

# Enterprise Resources Planning for Application Control in Revenue and Expenditure

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## Article Info

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**Abstract:** In most companies today, the use of technology and information systems has been focused to help ease the work of running their business operations. One of them is by developing the company's Enterprise Resources Planning (ERP) system. The purpose of this research is to evaluate the application control on sales, purchasing, and financial statement closing process cycle on company's ERP. The method applied is literature study and field study by doing observation and analyzing the results of IT Audit documentation of company. The result of research on application control on sales, purchasing, and financial statement closing process can be concluded has been run effectively. Although there are some deficiencies to the user access policy, it has been recommended to improve documentation and monitoring user's access by removing excessive access user in application area and developing the User Access Matrix

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## 1. Introduction

In this modern era, business people are competing to gain competitive advantage, companies must have a strategy to be able to survive among other companies. In most companies today, the use of technology and information systems has focused a lot to help simplify the work of running their business operations. Companies that have large and complex business processes need the help of technology to facilitate and expedite the process of business activities carried out [1].

Currently, business people in manufacturing have made technology a very important need in running their business, this is because it can increase the speed of business processes related to improving customer service and increase reaction to changing market conditions in decision making.

One of them is by developing the company's ERP system. According to [2], ERP (Enterprise Resource Planning) is a system that integrates all

aspects of organizational activities such as accounting, finance, marketing, human resources, manufacturing, and inventory management into a system. A well-designed ERP system will give management good access to update information about all activities in planning, controlling, and evaluating an organization's business processes more effectively.

SAP (System Application and Product in Data Processing) is one of the ERP-based solutions or a management and IT tool to support companies in planning and realizing operational activities more effectively. According to the [3], SAP is one of the largest ERP suppliers because of the capabilities of its products.

Our research object is CIN Corp, it is a publicly traded company engaged in manufacturing that produces a variety of bakery products. The company was founded in 1995 and began operating commercially producing bread by operating its first factory in Cikarang region,

West Java Province. In 2006, CIN Corp obtained a HACCP (Hazard Analysis Critical Control Point) certificate, which is a food safety assurance certificate as proof of CIN's commitment to promote the 3H principle (Halal, Healthy, and Hygiene) on each bread product. In addition, all bread products have been registered through BPOM Indonesia and obtained halal certificates issued by the Indonesian Ulama Council (MUI).

As one of the largest bread producers in Indonesia, CIN has won a variety of awards including, Top Brand and Top Brand for Kids since 2009, the 2010 Marketing Award, Original Brand 2010, 2012 Investor Award, and awards from Forbes Asia. To maintain the achievements and improve the quality of the company, PT CIN invested in improving the management of corporate ERP applications using SAP (System Application and Product in Data Processing) software in the process of recording applied transactions

### 1.1. Problem Identification

Based on the background of the research described above, the formulation of the problem will be discussed as follows:

1. How to control the application on the ERP system implemented by CIN?
2. Is the application of application control in the purchasing, sales, and closing process of CIN's financial statements effective?
3. What improvements are needed by CIN in improving the ERP system that has been implemented?

### 1.2. Problem Identification

Based on the formulation of the problem that has been described previously, the purpose of this research can be described as follows:

1. Analyzing aspects of application control in the sales cycle (Order to Cash / Sales), purchasing (Purchase to Payment), and the process of closing financial statements (Financial Statement Closing Process)
2. Conduct an evaluation and evaluation of application control in CIN's ERP system over the cycle:

- a. Sales (Order to Cash / Sales) which consists of 4 controls namely Duplicate Sales Order, Journal posted once GI Posted, Access to Pricing Assignment, and Access to Customer Master.
  - b. Purchase (Purchase to Payment) consisting of 2 controls namely 3 Way Matching and Access to Vendor Master.
  - c. Financial Statement Closing Process which consists of 8 controls namely Duplicate Journal Test, Unbalance Journal Test, Access to GL Master, Access to Manual Journal, Access to Open / Close Period, Inventory Ledger Sub-ledger, Customer Ledger Sub-ledger, and Vendor Ledger Sub-ledger.
3. Provide recommendations on the results of the evaluation of application control in the CIN ERP system.

## 2. Theoretical Framework

### 2.1. Enterprise Resources Planning

According to [4], ERP (Enterprise Resource Planning) is a system that integrates all aspects of organizational accounting such as financial accounting, marketing, human resources, manufacturing, inventory management into a system. A well-designed ERP system will give management good access to update information about all activities in planning, controlling, and evaluating an organization's business processes more effectively. ERP systems with centralized of data, provide significant advantages as follows:

1. ERP provides a single display of organizational data and financial situations that are integrated throughout the company.
2. Data input is retrieved or locked once, and not multiple times, when entered into a different system.
3. Management gets greater visibility into each area of the company and greater monitoring capability.
4. Organizations get better access control.

5. Standardized procedures and reports between business units.
6. Manufacturing plants receive new orders in real time and automation of the manufacturing process increases productivity.

SAP (System Application & Product) is an ERP-based solution that is widely used by middle and upper-class companies. According to the survey, SAP is the largest ERP supplier leader because of the capabilities of its products. In addition SAP develops its ERP products on an ongoing basis by following technological advances and business and industry needs [5].

## 2.2. Application Control

Control that prevents, detects, and corrects transaction errors and fraud in the application program. This control focuses on the accuracy, completeness, validity, and authorization of data that is entered, processed, stored, transmitted to other systems, and reported [6]. This control consists of:

1. Control of Input; Input control ensures that data entered into the system is validated, accurate and verified.
2. Process Control; Process control is usually divided into two stages, namely (1) the transaction stage, where the process occurs in both temporary and permanent transaction files and (2) the database stage, the process carried out in master files.
3. Control of Output; This control several checks are done automatically or manually (invisible) if the output produced is also invisible [7].

## 2.3. Revenue Cycle

According to [8], the revenue cycle is a series of business activities that occur repeatedly and information processing activities relating to the delivery of goods and services to customers and receiving payments for the delivery of goods and services. The main purpose of the revenue cycle is

to provide the right product in the right place at the right time for the right price.

According to [9], the income cycle consists of four basic activities, including sales, delivery, billing, and cash order entries.

Specific goals that companies want to achieve in implementing the revenue cycle [10]:

1. Record sales requests accurately and accurately;
2. Verifying consumer credit worthiness;
3. Delivering goods or services at the right time and in the right way;
4. Record and classify cash receipts appropriately and accurately;
5. Booked the sale and receipt of cash into consumer accounts appropriately;
6. Securing cash until the deposit is made.

## 2.4. Expenditure Cycle

According to [11], the expenditure cycle is a series of business activities and information processing operations related to the purchase and payment of goods and services. The main objective in the expenditure cycle is to minimize the total cost of acquiring and maintaining inventory, and the various services that companies need to function.

According to [12] the expenditure cycle consists of four processes, namely:

1. Determine demands for goods

Activities of requests for purchases of goods and services are carried out using Purchase Requisition documents. This document contains a list of orders that includes the purpose of shipping goods, date of order, name and type of goods, and order quantity.

2. Order goods

Activities for ordering goods and services to be purchased are carried out using Purchase Order documents. This document contains requests for goods and services to the Supplier as well as shipping.

### 3. Receive goods

The activity of receiving goods and services that have been purchased is carried out using the Receiving Report document. This document contains the acknowledgment of receipt of goods and services, which includes the date of receipt of goods, the type and quantity of goods that have been received, the origin of the shipment (Supplier), and the Purchase Order number. This is the control of the company in order to find out what goods have been received and that have not been sent by the supplier.

### 4. Pay for goods

This is for payment for the purchase of goods and services that have been made using cash disbursement documents. This document contains the date of payment, the price to be paid, along with the invoice number. When payment is due, the supplier will bill the company according to the voucher package document. This is the control of the company in order to know the amount of company cash disbursements.

## 2.5. Financial Reporting Process

Financial reporting is all aspects relating to the provision and delivery of financial information. These aspects include the institutions involved (e.g. setting standards, government or capital market regulatory bodies, professional organizations, and reporting entities), applicable regulations including GAAP (General Acceptable Accounting Principles)

Accounting is a process of 3 activities, namely: identifying, recording, and communicating the economic events of an organization [13]. The first process is identification, which is the activity of selecting activities that are included economic activities. The second process is recording, i.e. all economic events are recorded to provide a history of the financial activities of the organization. The third process is communication, information that has been obtained from identification and recording will not be useful if not communicated. This information is communicated through the

preparation and distribution of accounting reports, which are most commonly referred to as financial statements [14].

## 3. Material and Methodology

This study is qualitative research. The type of data used in this study is primary data. Qualitative data is data consisting of words or sentences and not in the form of numbers. The data source used in this study is primary data, which was obtained directly from the original source of the research object. This data source is obtained through direct observation to the company concerned.

### 3.1. Library Research

This library research was conducted by reading and filtering several theories from books and journals related to enterprise resources system and application control, as well as other supporting theories needed in writing this study [15].

### 3.2. Field Research

This research was conducted by directly observing the company concerned and collecting data needed in writing this thesis. Ways done:

Observation; make direct observations about the activities carried out by the company.

Documentation; collecting supporting documents relating to policies and standard operating procedures related to the company's Information Security / Information Technology guidelines.

Data Analysis; this study uses data analysis methods collected using descriptive analysis methods, namely analyzing the data from the IT audit working paper as well as the confirmation results with the client in charge manager.

## 4. Research Result and Findings

### 4.1. Application and Control Procedures

The application control procedures carried out during the research process at CIN, are as follows:

1. Team Planning Event. Determine the scope to be examined and the budget that has been adjusted.



2. Kick off Meeting. Determine the time table; discuss the scope to be discussed in more depth, and the needs of auditors during the audit process.
3. Carry out an audit process. Understand the IT system used by clients by reading the previous year's working paper.
4. Identifying risks in accordance with the scope that has been done.
5. Conduct an examination (test of control) of the scope that has been done.
6. Conduct an evaluation of the results of the examination, if any findings are found to be used as audit evidence.
7. Provide recommendations for risks that occur.
8. The issuance of management letters. This letter is management response to recommendations given to clients.

#### **4.2. Evaluation of Application Control**

Evaluation of application control at CIN was conducted during one period (January 1 - December 31) using the audit methodology of external audit firm. This evaluation was conducted by an external IT audit team from Gyna Audit Firm, where CIN is a client of Gyna Audit Firm. Evaluation of application control at CIN which consists of 2 cycles: revenue and expenditure plus financial reporting process.

#### **4.2. Findings Related to Revenue**

Duplicate sales order; Record sales transactions that are fictitious, unauthorized and duplicated. The results of the examination of the Duplicate Sales Order process have been effective during the audit period and there are no records of duplicated transactions on sales documents or invoices.

Journal recorded once general ledger posted; the recording of fictitious or duplicated transactions, recorded in the wrong period, and transactions posted on the wrong general ledger account number. The results of the examination of the journal posted once general ledger posted process have been effective during the audit period, each item release process has been recorded on sales invoices and accounting documents.

Access to pricing assignment; Found error recording nominal price, discount and tax on invoice. The results of the examination of the Access to Pricing Assignment process have been effective during the audit period, but there is an excess of access to one user that can affect the integrity of the financial statements.

Access to customer master; Fictitious, inaccurate, and duplicated transaction records in customer master data. The results of the examination of the access to customer master process have been effective during the audit period, but there is an excess of access to one user that can affect the integrity of the financial statements.

#### **4.3. Findings Related to Expenditure**

Three-Way matching; this includes recording of fictitious, unauthorized and duplicated purchase transactions. The results of an examination of the 3 Way Matching process have been effective during the audit period, the quantity and total price of the transaction recorded on the purchase order (PO) document, goods receipt (GR), and invoice receipt (IR) are in accordance with each other.

Access to vendor master; Include: fictitious, inaccurate and duplicated transaction records on master vendor data. The results of the examination of the access to vendor master process have been effective during the audit period, but there is an excess of access for four users which can affect the integrity of the financial statements.

#### **4.4. Findings Related to Financial Reporting**

Duplicate journal test; recording fictitious and duplicated transactions recorded on general ledger. The results of the examination of the Duplicate Journal Entry process were effective during the audit period and no fictitious or duplicated transaction records were found in the journal entry.

Unbalance journal test; financial statements become inaccurate. The results of the examination of the Unbalance Journal Entry Test process have

been effective during the audit period. Journal entry and trial balance movement have been found in accordance with no differences found in each transaction (equal to 0).

Financial information closed period; recording transaction journals that are invalid or recorded in the wrong period. The results of the examination of the FI Closed Order process have been effective during the audit period, no transactions were found during the months of October to December having a back date of more than 40 days.

Access to open / close period; recording transaction journals that are invalid or recorded in the wrong period. The results of the examination of the Access to Open / Close Period process have been effective during the audit period, users who have access are in accordance with users who have access to modify transaction records in the open / close accounting period.

Access to journal manual; recording fictitious and duplicated transactions recorded on general ledger. The results of the examination of the access to manual journal process have been effective during the audit period. The user who accesses is in accordance with the user who has access to modify the journal manually.

Access to general ledger master; recording account numbers are in the trial balance or financial statements that are not appropriate. The results of the examination of the Access to general ledger master process have been effective during the audit period. The user who made the access is in accordance with the user who has access to change the account number.

Inventory Ledger Sub-ledger, Customer Ledger Sub-ledger, Vendor Ledger Sub-ledger; the recording of transactions on inventory accounts, customer accounts receivable, and vendor debts are in the trial balance or financial statements that are not appropriate. The results of the examination

of the Inventory Ledger Sub-ledger process, customer ledger sub-ledger. Vendor ledger sub-ledger has been effective during the audit period, recording inventory accounts, customer accounts receivable, and vendor debt in sub-ledgers with ledgers is appropriate.

## 5. Conclusion and Suggestions

Based on the results of the inspection procedures for application control in the sales, purchase, and closing process of the financial statements at CIN after identification of risks and application control over these risks, it can be concluded that the entire process of inspection has been carried out effectively and there are no additional records. Although a number of deficiencies were found in the CIN application system, recommendations were made in accordance with these deficiencies.

The recommendations that have been given to companies are to conduct regular user access reviews to detect any excess access granted, and ensure timely removal of any excess user access that has occurred.

Company needs conduct regular user access reviews to detect any excess access given to users, and ensure timely removal of any excess user access that has occurred.

Based on these conclusions, several suggestions have been given for making and optimizing controls related to existing deficiencies. The suggested control is expected to reduce or reduce the likelihood of risk occurring and also reduce the impact on the company if the risk occurs. The following are suggestions given for companies:

Conduct regular user access reviews to detect excess access given to users, and ensure timely removal of any excess user access that has occurred.

For users who have authorized access to control over the documentation must obtain official approval from the manager's level or above. In addition, monitoring policies and procedures

related to access monitoring activities must be developed and carried out consistently.

Developing the User Access Matrix; document that lists users who have authorized access to each process in the company's application system, and maintains it periodically. This will allow better monitoring of user access and ensure that users are given access to areas that are in accordance with the system.

Suggestion for further research is expected to improve the research that has been done before, by conducting comprehensive research on general control of information technology and application control.

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