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Improving the Quality of the Accounting Information System in Public Hospital in Hanoi Under the Ministry of Health

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Abstract

In the context of international economic integration, with the goals of bringing Vietnam's accounting, auditing and finance fields closer to international parameters and standards, a high-quality information system is also calculated is receiving increasing attention.

One of the important tasks proposed by the Government in the Accounting and Auditing Strategy to 2030 is: Improving the quality of the economic - financial - budget information system. Research to improve the quality of accounting information systems plays an increasingly important role in

organizations. The article uses secondary data to research the implementation of accounting information systems at public hospitals under the Ministry of Health in Hanoi. Research results show that the accounting information system at this hospital still has many shortcomings. Based on the research results, the article proposes some solutions to improve the quality of information systems in organizations in general and in public hospitals under the Ministry of Health in Hanoi.

Keywords: Accounting Information Systems, Quality of Accounting Information Systems Public Hospitals

1. Introduction

Science and technology are always evolving, and the most modern technology is being applied to human activities ranging from production and business to supervision and management. Technology helps people manage work more effectively and quickly, while providing timely and reliable information. Accounting is a leading important part of the financial and economic management system, playing a huge role in controlling, managing and operating production and business activities of enterprises, especially in current period. That requires businesses to apply technology to organize and perform accounting work with the purpose of creating an effective accounting information system. That system must be reasonable, rigorous, provide truthful, timely, and reliable information with the most advanced processing techniques. That not only contributes to increasing competitiveness but also improves operational efficiency in businesses. This is an inevitable development trend and is consistent with the innovation process, especially in the current period of economic integration.

In the contemporary climate of international integration and socioeconomic development, public hospitals face several difficulties and challenges in combining limited resources with service quality. This necessitates continuous improvement in the quality of public hospitals' accounting information systems. As a result of investigating the existing state of accounting information systems at public hospitals under the Ministry of Health in Hanoi, the paper suggests methods to improve accounting information system quality.

2. Theoretical Background

Accounting information system concept

American Institute of Certified Public Accountants – AICPA: "Accounting is really an information system and, more precisely, accounting is the practice of general theories of information in the fields of effective economic activities and consists of the main parts of quantified information" (AICPA, 1966). The AICPA's first assertions served as the foundation for the creation of later conceptions of accounting information systems.

Marshall and Paul (2012) believed that accounting information systems include people, processes, and information technology that perform important functions such as collecting and storing data arising during operations and transactions to assist the unit in reviewing events that have occurred, processing data into useful information for decision making, and providing and fully controlling information to protect assets. Accounting information systems are highlighted as an essential instrument in decision making, strategic planning, and financial monitoring (Alrabei, 2014).

Thus, Accounting Information System (AIS) uses multiple technologies to recognize, gather, process, and transmit economic information about a business. It identifies and tracks the financial consequences of a company's operations. AIS disseminates operational information to those who need it in order to make decisions or coordinate the execution of essential tasks that arise in the unit.

Accounting information systems' role

The accounting information system is a subsystem of an organizational management information system. As a result, the accounting information system performs the following functions:

- Is a tool that assists organizations in evaluating operational efficiency: The accounting information system is a highly valuable instrument for evaluating business effectiveness in terms of financial efficiency based on indications. Soudani (2012) defines ROA and ROE as targets.
- Is an effective information providing tool: Creating a good accounting information system can help enhance the quality of financial reports and accounting information, hence increasing information provision to firms. User objects within and outside of the company serve distinct functions (Fitriati & Mulyani, 2015).
- Is a tool for managing organizational activities: accounting information systems help improve the decision-making process, facilitate the process of performing organizational operations, and improve the internal control system. Of the business (Sajady *et al.*, 2008), as well as helping to reduce the level of fraud and errors in the business (Ngo Thi Thu Hang *et al.*, 2013).
- Providing conditions for building a sustainable development organization: It is the elements in the accounting information system that create competitive advantages to help the sustainable development of businesses (Kuntjoro, 2016).

Components of the accounting information system

Human

This is an essential component of the Accounting Information System. Human resources are defined as a resource associated to the development of accounting information systems, the collection of data, and the processing, distribution, and utilization of information. Senior managers in the organization, the accounting apparatus and internal auditors, and officers in charge of functional departments in the organization, including heads and deputy heads, are examples of human resources in the accounting information system. Functional departments -

people with needs connected to accounting information systems, professionals in accounting system analysis, consulting, and programming.

Usage Instructions

Manual and automated techniques for collecting, storing, retrieving, and processing data are included in accounting information system processes and instructions. Data might come from both internal and external sources. Accounting information system software will be programmed with processes and instructions. Work procedures and instructions must be given to employees through documentation and hands-on training, and they must be regularly followed.

Data

Data is supplied in the form of numbers, letters, or anything else that can be utilized as input in the process of producing accounting information. An accounting information system's data includes all information pertaining to the organization's accounting operations. The accounting information system will process any business data linked to the company's accounting. The nature of the data in an accounting information system will be determined by the nature of the business. A decent database will have data recovery capabilities built in, as well as a data security, multi-access system, an authorization data system, and an online or offline data processing system.

Software

Software in accounting information systems refers to computer programs that are used to store, retrieve, process, and analyze a company's accounting data. Quality, dependability, and security are the most important aspects of software in accounting information systems. Managers rely on information to make business decisions, but they also require high-quality information to make sound decisions (Fontinelle, 2011). System software and application software are examples of software. As a result, system software includes operating systems such as DOS, WIN, LINUX, UNIX, and translation or programming languages. Editing systems, spreadsheets, database management systems (Foxpro, Access, SQL Service, Oracle...), and specialist software such as banking, accounting, human resources, warehouse management... are examples of application software.

Hardware

This is a technological tool for gathering, processing, and transmitting data. Personal computers, servers, printers, surge protectors, routers, storage media, and perhaps backup power supply are examples of hardware equipment. Aside from cost, other aspects to consider while selecting hardware include speed, storage capacity, expandability, and upgradeability (Fontinelle, 2011). According to O'Brien and Marakas (2010), hardware encompasses all physical devices employed in information processing. It covers not just computers and other devices and technology, but also all data mediums. The physical item on which data is recorded, which can be data on magnetic or optical disks, is referred to as hardware. Hardware consists of the CPU, memory, control card, input and output devices.

Internal control

According to Fontinelle (2011) the internal control system includes measures to protect important data. These measures can be as simple as passwords or as complex as biometric identification. The accounting information system must have internal controls to prevent unauthorized access of computers and limit access rights of authorized users (which includes some users within the company). Internal controls also help prevent unauthorized access to files by individuals, allowing access only to selected components for which the system allows authorization. According to Alvin A *et al.*, (2010) an internal control system includes policies and procedures designed to manage based on the assurance that the organization achieves its operational goals and objectives. These policies and procedures are often referred to as controls, which include an entity's internal controls. Internal control is a key factor in ensuring security because accounting information systems contain confidential information that belongs not only to the company but also to employees and customers. Such information includes salary information, credit card numbers, etc. Therefore, all data in the accounting information system must be encrypted and any access needs to be recorded and monitored.

3. Current status of accounting information system organization in public hospitals under the Ministry of Health in Hanoi

Introduction to public hospitals under the Ministry of Health in Hanoi

According to Decision No. 246/QD-TTg issued on February 12, 2014 on the promulgation of a list of public service units under the Ministry of Health, there are currently 25 public hospitals directly under the Ministry of Health in Hanoi, including four general hospitals and the remaining twenty-one specialized hospitals.

- General hospitals (such as Bach Mai Hospital, Hospital, E Hospital, Friendship Hospital, and Medical University Hospital) can diagnose and cure the majority of ailments.
- Specialized hospitals examine and treat a specific set of diseases (for example, the National Eye Hospital, National Dermatology Hospital, K Hospital, etc.) or a specific group of patients (for example, the National Children's Hospital, National Geriatric Hospital, National Obstetrics Hospital,...).

Examination and treatment activities in hospitals are comparable throughout hospital types, with the core role of examination and treatment.

In Hanoi, public hospitals run by the Ministry of Health provide the highest level of care, offering complex, specialized treatments that necessitate cutting-edge technology and equipment. Large, national, and even regional hospitals are available.

At the moment, public hospitals frequently contain the following activities:

Medical examination and treatment activities are mainly activities including medical examination and treatment activities for patients with health insurance, patients without health insurance and medical examination and treatment upon request. Disease treatment activities include inpatient and outpatient treatment activities for patients.

Training activities in the hospital include:

- Continuous training and technology transfer for health officials.

- Rotational training for newly graduated doctors and nurses.
- Training for practice certification.
- Specialized training for doctors and nurses.
- Gradually deploy long-term training types with formal degrees: Specialist doctor, Specialist doctor 2, Doctor of medicine, Nursing University, college, high school.
- Preclinical training.
- Training skills, functions and other forms of training for those in need: Medical workers, workers going abroad,...
- Manage full-time students from the University of Medicine, Hanoi University of Pharmacy, colleges, and medical schools who come to practice at the hospital.

Training might be done on a model at the hospital, by personally examining patients, or in the classroom.

Scientific research activities, in recent times, science and technology in the medical field have achieved many important achievements, the results have been successfully applied in the diagnosis, treatment and prevention of human diseases such as: Multi-organ transplantation, stem cell application in treatment, endoscopic surgery, imaging diagnosis, vascular intervention, vaccine production to prevent human diseases, endoscopic thyroid surgery...

Line organization: The hospital system is organized into technical lines. The upper line is in charge of providing technical guidance to the lower line. Line direction is likewise seen as a crucial and routine task at public hospitals.

Disease prevention (Preventive medicine): Disease prevention is an important job of public hospitals, in addition to medical evaluation and treatment. It is vital to educate individuals about illness prevention. It will lower the prevalence of disease in the community, lower health-care expenses, and help to avoid the spread and harm caused by epidemics in cases where they occur physically. Disseminating information about epidemics, how to prevent them, and how to immediately implement Ministry of Health directions and statements regarding raging epidemics to all hospital workers and patients' families.

International cooperation: In order to absorb modern technical knowledge, the hospital develops its collaboration with countries all over the world and in the region to absorb sophisticated techniques and apply them to medical examination, treatment, and research. Scientific research and education. Today, the route to medical modernization is one of worldwide integration and expanding international cooperation. People can benefit from high-tech medical services, early detection of tough diseases, and lower death rates.

It is clear that adequate attention to international cooperation has helped establish relationships with colleagues and friends all over the world, supporting each hospital's strengths in being at the forefront of cooperation and collaboration. Creating sophisticated and current approaches while also improving professional capability, equipment, and facilities.

Hospital financial management: Strictly enforce Decree 85, the State's laws on hospital budget receipts and

expenditures, and gradually systematize the accounting of medical examination and treatment costs in hospitals, particularly in the current condition of financial autonomy and self-reliance.

These operations are funded through three sources: the state budget, medical examination and treatment service revenue (paid on the spot), and joint partnerships. Each hospital has its unique functioning characteristics, with varying scales and revenue source shares.

Accounting information system organization's current state

The current state of human resources

Each hospital has its own accounting and management apparatus with distinct characteristics due to specific qualities. In terms of hospital management equipment organization, it follows an online approach (accounting for 100%).

Table 1: Management organization model

Management organization model	Number of hospitals responding	Respondent percentage (%)
Hierarchical Organization	25	100,0

Source: Author's survey results

Hospitals have varied levels of organizational structure and staffing autonomy depending on their financial autonomy. The Minister of Health appoints, reappoints, rotates, transfers, dismisses, and dismisses the Director and Deputy Director in accordance with the law. On the basis of Ministry of Health clearance, the hospital can decide to build, dissolve, or restructure departments, divisions, and other associated entities, as well as to establish different organizations and centers, providing conditions for Better manage hospital operations, provide incentive for hospital authorities, employees, and workers to work successfully,... establish councils (science - technology council, medical council - treatment,..) to carry out political tasks in accordance with legal regulations.

The medical examination and treatment departments are directly responsible for the principal activities and tasks. The establishment of these departments varies according to the duties and activities of each hospital, including medical examination and treatment departments in the clinical block and paraclinical block that perform medical examination and treatment for each specialty and subject. Patient.

Concerning the centralized arrangement of the accounting apparatus in hospitals (accounting for 100%).

Table 2: Accounting organization model

Accounting organization model	Number of hospitals responding	Respondent percentage (%)
Accounting Centralization	25	100,0

Source: Author's survey results

Current status of hardware and software usage

- Regarding investment in hardware: 100% of surveyed hospitals are equipped with desktop and laptop computers. All computers in public hospitals are connected to the Internet. However, hospitals do not have a properly designed computer exploitation process.

- Regarding investment in software: 100% of surveyed hospitals have used management software and accounting software.

Table 3: Hardware and software usage

Hardware and software usage	Number of hospitals responding	Respondent percentage (%)
Computer	25	100,0
Management software	25	100,0
Accounting Software	25	100,0

Source: Author's survey results

Current status of internal control

Building internal control systems at hospitals often only focuses on economic-financial indicators and final results with the habit of finding errors, shifting responsibility, and paying little attention to comprehensive inspection and control. The organization's activities focus on prevention and control as the main priority. This is one of the weaknesses that public hospitals need to overcome to improve their competitiveness when integrating into the global economy. Furthermore, the internal control system with risk management is not considered a top priority in public hospitals. The management methods of many public hospitals surveyed are still lax. There is still a situation of property loss, theft, and disunity in the hospital.

4. Conclusion

Managers must obtain and analyze a wide range of information in order to provide good management and improve hospital performance. On the other hand, the information delivered to managers must be of high quality, dependable, and appropriate for the firm. Although there have been some breakthroughs, the current state of the accounting information system at public hospitals under the Ministry of Health in Hanoi is not yet regulated and carefully monitored. Public hospitals under the Ministry of Health in Hanoi, in particular, and public hospitals in general, must implement a number of measures to improve the quality of the accounting information system:

(1) Regarding human resources

The role of human resources in an organization directly impacts the success or failure of an organization. In order for public hospitals to achieve uniformity in the application of accounting information systems in the context of applying information technology, hospital managers are required to:

- Improve managers' knowledge when applying accounting information systems.
- Leverage senior management support.
- Pay attention to staff training and education.

(2) About hardware and software

- Increase investment in information technology.
- Enhance implementation and understanding of operational applications.
- Need to promote comprehensive application of information technology during operations.
- Apply quality, integrated software to improve the hospital's capacity and operational efficiency.

(3) Regarding internal control

- Hospitals organize internal control departments with

capacity and experience.

- Develop and introduce a strict control process while summarizing, evaluating and providing clear reward and punishment policies.

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