

Impact of Information Technology on Accounting Systems

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ABSTRACT: An innovative system is the rise of information technology in accounting. The majority of businesses today, from giant companies to small businesses, rely on their accounting information systems to help them manage their operations. The effect of information technology on accounting systems is reviewed in this essay. This essay also addresses the various accounting procedures and their differences. Accounting is a crucial aspect of the organization, and using IT may improve calculation speed and accuracy as well as flexibility and information storage security

1. INTRODUCTION

Accounting is the art of accurately documenting, categorizing, and summarizing events and transactions that have, at the very least, a financial component, as well as evaluating the outcomes [1]. Another name for accounting is an information system that collects, analyzes, and disseminates financial data about an economic institution. Information technology advancements have significantly enhanced accounting processes and changed economic life [2]. Office productivity has grown thanks to computers and other digital technologies that make it easier to do research, share papers quickly, collaborate with distant colleagues, and gather and analyze data. Information technology has provided a wide range of individual economic players with new, beneficial instruments for spotting and seizing commercial and economic possibilities [3].

2. INFORMATION TECHNOLOGY

Information technology (IT) is the use of computers and telecommunications tools for data archiving, retrieval, transmission, and manipulation [4]. This may also be defined as anything that transmits data, information, or perceived knowledge via a multimedia distribution channel in any visual format [5]. When used in the context of business, it is intended to support management's day-to-day activities, decision-making, and stewardship role. Machines were created in 1880 to aid in the accounting system. As the years went by, developments in information technology changed accounting systems and their associated processes [6]. The Accounting Information System (AIS) underwent numerous changes. This is intended to assist in the

management and control of operations relating to the business's financial and economic sector. For most company entities, an accounting system is crucial. The development of a computerized accounting system, which is currently widely used by commercial entities, was made possible by technological developments. As a result, the market is now competitive. As a result,

organizations must enhance their systems to better match their information requirements for better decision-making.

3. ACCOUNTING INFORMATION SYSTEM

A group of interconnected subsystems known as an information system collaborate to gather, process, store, transform, and distribute information for planning, decision-making, and control. The efficiency of information gathering, processing, storage,

transformation, and delivery can all be improved with the use of computers in information systems [8]. A tool used in the field of information and technology systems is the accounting information system (AIS). It is crucial for commercial companies. This is in charge of producing accurate financial data necessary for decision-making. There are many different designs for the system since they need to take into account variables that affect how information is acquired and reported. It will continue to depend on the information's expected users and the kinds of decisions those users are predicted to make. The size of the company, the volume of transaction data, the kind of activities, organizational structure, and business form may all have an impact on how the system is designed.

3.1. General Model of Accounting Information System

The general model for the Accounting Information System is depicted in Figure 1. Because it may be used with any information system, regardless of technological design, it is

regarded as a general model [9]. End users, data sources, data gathering, data processing, database management, information generation, and feedback are among the components.

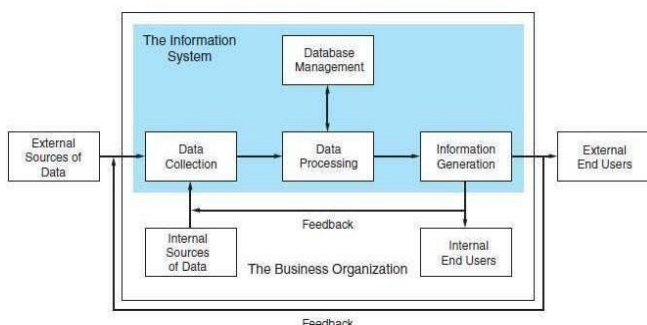


Figure 1: The general model for the Accounting Information System.

Data collection is the initial operational stage in AIS. Its goal is to make sure that any data entered is accurate, full, and devoid of significant errors. This phase

encourages usefulness and effectiveness. Only pertinent data should be collected by the system, and only once. Both internal and external sources of data are acceptable. Once the data has been gathered, it will be processed into information before being saved in the database management system. Algorithms, statistical methods, sales forecasting, and accounting summarization procedures are just a few of the simple to complicated tasks that fall under the umbrella of data processing. The generated information will subsequently be sent to both internal and external end users. Creditors, stockholders, investors, regulatory bodies, suppliers, and customers are examples of external end users. On the other hand, management at all levels of the organization constitutes the internal end user. The entity is then provided with feedback so they may decide what to keep and what to change.

3.2. Types of Accounting Information Systems

Business entities generally employ three different kinds of information systems: manual systems, computer-based transaction systems, and database systems [3].

3.2.1. Manual System

The first kind of accounting system is this one. It uses ledgers and journals that are printed on paper. Nowadays, certain paper records have been replaced by computer-based transaction systems. Furthermore, a manual system requires a lot of labor because it uses human processing. Manual systems may be prone to inaccuracy since they rely on human processing.

3.2.2. Computer-Based Transaction System

In their accounting information system, organizations use a variety of information technology platforms [10–14]. As a result of information technology breakthroughs, computer-based transaction systems were developed. Accounting data are kept distinct from other operating data in this system. To protect the integrity of the accounting information system, there is currently a greater degree of job compartmentalization. Information is handled in the same way as it would be in a manual system. The user is merely entering information into a computer screen, which frequently serves as the transaction's source document. This is the sole distinction between the two scenarios. The following are the advantages of computer-based transaction system as described by Ballada, 2011. Transactions can be quickly posted to the appropriate accounts, by passing the journalizing process; detailed listings of transactions can be printed for review anytime; internal controls and edit checks can be used to prevent and detect errors and; a wide variety of reports can be prepared. Accounting packages are

available in the market. This is consist of modules that deals with the business accounting systems. A simple accounting package might also contain one module or alsoreferred to as stand-alone module. But most of the time, it will consist of several modules. Examples of this are the QuickBooks and Peachtree.

3.2.3. Database Systems

This system reduces inefficiencies and information redundancies. Relational database systems such as enterprise resource planning (ERP) depart from the accounting equation method of organizing data. This system captures both financial and non-financial data, and then it stores that information in the data warehouse. The advantages of this system include recognition of business rather than just accounting events; the support in the reduction in operating inefficiencies and; the elimination of data redundancy.

3.3. Objectives Accounting Information System

For an accounting system to be considered as effective it must meet the basic objectives of information systems. The first objective is that they must pass the cost benefit principle or cost benefit relationship. Financial information is not free, other companies even spend millions every year just to gather and organize financial information to assemble into their financial statements. Under this principle, the cost of providing financial information in the financial statements must not outweigh the benefit of that information to the users [11]. If the firm is planning to improve their IT system, they must consider the cost- benefit principle. The second objective is to protect the entities assets, to ensure that data are reliable and minimize wastes and the possibility oftheft or fraud. This is also known as the control principle

The third objective is to be in harmony with the entity’s organizational and human factors. This can also be referred to as the compatibility principle. The last is to be able to accommodate growth in the volume of transactions and for the organizational changes, also called as the flexibility principle.

3.4. The Accounting Process

Figure 2 shows the general flow of the accounting process. The four basic steps involved are analyze transactions, record the effects of transaction, summarize the effects of transactions and prepare records. This procedure is neutral; this means that the steps involved can be applied both in manual and technology based.

Figure. 2: The Accounting Process



The analysis of transactions is the first phase. Recordable and non-recordable transactions are divided when the transaction is determined to be of a financial character. This phase involves examining how the transaction will impact the accounting equation.

Checks, orders, and other source papers are useful at this step. Recording the impact of the transactions is the second stage. Using journal entries, transactions are documented. These journal entries are the accountant's method of documenting the outcomes of both straightforward and intricate commercial transactions. Journals give a detailed chronological account of every business transaction. They display the dates of the transactions, the associated sums, and the specific accounts that were impacted. Occasionally, the transaction is also described in great detail. The third step is to summarize the effects of transaction, under this step, the journal entries will be posted to the ledger and a trial balance will then be prepared. Once transactions have been analyzed and recorded in a journal, it is necessary to classify and group all similar items.

This is accomplished by the bookkeeping procedure of posting all the journal entries to appropriate accounts. All accounts are maintained in an accounting record called a ledger. A ledger is also referred to as the book of accounts. The next step is to determine the total balance of each account. After the account balances

have been determined, a trial balance is usually prepared. A trial balance lists each account with its debit or credit balance. The production of reports, which involves making adjusting entries, creating financial statements, and closing the books, is the fourth step. Some adjustment entries that are pertinent for the period will be recorded and posted. The trial balance will then be calculated once more. The financial statements are then created using the information in the trial balance. This comprises the notes, income statement, cash-flow statement, and statement of financial position. The final step will be to close the books. Journals and ledgers are paper-based in manual systems. Nowadays, computers and electronic technology are a crucial component of the accounting systems used by the majority of commercial enterprises. Business was able to perform millions of calculations each second because to computers. Actually, all four of the related procedures remain the same. The main distinction between the two is that, in manual systems, the accountant must manually compute and prepare the paperwork, but with computerized systems, all you need to do is evaluate and input the data, and the computer will automatically calculate the balances. Even the automatic updating of financial statements is a feature of some applications. You can monitor the company's development right now. The fact that computers cannot reason, and that is the accountant's responsibility, still stands [10]. The first two steps of the accounting procedure are all that the accountant must do in the automated system. The only tasks left for the accountant to do are transaction analysis, recording of effects, and entry correction. The computer handles the bulk of the calculations.

3.5. Flow of Economic Activities

Figure 3 illustrates how economic activities flow into the accounting process, which produces accounting information. The information generated is then used by the decision makers in making economic decisions and taking actions; thus, resulting in economic activities [3].

Figure. 3: Flow of Economic Activities



With the touch of information technology, rapid communications are formed. This can help increase productivity of the business and improve business

decision-making. Communication channels such as email servers, routers, internal company billboards and chat services can help in the company's communications. The utilization of computer-based communication systems help disseminates routine and critical business information in a speedy and efficient manner. IT equipment can be used to send business status reports to executives, to update employees on critical business projects and to connect with business partners and customers.

4. THE INFLUENCE OF INFORMATION TECHNOLOGY IN ACCOUNTING

Operating systems, the Internet, software, and even personal digital gadgets have altered how businesses function. Along with information technology improvement, the accounting system also got better. Any advancement in accounting, which deals with business data, will have a good effect on the entity, particularly the accounting department [9].

4.1. Competitive Advantage

Companies can keep a competitive advantage over their competitors by using information technology resources [13]. New and enhanced products can be created using information technology to set them apart from those already on the market. By implementing information technology solutions in business, costs might be decreased. Both productivity and the demand for staff overhead may rise as a result. In order to prevent clients from switching platforms or products, businesses can incorporate information technology into their offerings.

4.2. Economic Efficiencies

Accounting costs can be greatly decreased with the help of information technology [15]. The usage of information technology infrastructure allows redundant duties to be concentrated in one place. High-cost functions can be moved into an online environment to achieve economic efficiencies. For customers, businesses can also provide email help, which could be less expensive than a live customer service contact. Additionally, there are cost- saving possibilities for remote work, outsourcing, and less expensive forms of communication.

4.3. Improved Equipment

Through the tools they employ for information processing, business entities can demonstrate how technology has advanced. The existence of computers, printers, scanners, fax machines, or other cutting-edge equipment in offices gives those who have it a

competitive advantage over those who don't. Nowadays, however, it is possible to get basic tools like laptops at fair and affordable prices. 97% of the business entity respondents to the Amidu et al. study from 2011 indicated that they used computers in their day- to-day operations. This demonstrates how crucial computers are to business [10].

4.4. Software Tools in the Accounting Process

In a business entities' point of view, software is considered as an intangible asset. This is a set of programs or procedures associated with a system. Commonly used software in business are accounting software, audit software, word processing software, graphics software and electronic data interchange.

4.4.1. Accounting Software

Accounting software is an application that records and processes accounting transactions within functional modules such as accounts payable, accounts receivable, payroll, and trial balance. It is a part of the accounting information system. Nowadays, simple accounting software can be acquired online. For software used in large companies they contact their trusted programming entities. These programs are used for organization and centralization of data. Software for business accounting information systems falls into one of three categories. These are the backbone, turnkey, and vendor-supported systems [11]. Turnkey systems are ones that have been thoroughly finished and tested. These are prepared for inclusion in the operational process. Enterprise resource planning (ERP) systems, Oracle, and SAP are examples of this type of system. In addition, Backbone Systems are composed of fundamental system structures that can be built upon. In this method, the main logic is preprogrammed, and the vendor will create the user interface based on the requirements of the customer. Customized systems are sometimes known as vendor-supported systems. For its client in this system, the software provider creates, implements, and maintains the system.

4.4.2 Auditing Tools

Since computers are now a part of accounting, auditors can do their duties in a computerized setting. Only for auditors are auditing software packages accessible.

Digital audit trails are also made available by computer technology for the auditor to use.

4.4.3. Word processing applications

This is the software used to create word documents on computers. Textual data can also be updated, saved, and printed under this. Word processing software is used by accountants and other entity employees to communicate

information. When creating reports, invoices, notes, and financial statements, they employ word processing software [5].

4.4.4. Spreadsheets

A spreadsheet is a type of interactive computer application program typically used for tabular data arrangement and analysis. As digital simulations of paper accounting spreadsheets, this was created. Excel and SPSS are now the two most used spreadsheet programs. This applies to virtual tasks as well as any computation-intensive work [12]. Financial statements for a company's end-of-period might be exported to a spreadsheet and shown visually to the board of directors.

4.4.5. Graphics Software

This software creates photos, graphs and charts from data input in order to facilitate better understanding of the topic. This is usually used in financial reporting.

4.4.6. Electronic Data Interchange (EDI)

This is the intercompany exchange of computer-processed business information in standard format. It is an inter-organizational endeavor for there are two or more entities engaged. There is no presence of human intermediaries to approve or authorize transactions in a pure EDI environment.

4.5. Security

Information technology is used widely in accounting security. The use of identifications and passwords provides a strong control in accessing confidential information about the entity. Instead of binders and papers lying around, security greatly enhanced with the proper computer programs. Using a program, accounting information can be encrypted in a way to prevent unauthorized use, making it quite safe. For instance, a lost, stolen or misplaced laptop or desktop computer can be tracked using the security software acquired by the entity.

4.6. Internet

The Internet offers a wealth of resources for information that businesses can use, particularly in the area of accounting. This allows for the online sharing of documents, online research, and in some countries, online tax filing [7]. Wireless and easy Internet connections are possible. Shops in malls and department stores frequently employ the point-of-sale (POS) system. Through a real-time connection between a customer's credit card and the appropriate banks, the internet facilitates the payment process for the customer. Barcodes are used to speed up sales

transactions and provide inventory data with automatic updates [11].

4.7. Cloud

Off-site web hosting, also known as cloud computing, is the newest development in accounting software. The program resides on a server in a different place rather than being installed on the entity's computer and storing data there. This cloud-based technology connects to the Internet and stores data or documents online. Another name for this is "working in the cloud." In this approach, businesses can avoid spending money on expensive software and hardware expenditures by just registering with a cloud provider and utilizing its services, including its storage for data. This eliminates the need to purchase a larger hard disk or worry about software updates. The ability to access your data from any location is another benefit of the cloud. The enhanced security of accounting data is also connected to this new cloud technology. Information can be restricted from being accessed by certain users by the administrator.

4.8. Efficiency

Efficiency is the ability to achieve the best results with the least amount of resources. The collaborative work, shared storage, and improved work flow mechanisms in the accounting system all boost productivity. Employees can process a higher volume of work in less time because of this. In order to make data analysis easier to complete and preserve data in a way that can be quickly retrieved for future use, information technology systems can be utilized to automate routine processes. Inquiries from customers can also be answered using technology. The organization can get in touch with the clients by email, live chat, or phone routing in order to be more effective.

4.9. Speed

Information technology is known for its rapid development. Multiple technologies are used, which speeds up operations and output. The system's ability to generate information is accelerated by the integration of information technology, which allows several calculations to be completed in a single second.

4.10. Accuracy

Computations are aided by information technology. Accuracy in documenting and reporting is highly valued in accounting because it involves a lot of detail. One advantage of this technique is that it makes it less likely that mathematical errors will be made, which is one of the issues with the manual system.

4.11. Improved Internal and External Reporting

Financial reports can be readily prepared and reported to internal and external users thanks to the improved speed and accuracy of information processing. These reports can be used by outside users to evaluate the entity's state. The management, an internal user, benefits from this improvement because they need to know the specifics before making financial decisions. Regarding the effects of computer technology on accounting, Nickels et al. [16][17] noted that the majority of businesses have discovered that computers significantly simplify the work, allowing managers and other personnel to receive financial reports exactly when they need them.

4.12. Flexibility

Flexible technology is severely needed in accounting departments. The accounting system must have the capability to adapt with changes in business practices. Information technology associated with accounting creates flexibility to accommodate the changes. Some systems are capable for upgrade when the entity's volume of transaction increases.

4.13. Reduction of Paper Usage

By using electronic envelopes and documents, accounting procedures use fewer papers. As a result, it lowers expenses and, of course, diverts the organization's attention from environmental problems related to the use of paper and trees.

5. CONCLUSION

The development of information technology has been extremely beneficial to commercial entities' accounting systems. Today's computerized accounting information systems appear to be improving business performance. Numerous transactional procedures were streamlined to produce effective operations. Small company entities have excellent potential to grow their operations because to the accessibility of computer technology. The development of information technology has improved the flow of information and improved managerial decision-making, boosting the firm's capacity to meet corporate and business plan objectives. In turn, this might improve the company's chances of surviving. The use of information technology in accounting is not flawless. Sometimes we have to remember that they are merely technological devices. In terms of a business's accounting information system, these systems are extremely beneficial to the accounting procedures. We must, however, take into account the likelihood that the system, like certain accounting software, could occasionally be unsuccessful. For

business entities to be effective, they must select suitable hardware and software. Computers have helped accounting procedures in the modern era of information technology, but they cannot take the position of humans in accounting systems.

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