Application of Information Technology in Accounting

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ABSTRACT
This study analyzes the use of Information Technology (IT) in management accounting and also accounting information system. Organizations are responding in different ways and at different rates to the wide range of IT based opportunities and pressures. The modern world of business has continued to evolve. Different investments and rapid changes in information technology, as well as the increased cost of conducting different research and development projects, have caused the information technology to change significantly in recent years. Information technology allows for the management and control of resources by the organizations so that they can decide on designing and organizing the organizations. Nowadays, not only the top and the executive organizational managers but also all the people in the society make use of information. Recent advances in information technology, which have brought about drastic changes in the private and public life of individuals and business units, have also affected the accounting information systems from different perspectives such as concepts and range of activities. Advances in information technology have affected the accounting information system through the removal of human errors, reduction in cost expenditures, and increase in the system's efficiency, quality, and efficacy and have also made new grounds and application for the accounting profession. Generally speaking, information technology is considered to be a valuable resource, which enhances the managerial and staff capabilities and paves the way for effective realization of organizational objectives and increase in the system's efficiency. Due to these factors, use of information technology in modern societies is inevitable. Thus, the accounting system also needs to make use of the whole or part of the new methods for service provision and task completion.

INTRODUCTION

Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character, and interpreting the results thereof. Accounting can also be referred to as an information system that measures, processes and communicates financial information about an economic entity. Advancements in information technology have dramatically improved accounting systems and transformed economic life. Computers and other digital technologies have increased office productivity facilitating the rapid exchange of documents, research, collaboration with far-flung partners and the collection and analysis of data. Information technology gave all sorts of individual economic actors the new valuable tools for identifying and pursuing economic and business opportunities. Humans have always sought to find ways for facilitation of his personal and social affairs. In the modern era, due to the rapid development of technology, daily communication and information transactions are essential. Furthermore, in large environments, information can easily be transferred by using such new media as internet. Continuous changes and rapid developments currently occurred in the range of activities and types of different business units have emphasized the immediate necessity for preparation and presentation of relevant, reliable, and comparable financial information by economic units. Besides, increasing growth in the societal complexities justifies the need for relevant economic information, information systems and information-generating processes. The importance of different applications of information technology in the modern life is also tangible and undeniable, without which the activities are sometimes disturbed and/or require extra costs expenditures. Different scientific studies have already been conducted on technological advances, which have
thus brought about many achievements such as high-speedness of data processing and data accessibility, high accuracy and quality of information, freshness and recency of information, possibility of electronic transaction of information, as well as time and cost saving due to the increase in the speed of interactions and communications. Resultantly, financial transactions in the accounting information system have changed from a conventional paper-based environment into an electronic environment. Accounting information system designed and implemented in a business unit is directly related to the organizational culture, level of strategic programming and information technology existing in the company. Therefore, accounting as an information system is an organizational element, which – through the processing of financial events – provides the users with the basic information for decision making. Based on a literature review of earlier research and empirical studies we conclude that there is a very limited knowledge about the impact of the most recent IT developments in the accounting field. Although IT clearly plays an important role in accounting and management control [4], this relationship has not been studied enough. Existing research has focused mostly on the relation between IT investment and company performance, notably in studies that attempt to measure the level of IT investment and company productivity or even the financial return on IT investments.

Information Technology:

Information Technology (IT) deals with the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data [4]. This may also be described as anything that renders data, information, or perceived knowledge in any visual format through any multimedia distribution mechanism.

By one definition, information technology refers to an aspect of information system technology which includes hardware, software, networks, and other devices. By another definition, in addition to the consideration of its technological dimension, the information technology is also considered to be a combination of several information systems, users, and their related managers. Information technology can be viewed as mechanical or electronic devices used in producing productions and creation of more efficient systems. In other words, information technology is designed for business processes, data collecting, and provision of valuable information for managers. New communicative and information technologies represent a trend for development and show an important part of official information system through computerized information. Application of information technology at a high level is to use internet, to the effect that the integrated financial system of the company is directly connected to the internet. This level is for most part in the focus of attention. Users of accounting information around the world can refer to the company’s website address and instantly observe and analyze the financial statements with the latest changes. Wherever information technology is used, at least one of the following operations and mostly a combination of them takes place: information transformation, information reservation, information processing, information transaction, information analysis, and destruction of information. Management accounting provides information on the budget, capital investment status, pay back period etc. to the internal users and decision-makers. Many organizations have ignored the prominence of management accounting and focused only on financial accounting. The pivotal use of management accounting would be more significant for planning and control operations when it is incorporated with current IT.

History:

IT and accounting come from different background and history. Accounting has been practiced since 8500 BC till today and there are not many changes to the way accounts are maintained. However, IT is changing fast and changing every day. New technologies, launched today, become obsolete within couple of months. The influence of IT is inescapable in today’s world, as it would result in competitive advantage and growth in business. Application of IT in management accounting has been popular recently, as organizations found the importance of management accounting to their benefit which helps to accesses the organizations’ potentials. The management accounting professional bodies including Chartered Institute of Management Accountants (CIMA) and The Association of Chartered Certified Accountants (ACCA) has stressed on IT and emphasize that IT has got the future to provide information to management for better decision making.

Information technology components:

Information technology can be regarded as a series of techniques and tools used for optimization and support of organizational activities based on the exploitation of information and knowledge. New communicative and information technologies represent a trend for development and show an important part of official information system through computerized information. The most important components of information technology are as follows.

- Infrastructures: including computers, transfer networks, internet, etc.
- Applicable software: including processing system software, management information system, customer-contact management, portal, etc.
- Man power: including the persons engaged in information technology such as the members of society, staffs, and managers
Information technology management: which is responsible for organizing and observing the processes and procedures.

**the most important barriers to the development of information technology in Iran:**

What challenges the Iranian society vis-à-vis the information technology is a lack of expansion in terms of economic and foundational dimensions and their practical implementation. The most important hindrances to the development of information technology in Iran are as follows.

- Lack of scientific knowledge and expertise among Iranian managers to deal with the information technology problem
- Insufficiency of educational programs for Iranian managers regarding information technology
- Public ignorance, not least the mass media, to the development of information technology
- Lack of appropriate infrastructure throughout the country

**Accounting information system and accounting:**

Accounting Information System An information system is a set of interrelated subsystems that work together to collect, process, and store, transform, and distribute information for planning, decisions making and control. The use of computer in information systems can improve the efficiency of information collection, processing, storing, transformation and distribution. Accounting information system (AIS) is a tool which was incorporated in the field of Information and Technology systems. It is very important for business entities. This is the one responsible in generating reliable financial information needed for decision making. There are many varying designs of the system for they must consider factors that influence the way in which information is gathered and reported. It will still depend on the anticipated users of the information and the types of decisions they are expected to make. The design of the system may also depend on the size of the firm, volume of transaction data, nature of operations, organizational structure and business form.

Accounting is a science focusing on a better understanding of financial events and transformation of such financial events into figures. Accounting tasks are performed with the aim of recording and classifying documents, controlling and calculating the profit and loss, better decision-making on commodity sale and customer service provision, efficiency, and progress in the tasks performed. More recently, accounting has been defined as an information system. In the year 1966, the American Accounting Association, through its official manifesto entitled “Basic Accounting Theory” (ASOBAT), first defined accounting as an information system.

Accounting information system is a subsystem of management information system, which is mainly responsible for processing of the financial transactions as well as the non-financial ones which indirectly affect the financial events processing. An accounting information system involves three main subsystems as follows.

- Transaction processing system: which provides commercial transactions as well as documents for the users through the organization.
- Public system: which provides financial reports such as income report, balance sheet, cash flows reports, financial statements, and other legal reports.
- Management report system: which prepares particular financial reports and information required for managerial decision-making, e.g., budget report and responsibility part report.

Accounting information system undertakes the responsibility for transforming the informational data into useful financial reports and giving them to the managers and authorities both within and out of the organization for making due decisions. Information data transformation into financial reports is carried out through collecting, classifying, analyzing, and representing of the information.

**relation between accounting information system and information technology:**

Nowadays, by the expansion of organizational activities and necessity for their flexibility toward changes, more importance has been attached to the role of information in decision-making and it has been used as a tactical weapon to achieve superiority. In the modern competitive market conditions, no company can survive without having access to high-quality and timely information. In fact, information systems and information technology play a major role in the conduction of organizational operations, and before emergence and evolution of the information systems, the companies and their senior management were seriously afflicted by a lack of accurate and authentic information, and hence so many operational and commercial opportunities were easily lost. However, this problem has recently been addressed by the application of viable and reliable accounting information systems, and information system experts are, thus, obliged to help the managers obtain the appropriate and high-quality information, promote them, and produce regular and authentic reports. Information quality takes a key role in organizational progress considering the highly competitive condition of modern time.

In modern world, information technology and information systems are no longer just a work tool or a production source among others, but rather the information technology makes a proper ground for application of accounting information system and also the accounting information system is a procedure implemented through
information technology. Rapid changes in information technology, unprecedented expansion of versatile systems, and organizational tendency to produce and implement new software and systems have resulted in the increased use of computer systems and a faster and more accurate fulfillment of accounting tasks. Accounting as the language of commerce and information system must be synchronized with new technologies so as to provide proper services to customers. Nowadays, with regard to the extensive changes in the field of information technology, it is essential to realize and optimally use such a technology for the improvement of the accounting position and quality (in keeping pace with the substantial changes occurred in information technology). The most important advantage of relation between accounting and information technology is that a proper mutual acceptability will gradually be resulted. Accounting with no information technology is hard to do and makes it possible for some performance deviations to happen. Therefore, information technology and accounting information system compose the main part of accounting studies.

Scope of the Study:
Application of IT in management accounting is enormous growing. The introduction of IT in accounting especially financial and managerial accounting are irrefutable. IT is a large area to explore from home PCs to large systems, firewalls and internet. Thus, this study focuses on the relevant technology adapted to management accounting such as multimedia technology and management accounting using internet. Major focus is given to impacts and implications of application of IT in management accounting.

Survey of Literature:
Scot M. Boggs (2003) believed that digital technology have been changing since a decade ago where the personal computers (PCs), streamlining manuals and Local Area Network (LAN) not only have reached small organizations but also individual home users. He reckons that digital technology will brace users to collect information from one place to another and manipulate data by filtering, sorting, compiling and analyzing to produce necessary reports for decision making. He strongly believes that with the digital technology, the companies will be able to achieve more value at strategic end of business and spend less time in processing transactions. Consequently, there is lack of argument in this article pertaining to the mindset of the small organizations users towards the digital accounting. Glen L. Gray (2001) discussed concern in financial reporting using internet. While internet and Web based information will provide an advantage for companies, Glen queries the confusion arises between the users and users interpretations on what should be allowed and what should be avoided when it comes to the Web based reporting. The limitation of this article is that the aspect of management reporting on Web was not given much importance. The author should have given larger magnitude to management reporting on Web, as it is vital to the internal users in order for them not to make wrong decision and wrong investment. Moreover, the information system may enable the company to pursue a strategy of just-in-time (JIT) production. The change in strategy might in turn cause a change in management accounting. This is very likely as the purpose of management accounting is to produce information such as the evaluation of the success of strategies. Connor & Martinsons (2006) commented that information technology is a precious assistance because they provide information for making decision. David Kay (2003) examines the investment on technology for organization on new support initiatives for customer service. The author indicates that there are many vendors to provide Return on Investment (ROI) analyzing tools and it is a handy tool that measures economy benefits from technology investment. He introduces balance scorecard for customer support technology, which will improve business process, improve products more effective, improve organizational capability and better-motivated staff. The limitation of this article is that the author failed to identify the degree of importance as well as comparison between business investment and ROI on the technology investment. This article also did not address in detail the IT platform to be adapted and the budgetary cost.

Dechow et. al., [4] emphasized the importance of information technology in management control. IT in management accounting is about how companies manage and control their resources.

Anastas, M. discussed about the changing role of management accounting and financial management such as being an internal consultants and strategists, decision making team member, and initiating and implementing IT.

Marriott, Marriott & Selwyn (2003) explored undergraduate students’ use and attitude towards information communication technology in accounting courses at two UK universities. The internet is a rapidly changing area of education and, indeed, has caused some prominent commentators to argue that the researchers should only concentrate on the potential uses of this revolutionary medium rather than be concern with is present weaknesses. The limitation of this article is that the author did not discussed on the weaknesses of the internet, as there are many notorious information and pictures that could distract students.

Conclusion:
Information technology advancements have greatly helped the accounting systems of business entities. Because of today’s computerized accounting information systems, business performance seems to improve.
Many transaction processes were simplified thus creating efficient operations. The affordability of computer technology for small business entities creates great opportunities for these entities to improve their business.

Information technology advancements made effective and efficient information flow that enhances managerial decision-making, thereby increasing the firm’s ability to achieve corporate and business strategy objectives. This in turn, may increase the prospects of the firm’s survival.

Due to the advances in information technology, which have significantly affected any aspect of modern market and economy, the accountants are also supposed to learn and optimally use these technologies and reduce the risks involved through the application of proper approaches. Information technology has changed the traditional accounting system’s methods and approaches. Information is electronically taken and needs to be processed, saved, and distributed through the accounting system designed based on the information progress. Information progress increases the ability to process the accounting information and can also introduce problems which have not been already experienced through the traditional accounting system. One of these problems is the use of information technology in the accounting systems. Economization of the number of personnel involved, time and cost saving due to the increased speed in doing calculations in large quantities, significant decrease in human errors, and increase in the efficiency and efficacy have resulted in the improvement in the qualitative attributes of accounting information such as information relevancy and comparability. Besides, these have led to a higher accuracy and speed in the calculation of the final price of the products. It should be finally stated that in our modern world, the information technology has contributed to the development of new techniques and grounds in the accounting tasks.

REFERENCES