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The Evolution of Technology for Financial Economics and Accounting Profession

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ABSTRACT

Every accountant knows that accounting is the language of business. That language has gone through many changes throughout the ages. But through all the changes accounting technology has always played a part in making the job just a little easier. As a knowledge technology increased so person ability to analyze statistical value. Technology advancement have enhanced the person the ability to interpret data efficiently and effectively. By this person has become a business advisor.

The primary goal of financial economics and accounting is to promote various development and technological changes through different factors contributed to accounting and economics scenario. Business functions affects accounting and economics, rationalization and Liberalization policy of govt. – Emerging issues in economics and accounting, role of information technology in accounting and economics. How it is utilized and useful for society and public in and latest amendments through various statutory laws.

Keywords: Financial Economics, Accounting, Technology and Accounting Profession.

I. INTRODUCTION

Every accountant knows that accounting is the language of business. That language has gone through many changes throughout the ages. Through all the changes accounting technology has always played a part in making the accountant's job just a little easier. As our knowledge

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Technology increased so has the accountant's ability to analyze statistical values. Technology advancements have enhanced the accountant's ability to interpret data efficiently and effectively. He/she now has the ability to interpret the language of business with such ease that the accountant has become a corporation's most trusted business advisor.

ACCOUNTING CHANGES THROUGH THE AGES

We can start way back in the beginning with the invention of the abacus, used to keep track of calculations in business. Although we didn't call it technology, we can go back centuries with several attempts to build adding machines to help an accountant with mathematical solutions. After the first working adding machine, came the invention of the calculator for information accuracy. As technology advanced so did the speed and proficiency of the accountant's job. But even with adding machines and calculators the accountant still had to keep track of the businesses' functions with paper entry. The process of identifying, measuring, and communicating financial information was documented in the form of paper records, columns of numbers and hand written statements. An accountant had to be a very methodical, detail oriented person.

Towards the end of the twentieth century the accounting profession began to take on a whole new look. Computers and accounting software has changed the industry completely. With programs such as Microsoft Excel an accountant now had an electronic spreadsheet. The need for adding machines, calculators, ledgers and pencils was eliminated. The job became less tedious with less of a margin for error. The core training for accountants which included the basic accounting, auditing and tax preparation was a thing of the past. With use of the computer an accountant can now perform statistical accounting or forecasting analysis with greater efficiency. Accounting technology has eliminated the number cruncher sitting behind a desk working on people's taxes and has allowed the accountant to find new challenges with much more to offer then decades ago when they relied on an abacus for a calculating tool.

e-Business, the Intranet and the Extranet

Today's accounting professionals who understand the importance of the Internet will use the Internet for e-business. They use the Internet to execute major business processes in the enterprise. Electronic business (e-business) allows the accounting firm to coordinate activities for internal management and combines the clients' relationships with the use of digital

networks. Enterprise applications can be used on a small internal network called the Intranet. The Intranet can distribute information to employees such as corporate policies, and programs. It centers on a portal which is a single point of access. Information can come from several different systems using a Web interface. They can feature such things as e-mail, internal documents such as the Code of Ethics, and a search tool. It is a good means of communication within an organization. Accounting professionals can also communicate outside the organization with Web technology using the creation of an Extranet. This allows the clients to have limited access linking to a portion of the accounting firm's Intranet to import and export files back and forth. Linking electronically increases efficiency and cuts down on travel costs ultimately reducing operational costs.

Diversified Opportunities

Information became available to an accountant with the click of a mouse. This changed the nature of an accountant's work. More doors were opening with the use of information technology. This diversified opportunities in the field of accounting. New specialized areas have been developed. Business owners started looking to professional accountants for technology advice. Accountants became more knowledgeable about which financial systems worked best. Accountants were becoming the staff and trusted advisors. An accountant's role was to help these businesses become more productive. Integrating the client's technologies properly with the accountant's systems made the practice more efficient when it came time for write-ups and reconciliation processes.

Input, Processing and Output

Not only does the client need to have proficient financial processes but the accountants themselves need software programs that keep track of clients accounting information with improved efficiency. Accountants work with systems programmers to develop a digital process that will organize their client's history and all their documents. When the client's data is input into the computer program the processing cycle gives the computer instructions on how to process the clients' data. This enables the accountant to change the data into useful information. Output, transfers the processed information to the accountant. He/she can analyze the data and interpret the clients' financial statements so as to increase the client's success. All the clients' records can be stored and organized on an accountant's computer system. Rather than bringing a suitcase full of file folders.

Client's place of business for review, the documents can be carried on an encrypted laptop or organized on an encrypted portable storage device. The accountant has the client's sensitive information protected but yet at his/her fingertips, ready to perform statistical, accounting or forecasting analysis. The program is stored on the computer hard drive and the data is used to prepare the clients' taxes. The need for a file storage room has been eliminated.

Cloud Computing

To go a step further, cloud computing is becoming popular today. It is called cloud computing because the name represents the cloud symbol used in flow charts, representing the Internet. It is a service that is being provided over the internet to permanently store data and use business applications over a remote server. Software-as-a-service (SaaS) is a web based service. The data is permanently stored in huge data centers shared by many other users. The accountant would not have to purchase anything. He/she would pay a monthly subscription so he/she would only pay for what is needed. It would free up space on the accounting firm's hard drive while the firm rents space from giant computer centers. However, the accountant should be aware of the security issues involved when making a decision to use this technology. Cloud service providers are obliged to provide a safe environment to store the organizations sensitive information as accountants are obliged to understand the risks.

Advancements of Information Technology

Accountants were pushed towards acquiring new skills due to the advancements that information technology has made on the accounting industry. Accountants now have to have a high level of computer and technical skills. These skills have become part of the knowledge, and abilities of the accounting professionals. In its report the American Institute of Certified Public Accounts (AICPA) states that, "The knowledge, skills and abilities necessary for the entry-level accountant now include the application and integration of information technology into the accounting process, as well as financial and managerial accounting principles". From this research, not only does an accountant need to have a broad range of accounting knowledge and a strong ability to apply accounting principles, government regulations and interpret tax laws; they must also have strong skills in information technology, to be able to merge accounting with information systems. These accountants will be in greater demand by the profession.

Enterprise Resource Planning (ERP) Systems

The twenty first century accountants have strategic software applications in place to prepare for the future; such as Enterprise resource planning (ERP) systems. This is a software program that integrates different departments of the organization onto the same system. This makes data available diverse and supports activities between the different departments. The information is made available through a common central database and shared through functional areas such as; finance and accounting, sales and marketing, human resources, and manufacturing and production.

Supply Chain Management (SCM) Systems

Another strategic software application is the Supply chain management (SCM) system. This helps businesses manage relationships with their suppliers. According to the authors of the textbook, *Management Information Systems*, Kenneth and Jane Laudon the definition of Supply chain management is, "Information systems that automate the flow of information between a firm and its suppliers in order to optimize planning, sourcing, manufacturing and delivery of products and services. This is an interorganization system because the flow of information crosses over organizational boundaries "Supply chain management is all about having the right product in the right place, at the right price, at the right time and in the right condition". Supply chain management has become an important area in many organizations.

There are quite a few demands of a SCM such as; planning and managing procurement, sourcing, and product logistics. These systems require financial expertise to run them. The financial and control aspects of the SCM organization needs to be monitored and supported by a CPA. The CPA needs to monitor the entire supply chain, beyond the corporation itself. John A. Kruglinski wrote in the *Pennsylvania CPA Journal*, "Supply chain finance positions typically require a strong background in inventory management and cost accounting, along with other skills, such as contract and capital expenditure evaluation". In order to meet the demands of a Supply chain management system a CPA, with a standard of excellence in financial knowledge and competencies; superior managerial abilities is needed to oversee the operations and facilitate the processes.

IT Governance

Many doors have opened for a professional CPA who is proficient in these systems. Because information technology takes on a major part

running a successful organization the IT department needs to be managed. This manager needs to oversee that the information technologies support the organizations' strategies and objectives. The organizations' IT systems must be ahead of the competition, they must be financially responsible to the organization, they must be secure with a backup plan for failure and they must be in compliance with effective controls. Not only must the IT systems support the organizational objectives but the organization must be in compliance with government regulations within the IT Infrastructure. The IT Governance concept is promoted by professional organizations such as, the IT Governance Institute (ITGI) which was established in 1998 and first published the IT Governance framework in that year.

MANUAL ACCOUNTING VS. COMPUTERISED ACCOUNTING

Accounting is a way business owners manage their company & financial information. Business owners use accounting to record, report and analyze their company & financial information. Companies often generate several pieces of financial information from business transactions, and compile this information into general ledgers and journals. Historically, accounting was a manual process using paper books and documents for financial information. Business technology has created significant advances in the area of financial management and accounting software.

History

Accounting is several centuries old. Luca Pacioli, an Italian friar from San Sepulcro, is generally known as the father of accounting. Pacioli is credited with developing the double entry bookkeeping system in 1494 using debits and credits to manage a company & financial information. His system included ledgers and journals where financial information was kept relating to business transactions. Pacioli & accounting system is still in use today, even by the various computerized accounting programs in the industry.

Facts

Manual accounting uses several paper ledgers and journals where accountants record financial information. The general ledger includes miscellaneous transactions and the aggregate balance of all subsidiary ledgers and journals. Manual accounting is very detailed, since accountants must carefully enter information into physical books. Computerized accounting uses software programs designed from traditional manual