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Accounting Information System in the Manual Payment Cycle: A Case Study at Hong KY Co., LTD.

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Abstract

In the accounting information system, the payment cycle is a cycle that needs to be built strictly and scientifically because money is an asset that is prone to embezzlement and fraud. The article summarizes the theoretical basis of accounting information systems in the manual payment cycle applied to businesses. The article applies the theory of accounting

information systems in the manual payment cycle combined with the theory of internal control to study the current situation and offer solutions to improve the accounting information system in the manual purchase cycle of printing enterprises in Hanoi.

Keywords: Accounting Information System, Payment Cycle, Physical Control Activities, Internal Controls, Data Flow Diagrams, Document Flowcharts

1. Introduction

The transaction cycle is a collection of transactions that are similar, interconnected, and entirely address a problem. In an enterprise, the accounting information system includes transaction cycles: sales cycle, purchase cycle, wage and fixed asset cycle, production cycle, financial statements, and management reports. In his book Accounting Information System (2018), James A. Hall examines internal control in general and internal control in each specific cycle. The work of James A. Hall provides the basic theoretical framework for building an effective accounting information system and minimizing risks. Thesis "Evaluation of accounting information systems in the environment of the accounting software application at the Vietnam Chamber of Commerce and Industry Can Tho branch" (2007) by student Tran Thi Phuc Duyen researched the application of information technology and offered solutions on the organization of accounting information systems. Thesis "Accounting information system at Provimi Co., Ltd. - Current situation and some complete solutions" (2013) by Do Thi Tuyet Hang, thesis "Research on factors affecting the quality of accounting information on financial statements of construction and installation enterprises listed on the Vietnam stock market" (2021) by PhD student Dao Thi Nhung, thesis "Factors affecting the effectiveness of accounting information systems in Vietnamese garment enterprises" (2022) by PhD student Nguyen Thi Hoai Thu, thesis "The impact of accounting information systems on the performance of Vietnamese small and medium enterprises" (2023) by PhD student Truong Van Tu... Based on past research findings, the authors highlight topics that have not been investigated in the accounting information system from the standpoint of the system's processes and internal control. Currently, there is no topic to study the accounting information system in the manual payment cycle at Hong Ky Co., Ltd., so the authors have researched the manual payment cycle in businesses and the typical case of Hong Ky Co., Ltd.

2. Literature Review

An accounting information system is an information system, consisting of a collection of small systems or material and immaterial components, linked and coordinated with each other in a harmonious way to process financial-related transaction data to produce financial information. The accounting information system consists of three main subsystems: The transaction processing system is the functional center of the entire information system by converting economic events into financial transactions; Recording financial transactions in accounting books and distributing necessary financial information needed to employees to support their daily activities. General Ledger/Financial Reporting Systems include the accounting books and financial statements prepared according to regulations. Management reporting systems are legally optional reports that provide necessary management reports for managers to make decisions.

The accounting information system description tools used include data flow diagrams and document flowcharts. Data flow diagrams (DFD) use symbols to present the elements, processes, data flows, and data stores that are relevant to a system. DFD

does not describe physical rotation in the system; rather, it describes the system's logical components. Flowchart documents are used to describe elements of the manual system such as bookkeeping, organizational sections participating in processes, and departmental operations. Each system component has at least one operation. The flowchart covers the flowchart's components, the actions of each department, the documents produced by each department, and the bookkeeping and saving activities.

In the process of building and perfecting the accounting information system in general and the accounting information system in the payment cycle in particular, internal control plays an important role to evaluate and perfect the system:

Transaction authorization is the authorization for individuals or departments to perform specific tasks or tasks. The purpose of transaction authorization is to ensure that all transactions processed by information systems are valuable and consistent with management objectives.

Segregation of duties: is the division of tasks for each individual and department in the enterprise, decentralization must ensure the minimization of incompatible functions. Decentralization is most seen in the following tasks: Decentralization should ensure that authorization for a transaction is separate from transaction processing, that asset holding is separate from asset record-keeping responsibilities, and that collusion between two or more

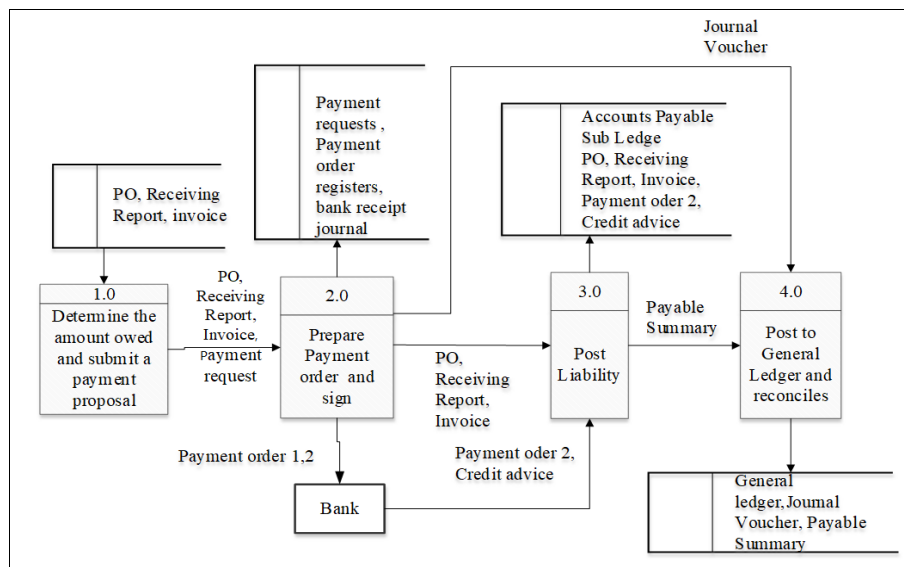
individuals with incompatible tasks is avoided.

Supervision: Often, to fully decentralize tasks requires a company that employs a large labor force. Achieving adequate separation of tasks is often difficult for small businesses. Therefore, monitoring activities are carried out to prevent risks to the system. Surveillance activities can be performed by humans or equipment such as cameras that inspect and monitor...

Accounting records: An enterprise's accounting records include all accounting paperwork and books detailing failed economic operations. These accounting records are a vital control activity and are preserved by regulations for enterprise inspection and audit operations.

Access Control: The company has a wide range of assets, including tangible assets and intangible assets. The purpose of access control is to ensure that only authorized personnel have access to company assets. The measures of access control help prevent and limit unauthorized activities, and protect company assets, including fences, protection at company gates, locks, safes to protect assets, and unauthorized intrusion alarm systems.

Independent verification: The verification procedure is a separate check with the accounting system to find errors and inconsistencies. Specific activities of independent verification can be the reconciliation of detail books and general books, reconciliation of data between accounting books and actual data in warehouses, funds, etc.



Bui Thi Ngoc, Tran Thi Du (2020)

Fig 1: DFD for manual payment cycle

Purchases can be immediate or deferred often, business purchases are deferred purchases. Bank deposits are typically used to fund purchasing transactions. Therefore, the study of the money payment cycle is focused on the process of payment of bank deposits. The data flow diagram of the manual money payment cycle shown in Fig 1 consists of four operations:

Determine the amount owed and submit a payment proposal: Based on the open vouchers payable, perform an inspection of the liabilities that are due and make a payment request. After that, all records of liabilities and payment requests are sent to the department that makes the Payment order.

Prepare Payment order and sign: Depending on the form of

payment, there will be different payment documents. After the payment order is signed, the payment order is sent to the bank. The remaining documents are needed to record liability details. At the same time, journal voucher is prepared and sent to the General ledger department.

Post Liability: After receiving the liabilities records and receiving payment documents from the bank, post to accounts payable subsidiary. At the same time, make a payable summary and send to the general ledger department.

Post to General ledger department and reconciles: The General ledger department is done with general ledger and reconciliation of the general ledger with the payable summary and saving documents.

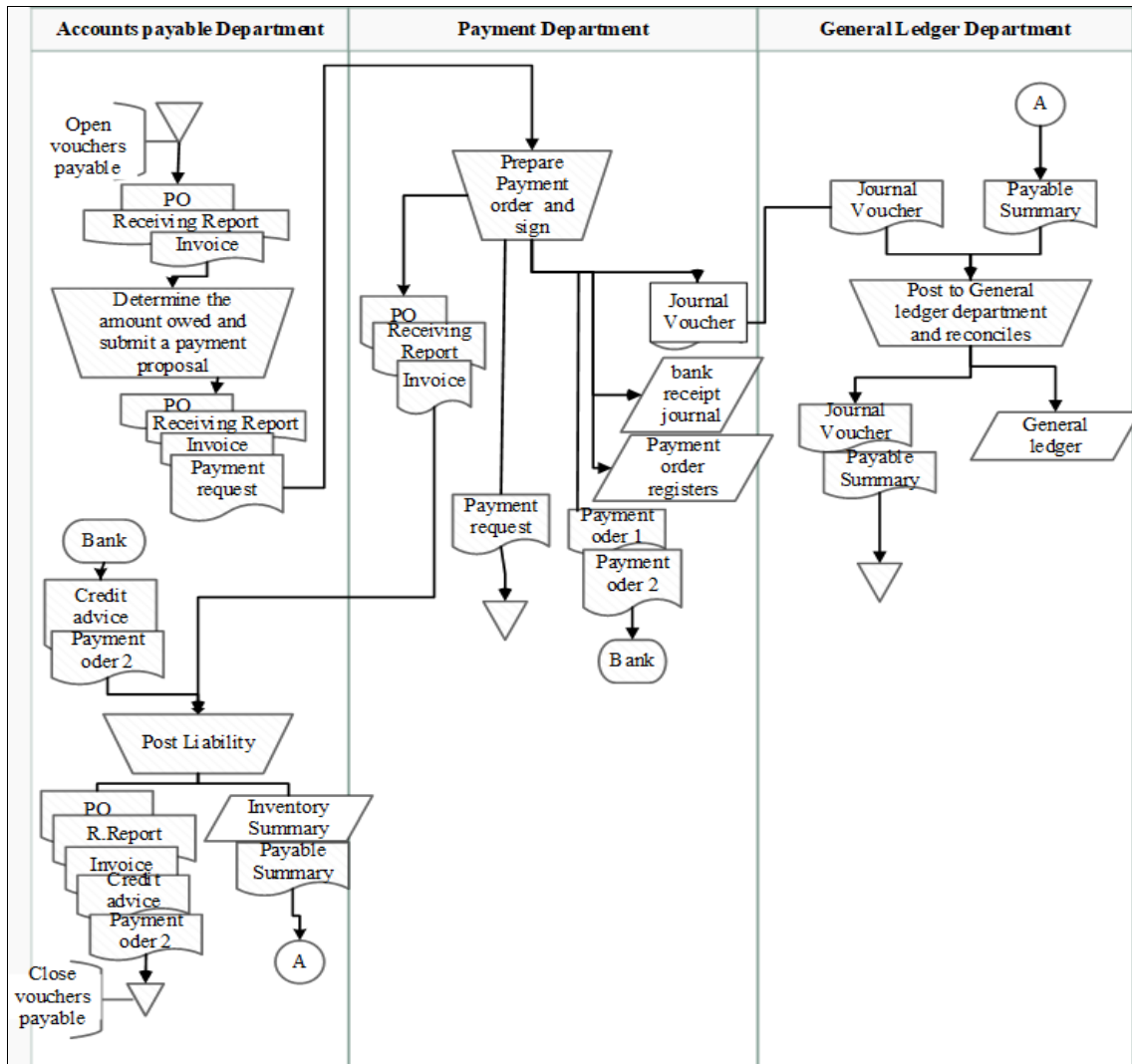


Fig 2: DF for manual payment cycle

The manual payment cycle consists of four procedures but is carried out by three divisions: Accounts payable, Payment Department, and General Ledger Department. The following are the responsibilities of each department in the money payment system:

Accounts payable Department: The liabilities accounting department is responsible for two tasks: identifying liabilities due and payables, as well as detailed bookkeeping of liabilities, which includes a general tabulation of liabilities.

Payment Department: The money accounting department is in charge of reviewing liability data and creating payment documentation for permitted expenditures. The money accounting department is responsible for checking records of liabilities and preparing payment documents that are authorized expenditures.

General Ledger Department: The general accounting department is in charge of ledger recording, reconciling detailed ledgers and general tables, and document storage.

Manual Payment Cycle Material Control

Transaction authorization: There are two crucial activities in the manual payment cycle: selecting which debts to pay and paying the merchant money. The first activity is to determine which debts will be paid and which will be transferred to the liabilities department. The second activity is the operation of paying money assigned to the money

accountant. Money accounting will be based on the liabilities that must be paid to make money payments to the seller. These two activities are divided into two departments. **Segregation of duties:** In the manual money payment cycle, there is a separation of tasks between departments, ensuring the avoidance of fraud and ensuring the ability to reconcile and verify between departments. In addition, in the manual payment cycle, there is a separation between detailed bookkeeping and consolidated bookkeeping. It distinguishes between the detailed bookkeeping of liabilities performed by the liabilities department and the general bookkeeping of liabilities performed by the general accountant, as well as between the detailed bookkeeping of money performed by the money accountant and the general bookkeeping of money performed by the general accountant. Separating detailed and general ledgers will serve as the foundation for verification, reconciling data between departments, assuring data accuracy, and mitigating risks.

Supervision: In the manual payment cycle, money is an asset that is easily stolen. Therefore, it is necessary to have surveillance activities for the area where money-related transactions are carried out such as surveillance cameras...

Accounting records: Accounting books used in the manual payment cycle include a set of liabilities documents, payment requests, expenditure authorizations, liabilities detail books, money detail books, ledgers, and related general books. These documents are the basis to prove that

payment operations are reasonable, and accounting books are the basis for recording payment operations for audit inspection.

Access Control: Access control in the manual payment cycle is access control to bookkeeping assets. Accounting books should be limited so that only responsible persons have access to and view accounting data. To prohibit illegal access to accounting books, particular persons responsible for storing and preserving accounting books must be authorized.

Independent verification: The payment department double-checks the accuracy of the documents to be paid, the payment deadline, and the amount to be paid before making the payment to the seller. This is the final verification stage to ensure that the money is paid to the right object, the right amount, on time. The general accounting department examines the recording between the general and detail books by reconciling the detailed summary tables payable to the seller and the ledger of accounts payable to the seller.

3. Research Method

Data collection methods: Data sources are collected from two primary sources: primary and secondary data sources. The author conducts in-depth interviews with business directors, chief accountants, staff of accounting departments, and related departments. At the same time, observe and record the current status of the payment cycle of Hong Ky Co., Ltd.

Methods of data analysis: Descriptive statistical methods and survey and synthesis methods are carried out to assess the current status of the accounting information system in the manual payment cycle at Hong Ky Co., Ltd.

4. Actual Situation

Overview of Hong Ky Co., Ltd

Company Name: Hong Ky Company Limited
 Tax ID: 0101345850
 Address: 215 Tay Son Street, Dong Da District, Hanoi City, Vietnamese

Business Divisions: Printing, processing printing products, buying and selling, and repairing printers.

At Hong Ky Co., Ltd., the main raw materials purchased are printing paper, inks, and other auxiliary materials such as lakes, glue, steel wire... serving the production process. At Hongky Co., Ltd., the majority of purchases are late payments. Hong Ky Co., Ltd.'s management apparatus is organized functionally and separated into divisions with distinct functions, including the Chairman of the Members' Council, the Director, the control margin, and departments that carry out particular functions such as finance and accounting, human resource administration, production workshop, sales department.

Current Status of Manual Payment Cycle at Hong Ky Co., Ltd.

A manual payment cycle is a method of paying money that is completed entirely by hand, without the use of computer software for payment, paperwork, or bookkeeping. The majority of payment transactions at Hongqi Co., Ltd. are settled by bank deposits.

The flowchart of the manual payment cycle of bank deposits at Hong Ky Co., Ltd. is carried out through two departments, the accountant and the director, which are shown in Fig 3.

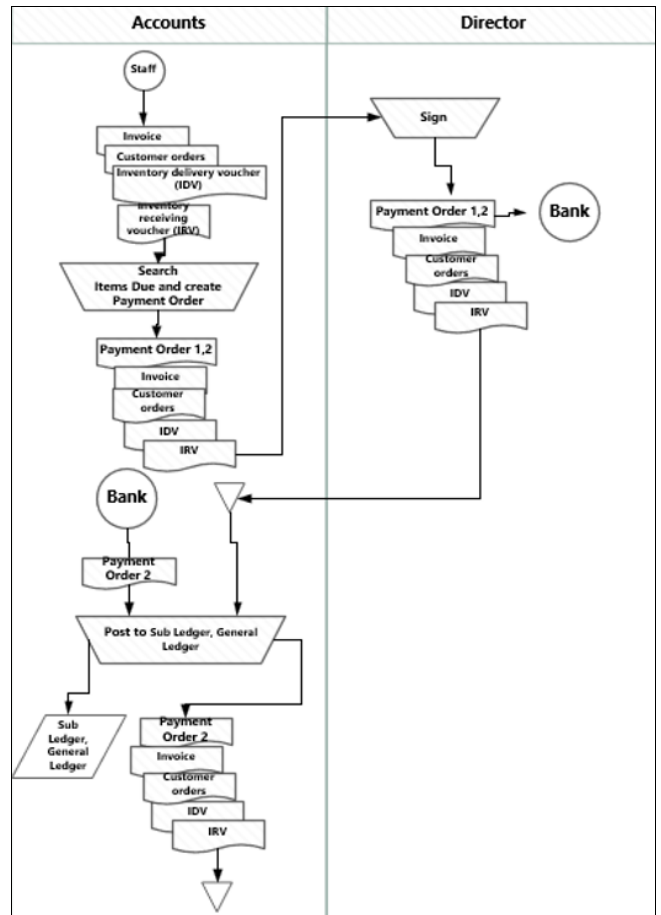


Fig 3: DF for Manual Purchase System at Hong Ky Co., Ltd

The data flow diagram of the manual payment cycle of bank deposits at Hongky Co., Ltd. is carried out through three operations: determination of debt due, Establishment of expenditure authorization; signing, approving, and bookkeeping.

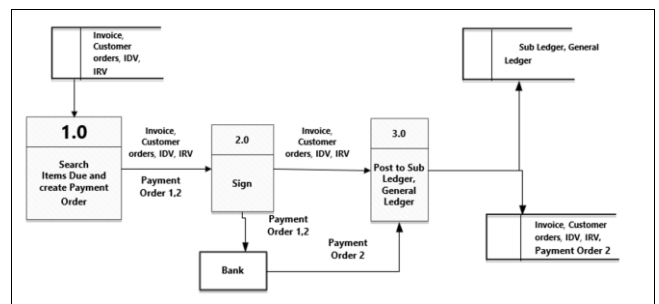


Fig 4: DFD for Manual Purchase System at Hong Ky Co., Ltd

The research results show that the manual accounting information system at Hong Ky Co., Ltd. has the following advantages:

About access control: Hong Ky Co., Ltd. arranges security at the company gate to limit unauthorized access. Only people on duty are permitted to enter the company, particularly the manufacturing area. The company's computer system is located in a private office area. Only office workers have access to computer systems. Computers at the company are set with the passwords of users directly.

About accounting records: Accounting books are fully implemented by regulations. Hong Ky Co., Ltd. secures the company gate to prevent unwanted access. The accounting

book system is implemented in the applicable unit's right form of accounting, assuring systematic recording of operations in the accounting books and providing a reliable basis for the generation of accounting reports to offer information to users.

At Hong Ky Co., Ltd., The accounting information system in the manual payment cycle has provided information on payment activities, asset protection, and fraud prevention. However, this cycle still has some disadvantages to complete:

About segregation of duties: At Hong Ky Co., Ltd., the division of tasks is not guaranteed, general accounting and detailed accounting of money are assigned to one person to perform. A person who is in charge of both keeping track of liabilities and paying money is very likely to collude with the seller to pay early to receive a commission from the seller, or the accountant will create a fake payment to seize the company's assets and then fix the accounting books

About automating payment operations: In payment activities, tracking customer debts without the help of computers will be difficult and error-prone, such as late payment, early payment, and tracking untimely payment discounts, causing damage to the company.

5. Discussion and Conclusion

The authors realized that there are still some limitations that need to be completed after studying the current situation of the manual payment cycle at Hong Ky Co., Ltd., but the introduction of complete solutions needs to ensure the suitability for the application and completion of the accounting information system in the enterprise, bringing practical efficiency to businesses. Therefore, the finished solutions must meet the following orientations: Complete solutions must assure conformity with the state's regime and policies. The finished solutions must be appropriate for the manufacturing and business activities of the company. Each company has different sizes and scopes of activities, so the solutions must be in line with the reality of the company, ensuring the applicability of the solutions in practice. Complete solutions must be economical and efficient. Solutions to complete accounting information in the manual payment cycle at Hong Ky Co., Ltd.

About the division of duties: On the division of duties between departments to ensure that a department or an individual does not perform non-negotiable tasks. The company needs to separate the person who performs detailed accounting work from those who simultaneously do general accounting work. Simultaneously, businesses must establish compensatory methods to reduce risks to their assets, such as monitoring and inventory controls to detect fraud. For bank deposits, it is required to compare deposit data across firms and banks regularly.

About automating payment operations: Hong Ky Co., Ltd. should employ computer software with a combination of accounting software with departmental connections to assist in saving costs such as paper costs, printing costs, document circulation costs, and document storage. When the software is ready, the departments' documentation can be prepared and approved on the software. In addition, businesses need to connect with banks to synchronize their computer systems with banks, ensuring quick payment.

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