Original Article

THE ACCOUNTING INFORMATION SYSTEMS OF CONVERSION CYCLE (RAW MATERIALS, LABOR AND OVERHEAD) SPECIAL IN THE PHARMACEUTICAL INDUSTRY

An Suci Azzahra[1], Arini[2], Iskandar Muda[3]

[1] Universitas Pembangunan Pancabudi, Medan, Indonesia
[2] Universitas Lancang Kuning, Riau, Indonesia
[3] Universitas Sumatera Utara, Medan, Indonesia
[1,3] Email: shuchiey@gmail.com, [3]iskandar1@usu.ac.id

DOI: 10.47750/pnr.2022.13.S07.525

Abstract

In this article, we're going to talk about conversion cycles. The definition of the conversion cycle is the conversion cycle that originates from various input resources, for example raw materials, labor, and overhead, into finished products or services for sale. The clearest example of the conversion cycle is seen in manufacturing companies.Within the company, the conversion cycle is an important part to suppor the company's progress in increasing competitive advantage. Conceptually, the conversion cycle must exist in all organizations, both organizations belonging to the service industry or the retail industry. However, the most obvious is in the manufacturing industry.

Keywords: Conversion Cycle, Quality information, Sales Outstanding

1. Introduction

In the information and globalization era, the business environment has experienced rapid changes with intense competition. Therefore, companies are required to carry out their operational activities effectively and efficiently to maintain their existence, so that knowledge is a very important force to assist managers in making decisions. Quality information, namely information that is accurate, relevant and timely so that the right decisions can be made that are adapted to the information systems implemented in each company (Nasution et al., 2020). Thus, management of information systems is a very important thing to do. Due to the various forms of company operations, the objectives of accounting information systems also vary.

Information systems are also needed in the procurement of raw materials to smooth the process of purchasing raw materials from suppliers and to buyers. The procedure for purchasing raw materials involves several parts of the company with the intention that the implementation of purchasing raw materials can be monitored properly. One of the causes of chaos in the procedure for purchasing raw materials is the weak internal control of the systems and procedures that govern a transaction. To overcome this problem, every company needs to develop a system and procedure that can create good internal control in managing the implementation of company transactions.

The conversion cycle contains the transactions that actually occur when inputs are converted into salable goods or services. The processes used in the conversion cycle are materials, labor, and exploitation costs.In the implementation of the production process many things that must be considered. Starting from the procurement of raw materials to the implementation of the production process itself, it is necessary to have good and appropriate

control systems and procedures so that the smooth production process is maintained. In fact, many problems that often occur are related to production activities. For example, inadequate availability of raw materials, untimely delivery of ordered raw materials, wasted materials used, production implementation that was not on time, inadequate human and technological resources, to the application of inaccurate cost accounting (Lubis et al., 2022). That's where the production accounting system has an important role as control controls for the company. Management requires accounting information related to decision making for a specific purpose, so a managerial accounting information system is needed. In this discussion, we will discuss one of the four transaction cycles in the accounting information system to record business activities.

2. Literature Review

Informationis useful data that is processed so that it can be used as a basis for making the right decision. The characteristics of reliable information must meet the requirements of being relevant, timely, accurate and complete. Information System is a system that processes data and transactions to produce information that is useful for planning, controlling and operating a business.According to Bodnard and Hopwood (2000:23) an accounting information system is a collection of resources such as humans and equipment that are managed to transform data into information.

According to Costa (2014), Wiyono and Kusuma (2017) state that the Cash Conversion Cycle (CCC) is a measure of how quickly a company can receive cash through sales, which is expressed in the sum of the time needed to convert the company's receivables into cash (Days Sales Outstanding/DSO) and the time required to convert raw materials into finished goods and sell them (Days Inventory Outstanding/DIO) reduced by the average period from the purchase of raw materials and the use of labor to payment (Days Payable Outstanding /DPO). Understanding the Conversion Cycle is a group of repetitive activities of business activities and data processing operations that will be involved in the conversion of input resources, such as raw materials, labor, and overhead into finished goods or services for sale (Romney, Steinbart, Cushing, 1997).

So it can be interpreted that the conversion cycle is a cycle that processes raw materials and supplies into finished products (goods or services) that are ready for sale. In the conversion cycle, the accounting system records one economic event (transaction), namely the consumption of raw materials, labor, and overhead to produce products or services that can be sold. In manufacturing companies, this cycle consists of a payroll system, an inventory system, and a cost accounting system.

The application system in the conversion cycle processes 5 types of transactions, namely: purchases of goods, sales of goods, transfers of raw materials, labor and overhead into production, transfers of goods in process to finished products and payroll.

2.1. Production System

A production system that includes several series of business activities and several data processing activities that will be related to other subsystems.

- Revenue cycle that provides information about what products are ordered and sales forecasts (quantity), which will be used by the production department to develop production plans and inventory level (amount)
- Information about raw materials is sent to the purchasing cycle in the form of a purchase requisition. Conversely, the purchasing cycle also provides information about purchased raw materials and expenses included in factory overhead.
- Information about labor requirements is sent to the human resource management/payroll system which will provide data on labor availability and costs (labor costs).
- Information about cost of production is sent to the general ledger and reporting cycle

Activities activities in the production system include

- Product design
- Planning and scheduling (planning and scheduling)
- Production activities
- Cost accounting

2.2. Inventory System

An inventory system is a system that maintains inventory records and notifies managers when certain types of goods require replenishment. In manufacturing companies, the inventory system controls the level or amount of raw materials and the amount of finished products. An inventory system processes two types of transactions, namely purchases of goods and sales of goods.

A. Purchase of goods

The expenditure cycle processes purchases of goods. However, the journal that is made to record these transactions depends on the method used for inventory accounting, namely the periodic method and the perpetual method. Periodically the company also calculates the cost of goods sold from the beginning balance and ending balance of the period and account balance purchase. The journal to record purchase transactions is:

Purchase	xxx
Accounts Payable	xxx

B. sale of goods

The company records the cost of goods sold in a ledger account entitled Cost of Goods Sold. If the company uses the periodic method, the company does not need to make a journal when a sales transaction occurs. how If the company uses the perpetual method, the company will debit the Cost of Goods Sold account and credit the Inventory account when a sales transaction occurs. so that at the end of the period, the ending balance in the cost of goods sold account is the cost of goods sold during one accounting period.

C. Generated Reports

The inventory system also generates various kinds of reports, namely:

a. Inventory status report

This report contains a list of all types of inventory, quantity and cost. This report provides an explanation of the inventory reported in the balance sheet.

b. Report per inventory type

In the real-time on-line system, the company's employees know the quantity per type of inventory available when this report is generated. There are 2 options for finding out this information, namely printing it on paper or viewing it on a monitor screen.

c. Reorder report

In a manufacturing company, this information initiates production orders.

d. Report on the results of physical calculations

This report contains a physical inventory count that is carried out periodically. With this report, the calculation of cost of goods sold can be done.

2.3. Cost Accounting System

The final stage in the production system is the cost accounting system. The purpose of implementing a cost accounting system is (a) to produce information for planning, controlling, and evaluating the performance of production activities, (b) to produce accurate cost information so that it can be used as a basis for pricing and decisions about product composition (product mix), and (c) produce information that can be used to calculate the value of inventory and cost of goods sold.

The types of cost accounting systems that are generally used by a company are job-order costing systems and process costing systems. The system for determining the cost of orders assigns costs to certain production groups, for example orders. This method is used when the products made and sold have different specifications (heterogeneity). Reports generated by the cost accounting system are generally in the form of control reports and reports on cost of production. The accounting records maintained in this cost accounting system depend on whether the cost data processing is done using a computer or not. Fee transaction processing can be done manually or by using a computer. Detailed description of fee transaction processing procedures,

2.4. Human Resource Management System (Payroll)

A human resource management system or payroll system is a set of business activities and related data processing activities that relate to the effective management of a company's employees (Yulisfan et al., 2021). Important activities included in the human resource management system are:

1. Selection of prospective employees and appointment of new employees
2. Training for new employees
3. Placement or assignment of new employees
4. Payroll or salary determination, and other incentives
5. Evaluation of employee performance
6. Termination of employees

However, a well-designed HR management system is also important for the company, because the skills and knowledge of employees are assets of high value, which must be managed, developed and maintained carefully (Muda et al., 2019). The payroll system is closely related to other subsystems and also related to external parties of the organization. Activities in the payroll system will be described through two models, namely a payroll system that is carried out manually, and a payroll system that is carried out using a computer. For each system the description will be given in two forms, namely in the form of a flowchart and in the form of a narrative.

3. Methods

The research method used in this research is a qualitative method with a descriptive type. Data collection uses primary and secondary sources. Primary sources are data sources that directly provide data to data collectors, and secondary sources are sources that indirectly provide data to data collectors, for example through documents (Sugiyono, 2011: 225).

4. Result And Discussion

The company's expenditure cycle will transform various input resources, such as raw materials, labor, and overhead, into finished products or services that will be traded. so that in the application of the existing conversion cycle in a traditional manufacturing environment, there are several basic activities of the production cycle.

1. Product Design

The first step in the production cycle is product design. The goal of this activity is to design a product that will meet demand in terms of quality, durability, and function, while minimizing the cost of producing it. So that the product design activities will produce two main documents, namely the first list of raw materials and the second list of operations.

Accountants can be involved inproduct design. Accountants can provide information showing how various designs affect production costs and profit levels. The accountant can ensure that the SIA is designed to collect and provide information regarding machine setup and material handling costs associated with various product design alternatives. Providing data on repair costs and warranties associated with existing products can be useful for designing better products.

2. Production Planning and Scheduling

The second step in the production cycleis planning and scheduling. The goal of this step is to develop a production plan that is efficient enough to meet existing orders and anticipate short-term demand without creating excess inventory of finished goods. Two usual methods of production planning.

1 Production resource planning

(MRP-II)• MRP-II is a continuation of raw material resource planning that seeks a balance between existing production capacity and raw material requirements to meet forecasted sales demand.

2 Just-in-time (JIT) production systems

The goal of JIT production is to minimize or eliminateinventories of raw materials, work-in-progress, and finished goods.

Documents, forms and procedures used inproduction planning and scheduling:

- The master production schedule (MPS) specifieshow much product will be produced during the planning period and when the production should take place.
- The raw material request legitimizes the expenditurethe amount of raw material needed from the warehouse to the factory location, where the material is needed.
- Subsequent movement of raw materials inthroughout the factory will be documented in the transfer card

Accountants can be involved inplanning and scheduling by ensuring that the AIS collects and reports costs in a manner consistent with the company's production planning techniques. Accountants can also help companies choose between MRP-II or JIT to see which is more appropriate for the company's production planning and scheduling.

3. Production operation

The third step in the production cycleis the actual production of the product. The way this activity is accomplished differs greatly in different companies. Computer-integrated manufacturing (CIM) is used as a form of information technology in the production process.

Computer-Integrated Manufacturing (CIM) isthe use of various forms of IT in the production process, such as robots and computer-controlled machines, to reduce production costs. Every company needs data regarding the following 4 aspects of its production operations in the form of raw materials used, labor hours used, machine operations carried out, as well as other production overhead costs that occur.

4. Cost accounting

The final step in the production cycle is accountingcost. The cost accounting activity of the conversion system records the various financial effects of physical events that occur in the production process. from the receipt of the last few transfer sheets for a batch that will signal the completion of a production process and some transfers of products from WIP to finished goods inventory.The purpose of a cost accounting system is to provide information for planning, controlling, and evaluating the performance of production operations. To provide accurate cost data about products for use in pricing and product mix decisions. Collect and process information used to calculate inventory and the value of cost of goods sold that appears in the company's financial statements. the cost accounting system in the conversion cycle can be done by:

1 The cost of the order

Order costing is charged tocertain batches of production, or certain jobs.

2 Process cost

Calculation of the cost of the process of assigning costs toeach process, and then calculates the average cost for all units produced

Application of Traditional Manufacturing Environments

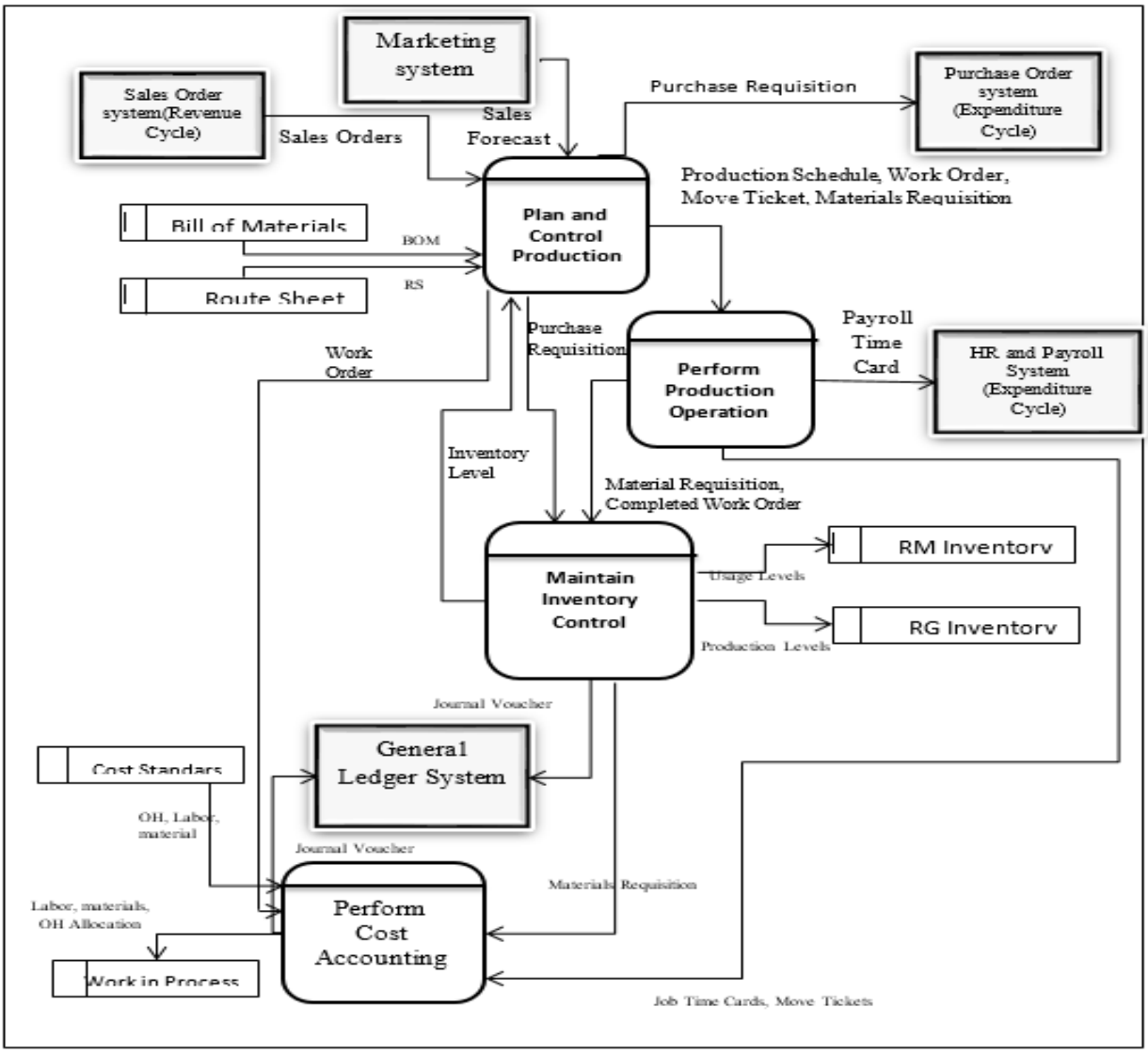
The conversion cycle will consist of two subsystems, namely physical activity (production system) and information activity (cost accounting system). So based on the type of product to be produced, the company will use one of the following methods for production:

✓ From continuous processing will make the same product from going through a series of continuous standard procedures. Thus, with this approach the company will try to store finished goods at the level needed to meet the forecast sales demand.

✓ Processing from multiple orders to orders which will involve manufacturing a variety of different products so that they can be matched to customer specifications. This process can be initiated by a sales order, not by a decreasing inventory level.

✓ Batch processing produces different batches. Each item in a batch is almost the same, that is, it would require the same raw materials and operations. This method is also used to manufacture various products such as cars, household appliances, and computers.The trigger mechanism for this process is the need to maintain finished goods inventory levels in line with predicted sales needs.

Batch Processing System



Information

a. Documents in Batch Processing Systems

✓ **Production schedule**(production schedule) is a formal plan and authorization to start production. This document describes the various products to be made, the quantities to be produced in each batch, as well as the production schedule for starting and completing production.

✓ **List of raw material requirements**(bill of materials - BOM) specifies the type and quantity of raw materials and assembly materials used in producing one unit of finished goods.
✓ **Work process sheet**(route sheet) shows the production path for a specific group of products during the manufacturing process. It usually specifies the sequence of operations (machine or assembly) as well as the standard time allocated for each job.
✓ **Work order**, or production orders (work orders/production orders) are created based on BOM and work process sheets to specify raw materials and production for each batch.
✓ **Transfer sheet**records the work done at each job site and authorizes the movement of a batch to the next job site.
✓ **Raw material demand**(Material requisition) authorizes the keeper of the storage room to release raw materials to individuals or work centers in the production process.

b. Batch Production Activity
✓ **Production and Control Plan.**This stage involves two activity procedures: (1) specification of requests for raw material requirements and production operations and scheduling.
✓ **Raw material and operational needs.**Raw material requirements for a batch in a particular product breakdown is to analyze what is needed compared to that will be available in some raw material inventory. Operational requirements for the batch include installation and/or various production activities that will be applied to the product.
✓ **Production Scheduling.**The primary scheduler for production execution coordinates the different batches. Scheduling is affected by pressing time, batch size, and specifications derived from BOM sheets and routes.
✓ **Workplace and Warehouse (Storage).** The actual production operation begins when jobs receive raw materials from warehouse staff in exchange for requisitions for materials. so that in the end, together with the finished product, it will then be sent to the finished goods warehouse.
✓ **Inventory controller.** Inventory control which will consist of three main activities. the former, will trigger the entire process by providing inventory status reports to raw materials and finished goods for production planning and control. secondly, inventory control personnel will continue to be involved in updating raw material inventory records based on raw material requests, requests for additional materials, and material return sheets. Finally, after being able to receive work orders from the last workplace, part of the inventory control will record finished products in several finished goods inventory records. The goal of inventory control is to reduce the total cost of inventory while ensuring sufficient inventory to meet current demand.

5. Conclusion

system isa group of elements that are closely related to each other that function together to achieve certain goals. Usually made to deal with something that occurs repeatedly or regularly. Information is useful data that is processed so that it can be used as a basis for making the right decisions. The characteristics of reliable information must meet the requirements of being relevant, timely, accurate and complete. Information System is a system that processes data and transactions to produce information that is useful for planning, controlling and operating a business. The notion of a conversion cycle is a group of repetitive business activities and some of the data processing operations associated with the conversion of input resources, for example a conversion cycle such as raw materials, labor, and overhead that will become finished goods or services for sale. (Romney, Steinbart, Cushing, 1997). The conversion cycle contains the transactions that actually occur when inputs are converted into salable goods or services. The processes used in the conversion cycle are materials, labor, and exploitation costs. The traditional conversion cycle consists of two types, namely: production systems and cost accounting systems. The production system involves planning, scheduling, and controlling physical products throughout the production process. The cost accounting system monitors the flow of production-related cost information. The Conversion Cycle is a group of recurring business activities and data processing operations associated with converting input resources, such as raw materials, labor, and overhead into finished goods or services for sale (Romney, Steinbart, Cushing, 1997). The conversion cycle contains the transactions that actually occur when inputs are converted into salable goods or services. The processes used in the conversion cycle are materials,

labor, and exploitation costs. The traditional conversion cycle consists of two types, namely: production systems and cost accounting systems. The production system involves planning, scheduling, and controlling physical products throughout the production process. The cost accounting system monitors the flow of production-related cost information. The processes used in the conversion cycle are materials, labor, and exploitation costs. The traditional conversion cycle consists of two types, namely: production systems and cost accounting systems. The production system involves planning, scheduling, and controlling physical products throughout the production process. The cost accounting system monitors the flow of production-related cost information. The processes used in the conversion cycle are materials, labor, and exploitation costs. The traditional conversion cycle consists of two types, namely: production systems and cost accounting systems. The production system involves planning, scheduling, and controlling physical products throughout the production process. The cost accounting system monitors the flow of production-related cost information.

References

1. Krismiaji, (2005). Accounting Information Systems, Second Edition; Yogyakarta : Academy of Management. YKPN Company.
2. La Midjan, (2006). Accounting Information System, Jakarta: Salemba Empat
3. Lubis, S. S., Maherza, W., Ziwiana, N. D., (2022). Flexible Budget and Overhead Analysis in Pharmacy Issuers. *Journal of Pharmaceutical Negative Results*, 2931-2936.
4. Muda, I; Afrina. A; E. (2019). Influence of human resources to the effect of system quality and information quality on the user satisfaction of accrual-based accounting system (Implementing of adaptive behavior assessment system theory, case in Indonesia). *Contaduría y Administración*, próxima publicación. 63(4), 1-25. https://www.journals.elsevier.com/contaduria-y-administracion
5. Mulyadi, (2005). Accounting Information Systems, Third Edition; Jakarta : Salemba Empat publishing department.
6. Nasution, M.K, Manurung, K.B., (2020). The Relation of COBIT Internal Control and ISO 9001 Quality Management. *Turkish Online Journal of Qualitative Inquiry*. 11(4). 726- 734. https://tojqi.net/index.php/journal/article/view/6711
7. Yulisfan, Y., & Nedelea, A. M. (2021). The Evolution of Payroll Software That Can Replace The Manual Method In Indonesia. *Ecoforum Journal*, *10*(2).1-6.