



The Role of Accountants in Relation to Accounting Information Systems and Difference between Users of AIS and Users of Accounting

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ABSTRACT

This study has aimed to identify the role of the accountants in the accounting information system and difference between users of AIS and users of accounting. The role of the accountant in a business environment has been evolving over the years. Besides traditional accounting knowledge, accountants need to possess other skills that are vital to their survival in an effective organization. Accountants are primarily involved in three ways: as system users, designers, and auditors.

Accounting information system (AIS) is that subsystem of overall management information system that provides information to an organization in the right format, size, time frame, and within a budget. Accountants have many roles to play as far as accounting information system is concerned. In this article, you will learn the various roles that accountants play as regards accounting information system.

Keyword: *system users, designers, auditors, accounting information system*

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INTRODUCTION

We begin the study of AIS with the recognition that information is a business resource. Like the other business resources of raw materials, capital, and labor, information is vital to the survival of the contemporary business organization. Every business day, vast quantities of information flow to decision makers and other users to meet a variety of internal needs. (7)

Accounting information systems (AIS) as a part of company's information systems (IS) are seen as facilitating decision making within organizations and should be tailored to an organization's environment, requirements of task, and structure. This consideration makes systems fit to task characteristics and organizational structure.

Accounting Information System (AIS) is vital to all organizations (2) and perhaps, each organization either profit or non profit-oriented need to maintain the AISs (10). On the other hand, an AIS is the whole of the related components that are put together to collect information, raw data or ordinary data and transform them into financial data for the purpose of reporting them to decision makers (6). To better understand the term 'Accounting Information System', the three words constitute AIS would be elaborated separately. Firstly, literature documented that accounting could be identified into three components, namely information system, "language of business" and source of financial information (9). Secondly, information is a valuable data processing that provides a basis for making decisions, taking action and fulfilling legal obligation. Finally, system is an integrated entity, where the framework is focused on a set of objectives (4, 8).

Therefore, Accountants in AIS summarize the results of a firm's transactions and issue reports to help managers make informed decisions. The role of accountant has expanded due to the development of the accounting information of various business sectors, on the one hand, and the increase of the volume and the complexity of the information, on the other hand; the accountant shall play an active and effective role in the processes of designing the systems in order to achieve an effective internal system as well as the

needs of accounting information users (1). There is no doubt the success of developing the system requires the necessity of participation of accountants in establishing and developing that system. The effective method of applying the participation principle is represented by the ability of system to involve the accountants not only in one stage of the development of the system but all stages of system development , in particular that each stage has its own specificity which distinguishes it from other stages; the real participation requires that the accountant shall interact mentally and emotionally through an intellectual debate and consultation with the persons who are responsible for developing the accounting information system in a manner that encourages them to participate in bearing the responsibility and contributing to achieve the goals desired.(3)

❖ COMPONENTS OF ACCOUNTING INFORMATION SYSTEMS

Accounting information systems generally consist of six main parts:

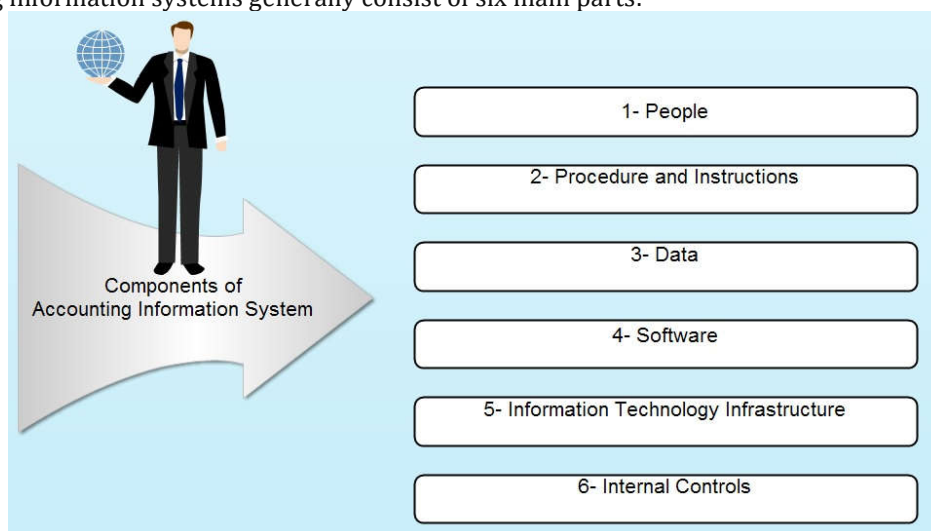


Figure 1: Components of Accounting Information System

1- People

The people in AIS are simply the system users. Professionals who may need to use an organization's AIS include accountants, consultants, business analysts, managers, chief financial officers and auditors. AIS help the different departments within a company work together. For example, management can establish sales goals for which staff can then order the appropriate amount of inventory. The inventory order notifies the accounting department of a new payable. When sales are made, sales people can enter customer orders, accounting can invoice customers, the warehouse can assemble the order, the shipping department can send it off, and the accounting department gets notified of a new receivable. The customer service department can then track customer shipments and the system can create sales reports for management. Managers can also see inventory costs, shipping costs, manufacturing costs and so on.

2- Procedure and Instructions

The procedure and instructions of AIS are the methods it uses for collecting, storing, retrieving and processing data. These methods will be both manual and automated, and the data can come from both internal sources (e.g., employees) and external sources (e.g., customers' online orders). Procedures and instructions will be coded into AIS software; they should also be "coded" into employees through documentation and training. Procedures and instructions must be followed consistently to be effective. To store information, AIS must have a database structure such as structured query language (SQL), a computer language commonly used for databases. The AIS will also need various input screens for the different types of system users and different types of data entry, as well as different output formats to meet the needs of different users and different types of information.

3- Data

The data contained in AIS is all the financial information pertinent to the organization's business practices. Any business data that impacts the company's finances should go into AIS. The data included in AIS will depend on the nature of the business, but it may consist of the following:

- sales orders
- customer billing statements
- sales analysis reports
- purchase requisitions
- vendor invoices
- check registers
- general ledger
- inventory data
- payroll information
- timekeeping
- tax information

This data can then be used to prepare accounting statements and reports such as accounts receivable aging, depreciation/amortization schedules, trial balance, profit and loss, and so on. Having all this data in one place - in the AIS - facilitates a business's recordkeeping, reporting, analysis, auditing and decision-making activities. For the data to be useful, it must be complete, correct and relevant.

On the other hand, examples of data that would not go into AIS include memos, correspondence, presentations and manuals. These documents might have a tangential relationship to the company's finances, but excluding the standard footnotes, they are not really part of the company's financial recordkeeping.

4- Software

The software component of AIS is the computer programs used to store retrieve process and analyze the company's financial data. Before there were computers, AISs were manual, paper-based systems, but today, most companies are using computer software as the basis of the AIS. Small businesses might use Intuit's QuickBooks, Sage Peachtree Accounting, or Microsoft's Small Business Accounting but there are many others. Small to mid-sized businesses might use SAP's Business One. Mid-sized and large businesses might use Microsoft's Dynamics GP, Sage Group's MAS 90 or MAS 200, Oracle's People soft or Epicor Financial Management.

Quality, reliability and security are key components of effective AIS software. Managers rely on the information it outputs to make decisions for the company, and they need high-quality information to make sound decisions.

AIS software programs can be customized to meet the unique needs of different types of businesses. If an existing program does not meet a company's needs, software can also be developed in-house with substantial input from end users or can be developed by a third-party company specifically for the organization. The system could even be outsourced to a specialized company.

For publicly traded companies, no matter what software program and customization options the business chooses, Sarbanes-Oxley regulations will dictate the structure of the AIS to some extent. This is because SOX regulations establish internal controls and auditing procedures that public companies must comply with.

5- Information Technology Infrastructure

Information technology infrastructure is just a fancy name for the hardware used to operate the accounting information system. Most of these hardware items are things a business would need to have anyway - they include personal computers, servers, printers, surge protectors, routers, storage media, and possibly a backup power supply. In addition to cost, factors to consider in selecting hardware include speed, storage capability and whether it can be expanded and upgraded.

Perhaps most importantly, the hardware selected for AIS must be compatible with the intended software. Ideally, it would be not just compatible, but optimal, a clunky system will be much less helpful than a speedy one. One way businesses can easily meet hardware and software compatibility requirements is by purchasing a turnkey system that includes both the hardware and the software that the business needs. Purchasing a turnkey system means, theoretically, that the business will get an optimal combination of hardware and software for its AIS.

Good AIS should also include a plan for maintaining, servicing, replacing and upgrading components of the hardware system, as well as a plan for the disposal of broken and outdated hardware so that sensitive data is completely destroyed.

6- Internal Controls

The internal controls of an AIS are the security measures it contains to protect sensitive data. These can be as simple as passwords or as complex as biometric identification. AIS must have internal controls to

protect against unauthorized computer access and to limit access to authorized users which includes some users inside the company. It must also prevent unauthorized file access by individuals who are allowed to access only select parts of the system.

THE ROLE OF THE ACCOUNTANT

Accountants play the following roles in AIS, the industry they are into does not matter. What matters is the accountants' ability to deliver whenever they are being called upon. This section of study deals with the accountant's relationship to the information system. Accountants are primarily involved in three ways: as **system users, designers, and auditors**.

1. Accountants as Users

Yes, accountants are users of AIS, this is logical as they are the first people to live by example for others to follow. Again, junior accounting staff members that are not privileged to be at the helms of affairs to participate in the designing stage of accounting information system only play the role of users of accounting information system.

In most organizations, the accounting function is the single largest user of IT. All systems that process financial transactions impact the accounting function in some way. As end users, accountants must provide a clear picture of their needs to the professionals who design their systems. For example, the accountant must specify accounting rules and techniques to be used, internal control requirements, and special algorithms such as depreciation models. The accountant's participation in systems development should be active rather than passive. The principal cause of design errors that result in system failure is the absence of user involvement.

2. Accountants as System Designers

Accountants are major catalysts in the design of accounting information system. They are the most suitable and most equipped information measurement professionals to design the information system. It is generally believed that insiders in every area of life make better developmental instrument. This function of designing AIS includes the design of managerial accounting information system to aid management in decision making processes.

An appreciation of the accountant's responsibility for system design requires a historic perspective that predates the computer as a business information tool. Traditionally, accountants have been responsible for key aspects of the information system, including assessing the information needs of users, defining the content and format of output reports, specifying sources of data, selecting the appropriate accounting rules, and determining the controls necessary to preserve the integrity and efficiency of the information system.

These traditional systems were physical, observable, and unambiguous. The procedures for processing information were manual, and the medium for transmitting and storing data was paper. With the arrival of the computer, computer programs replaced manual procedures, and paper records were stored digitally. The role accountants would play in this new era became the subject of much controversy. Lacking computer skills, accountants were generally uncertain about their status and unwilling to explore this emerging technology.

Many accountants relinquished their traditional responsibilities to the new generation of computer professionals who were emerging in their organizations. Computer programmers, often with no accounting or business training, assumed full responsibility for the design of accounting information systems. As a result, many systems violated accounting principles and lacked necessary controls. Large system failures and computer frauds marked this period in accounting history. By the mid-1970s, in response to these problems, the accounting profession began to reassess the accountant's professional and legal responsibilities for computer-based systems.

Today, we recognize that the responsibility for systems design is divided between accountants and IT professionals as follows: the accounting function is responsible for the conceptual system, and the IT function is responsible for the physical system. To illustrate the distinction between conceptual and physical systems, consider the following example:

The credit department of a retail business requires information about delinquent accounts from the AR department. This information supports decisions made by the credit manager regarding the creditworthiness of customers.

The design of the conceptual system involves specifying the criteria for identifying delinquent customers and the information that needs to be reported. The accountant determines the nature of the information required, its sources, its destination, and the accounting rules that need to be applied. The physical system is the medium and method for capturing and presenting the information. The computer

professionals determine the most economical and effective technology for accomplishing the task. Hence, systems design should be a collaborative effort. Because of the uniqueness of each system and the susceptibility of systems to serious error and even fraud, the accountant's involvement in systems design should be pervasive. In later chapters, we shall see that the active participation of accountants is critical to the system's success.

3. Accountants as System Auditors

Accountants audit the already 'acclaimed' AIS to ensure that what is claimed to have been implemented is actually followed. Note that the role of auditors is not to fetch thieves in a system, but to ensure that rules claimed to be followed are backed up by documentation and where it is not possible for it to be documented, the auditors should observe the process take place.

Auditing is a form of independent attestation performed by an expert - the auditor - who expresses an opinion about the fairness of a company's financial statements. Public confidence in the reliability of internally produced financial statements rests directly on their being validated by an independent expert auditor. This service is often referred to as the attest function.

Both internal and external auditors conduct audits. External auditing is often called independent auditing because certified public accounting (CPA) firms that are independent of the client organization's management perform them. External auditors represent the interests of third-party stakeholders in the organization, such as stockholders, creditors, and government agencies.

A. External Auditing

Historically, the external accountant's responsibility as a systems auditor was limited

To the attest function described previously. In recent years this role has been expanded by the broader concept of assurance. The Big Four public accounting firms have now renamed their traditional audit functions *assurance services*.

Assurance. Assurance services are professional services, including the attest function, that are designed to improve the quality of information, both financial and nonfinancial, used by decision makers. For example, a client may contract assurance services to obtain an opinion as to the quality or marketability of a product. Alternatively, a client may need information about the efficiency of a production process or the effectiveness of their network security system. A gray area of overlap exists between assurance and consulting services, which auditors must avoid. They were once allowed to provide consulting services to audit clients. This is now prohibited under SOX legislation. These issues are discussed in later chapters.

IT Auditing. IT auditing is usually performed as part of a broader financial audit. The organizational unit responsible for conducting IT audits may fall under the assurance services group or be independent. Typically they carry a name such as *IT Risk Management, Information Systems Risk Management, or Global Risk Management*. The IT auditor attests to the effectiveness of a client's IT controls to establish their degree of compliance with prescribed standards. Because many of the modern organization's internal controls are computerized, the IT audit may be a large portion of the overall audit.

B. Internal Auditing

Internal auditing is an appraisal function housed within the organization. Internal auditors perform a wide range of activities on behalf of the organization, including conducting financial statement audits, examining an operation's compliance with organizational policies, reviewing the organization's compliance with legal obligations, evaluating operational efficiency, detecting and pursuing fraud within the firm, and conducting IT audits.

As you can see, the tasks external and internal auditors perform are similar. The feature that most clearly distinguishes the two groups is their respective constituencies. External auditors represent third-party outsiders, whereas internal auditors represent the interests of management.

Accountants also can be as Implementers & Owners;

AS IMPLEMENTERS

It is the role of accountants to ensure that AIS designed are actually implemented. It is not enough to just have procedures in place, implementation and enforcement is very important. The accountant while being involved in the implementation process of the AIS may discover an implementation problem that non accountants may find difficult communicating back to the systems designers.

AS OWNERS

As accountants gets more involved in the overall decision making in the business angle, a lot of accountants are now being classified as users of accounting information system. They use the AIS to

process and produce accounting information such as financial statement. Also, accountants rely on their knowledge of AIS to make quality fundamental analysis of financial information, this they do while acting as financial planner or investment accountants.

I would want to make one thing clear at this point that AIS is not, and cannot be an island on its own. It must be working in line with other information systems (IS).

However, the role of accountants in accounting information system cannot be overemphasized. Remove accounting information system from the business community and be almost certain that businesses will take a nosedive. But, I am sure we all don't want this to happen, hence, we should take the role of accountants in the accounting information systems a little bit more serious.

❖ DIFFERENCE BETWEEN USERS OF AIS & USERS OF ACCOUNTING

➤ USERS OF AIS

AIS are an acronym used to represent that aspect of MIS (management information system) that deals with accounting informational flows. AIS stand for accounting information system. The main classes of people that use AIS (users of AIS) are the accountants and auditors that can act in various capacities. Figure 2

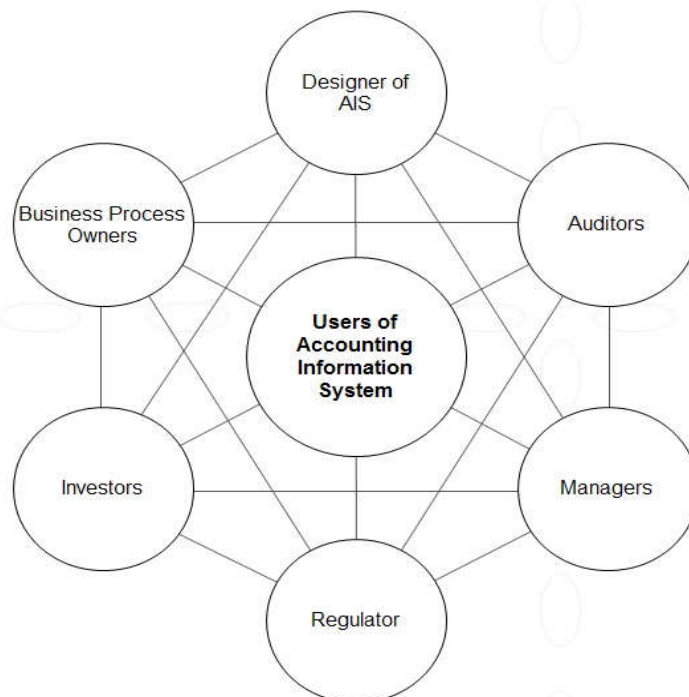


Figure 2: The major users of accounting information system

The major users of accounting information system:

Designers of AIS: designers of accounting information system are the main users of accounting information system. Some people call these classes of people 'the systems analysts'. Whatever name you call them does not matter what matters is that they are the primary users of AIS in the modern business environment.

Auditors: auditors make use of AIS in the bid to carry out their duties effectively. AIS enables the auditor to gather the information that are necessary to; plan, develop and implement audits as it is suppose to be done.

Managers: as business environment become more complex by the day, managers tend to rely more on the information supplied to him or her on a real-time basis to make informed decisions that have the capability of making or marring a business. AIS is a one stop shop for financial information that business managers need just like MIS (marketing information system) serve the marketing manager in analyzing and interpreting marketing situations.

Regulators: government of the modern society are increasingly becoming aware of the importance of having a comprehensive database of the required activities of companies that operate within its jurisdiction and have placed greater reliance on AIS to supply the bulk of this information as they are primarily concerned with financial information.

Investors: investors rely on AIS to produce financial statement that is true and fair. AIS are designed in such a way that the chances for financial statement fraud/ error to occur are slim thereby boosting the confidence of the investing community.

Business process owners: business process owners (BPO) are people that run the operation of businesses; they are not the owners of business except where business operations are done by owners. I took time to bring out this point as a lot of people have misunderstood this. AIS provide information that makes the life of workers a lot much easier. A sales representative will have instant access to a company's stock database from a remote point while accepting orders and production managers simultaneously have access to information that will signal the need for more goods to be produced.

Accounting information system (AIS) has changed the face of accounting as a field; by introducing challenging but interesting elements into accountancy. If you have interest in pursuing a career in accounting and you are not giving AIS serious thought, you had better look elsewhere as accountancy may not be for you.

➤ **USERS OF ACCOUNTING**

Accounting can be said to be a process that collects, collate, record, analyze, interpret and communicate financial information to end users in the form/ format that they will understand. Figure 3.

Accountancy is the only language that businesses all over the world understand. And for you to be a better business person, you have to know how to speak, write, read, and understand this language of business. There are many people that rely on accounting as a profession to provide them with much needed information to make an informed economic decision.

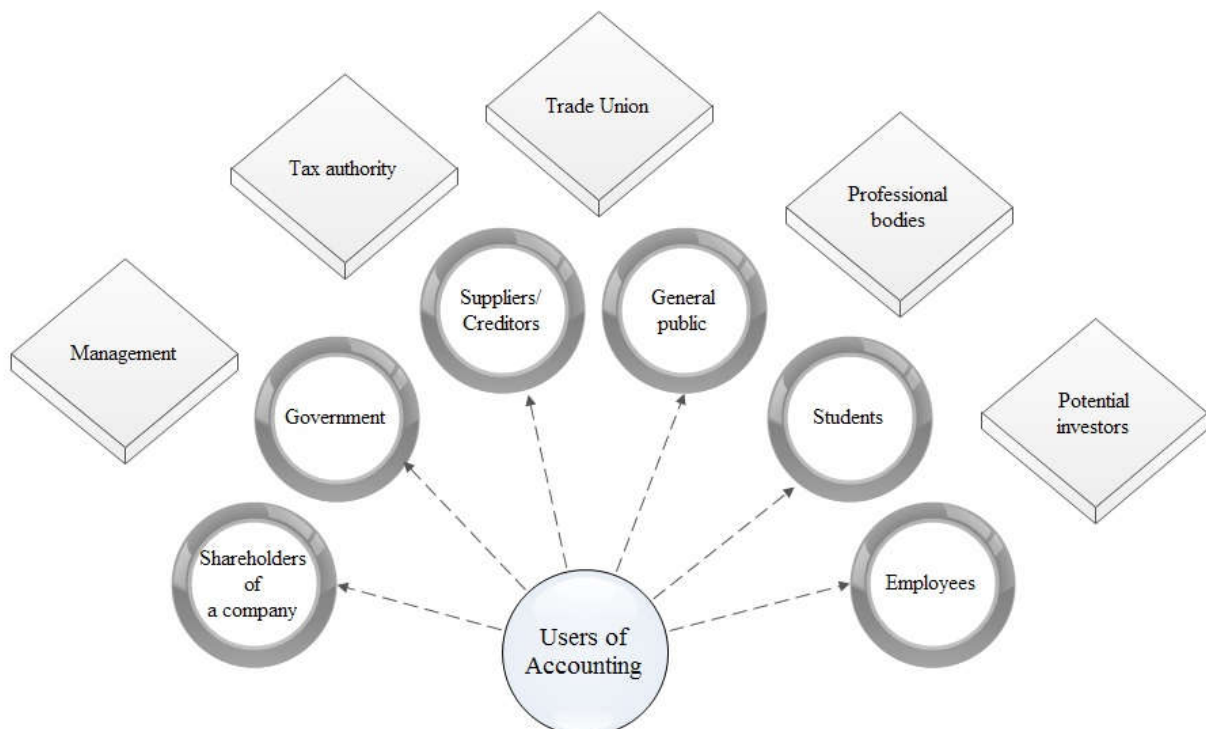


Figure 3: The major users of accounting

The major users of accounting

Shareholders of a company: Company's shareholders are the real owners of a business and needs information from those that manage the business on their behalf.

Government: It is the duty of government to protect lives and property and in so doing will need information concerning every facet of her jurisdiction. Information from businesses in the form of financial report will help government properly formulate her strategic plan.

Suppliers/ Creditors: Suppliers and creditors of a company need information concerning the financial position of a company. They need to be convinced that the company is liquid enough to meet with her obligations upon maturity.

General public: The general publics will some time need information about the finance of a company in order to protect their interest.

Students: students need information about company's finance to take some decisions that relates to courtesy visit and demand for bursary.

Employees: Employees and lower cadre managers are only interested in a company's financial statements because they want the safety of their daily bread. They may also want increase in wages and salaries.

Management: Management in this context is the top level managers and they have similar interest with ordinary managers. The only difference is that management also needs this information to make economic decision that concerns the running of the business.

Tax authority: They are only concerned about the return that comes to them in the form of tax revenue.

Trade union: Their concern is to seek a fair wage for their members. Knowing what a company is making will give them an insight of what to agitate for as fair wage.

Professional bodies: Professional bodies need accounting information as a tool that will be used to educate her members.

Potential investors: For potential investors to be in a position to make investment decision some analysis has to be made and this can only be made from accounting information.

What exactly do these groups of people do with this information when it is at their disposal? The simple answer is to make an informed economic decision.

Hence, the use and the need of accounting information system in business community is therefore to provide accounting information that can meet informational needs of the stakeholders of a business.

CONCLUSION

In most organizations, the accounting function is the single largest user of the AIS. The accounting function is responsible for specifying the conceptual system. Auditing is an independent attestation performed by the auditor, who expresses an opinion about the fairness of a company's financial statements. Both external and internal auditors conduct IT audits.

This study has aimed to the role of the accountants in the accounting information system and difference between users of AIS and users of accounting. It is necessary to pay attention to the participation of the accountants in all various stages of developing the accounting information systems.

Therefore training programs shall be established in the field of developing the accounting information systems; such matter can enable the accountants to positively participate in the process of developing the system, as necessary.

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