle activities namely Ordering Materials, Supplies, and Services, Receiving Materials, Supplies, and Services, Approving Supplier Invoices, and Cash Disbursement (Romney and Steinbart, 2012:392).

a. **Ordering Materials, Supplies, and Services**

The first major business in the expenditure cycle is ordering materials, supplies, and services. This involves first identifying what, when, and how much to purchase and then choosing from which supplier to purchase.

b. **Receiving Materials, Supplies, and Service**

The second major business activity in the expenditure cycle is the receipt and storage of ordered items. The receiving department is responsible for accepting deliveries from suppliers and reports to the warehouse manager. The inventory stores department responsible for storage of the goods. Information about the receipt of ordered merchandise must be shared to the inventory control function to update the inventory records.

c. **Approving Supplier Invoice**

The third main activity in the expenditure cycle is approving supplier invoices for payment. Here the account payable department approves supplier invoices for payment.

d. **Cash Disbursement**

The final activity in expenditure cycle is paying the supplier. The cashier, who reports to the treasurer, is responsible for paying the supplier.

Below are the examples of how the cross information works from the revenue and production cycle to expenditure cycle. When wanting to purchase goods and materials, it needs to first check the information about
the sales order from the revenue cycle before checking the availability of the inventory information from the production cycle.

3. Production Cycle
   According to Romney and Steinbart (2012:426), Production cycle is:

   *a recurring set of business activities and related information processing operation associated with the manufactured product. Production cycle describes how the information needs to perform and manages those activities to be collected, processed, and stored. It also explains the control necessary to ensure not only the reliability of that information but also the safeguarding of the organization’s resource.*

   There are four basic production cycle activities, which are Product Design, Planning and Scheduling, Production Operations, and Cost Accounting (Romney and Steinbart, 2012:426). It explains the activities as follow:

   a. **Product Design**
      The first step in production cycle is product design. The objective is to create a product that meets customer requirements in terms of quality, durability, and functionality while simultaneously minimizing production cost.

   b. **Planning and Scheduling**
      The second step in the production cycle is planning and scheduling. The objective is to develop a production plan efficient enough to meet existing orders and anticipated short-term demand while minimizing inventories of both raw materials and finished goods.

   c. **Product Operation**
      The third step in production cycle is the actual manufacture of the product. The manner in which this activity is accomplished varies greatly across companies, differing according to the type of product being manufactured and the degree of automation used in the production process.

   d. **Cost Accounting**
      The final step in production cycle is cost accounting. The three principal objectives of the cost accounting system is 1) to provide information for planning, controlling, and evaluating the performance of production operation; 2) to provide accurate cost data about product for use in pricing and product mix decisions; and 3) to collect and process the information used to calculate the inventory and cost of goods sold values that appear in the company’s financial statement.
One example of the accounting information used for production cycle is information from revenue cycle such as sales order that is used to plan the production.

4. Payroll Cycle

According to Romney and Steinbart (2012:455), Payroll cycle is:

*a recurring set of business activities and related data processing operations associated with effectively managing employee work force. The more important task includes the following: 1.) Recruiting and Hiring new employees; 2.) Training; 3.) Job Assignment; 4.) Compensation (Payroll); 5.) Performance Evaluation; 6.) Discharge of employees due to voluntary or involuntary termination... The Human Resource Management (HRM) system is usually the responsibility of the director of human resources, whereas the controller manages the payroll system.*

As explained above, payroll cycle activities focus on the things that are related to the management for its human resource. It has six important tasks which focus on two things namely HRM and Payroll. Recruiting and hiring, training, job assignment, performance evaluation, and discharge of employees are the focus for HRM to improve the company’s human resource. The payroll department focuses on controlling and managing the compensation. The example of the payroll cycle’s role in another cycle, such as expenditure cycle, it needs information to record its expenses for the payroll.

5. General Ledger and Reporting System

General ledger and reporting system according to Romney and Steinbart (2012:483):

*General ledger and reporting system play a central role in a company’s accounting information system. Its primary function is to collect and organize data from the following source:*

a. Each of accounting cycle subsystems provides information about regular transactions. (only the principal data flows from each subsystem are depicted, to keep the figure uncluttered)

b. The treasure provides information about financing and investing activities, such as the issuance or retirement of debt and equity instruments and the purchase or sale of investment securities.

c. The budget department provides budget numbers.
d. The controller provides adjusting entries.

This cycle is the central point that collects and organizes the data from revenue, expenditure, production, and payroll cycle. This cycle is used to produce reports and a financial statement by accumulating all the data received from the other cycles. Which later, this report will be useful for the user to help in making a decision.

Accounting Information System Design

The definition of a designing system based on Ladjamudin (2005:39) is “designing steps (design) which have the purpose of designing a new system which is able to solve the problems faced by the company, received by choosing the best alternative system”. Kusriini (2007:79), also defines a designing system as a process of a new system specification development based on recommendation resulted from the system analysis. From those two definitions, it can be concluded that designing accounting information system is a process of the new system development to help and support the company in doing their operational activity.

According to Romney and Steinbart (2012), there are five steps used to develop a system design called System Development Life Cycle (SDLC), those steps are:

1. System Analysis
   This step used to collect any information needed in order to purchase, develop, and modify the system.

2. Conceptual Design
   This step used to identify and evaluate any alternative design.

3. Physical Design
   This step used to specify the design into a computerize coding, design the input and output document, create file and database, develop a procedure, and develop a new control system

4. Implementation and Discussion
   This step used to install or implement the new system design.

5. Operation and Maintenance
   This step reviews and modify the system if there is any problem appear from the new system designed.
Mulyadi (2011) also explains the steps used to develop the accounting information system, which consists of three parts namely:

1. **System Analysis**
   *In analyzing the system, it is necessary to collect the information to get the entire idea of the client company. The purpose is to understand the problem that happens in the company by defining the functional need.*

2. **System Design**
   *In this step, a system analysis gives a suggestion of the system design in details. It also gives a final report resulted by the system design that is made. Some documents are also used to provide and offer a system design to the users. System design aimed at understanding the problem solving in the analysis step.*

3. **System Implementation**
   *In this step, the implementations of the design made in the system application in a company are as follows:*
   - a. Preparation of system implementation
   - b. Knowledge and training for the employees
   - c. System conversion

This research adopts the step method to develop the accounting information system from Mulyadi because of its steps are more compatible for designing a system especially for accounting information system.