

INFORMATION TECHNOLOGY - ENGINE DEVELOPMENT OF MODERN ACCOUNTING SYSTEMS

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The current economic environment makes it almost impossible to analyze financial - accounting system without taking into account the heavily positive impact that has brought by technology.

Data collection, verification, processing and analysis are not possible without using a special kind of software.

Moreover, auditing and managerial decision-making process would be unthinkable without consulting ERP systems.

The study below aims to present the relationship between accounting information system and information technology.

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I. INTRODUCTION

Accounting (Oficial, 1991) is the science and art of ruling business, and the purpose is to deal deal with "measurement, assessment, knowledge, management and control of assets, liabilities and equity, as well as the results of the activity of natural and legal persons".

Accounting, helps evaluate the past and the actual performances, and helps to create an image as faithful on future directions of development.

In retrospect, information technology has influenced many human activities and implicitly accounting. Of course, this science specificity (accuracy) was folded neatly on technological development trends.

Adoption of information systems within economic entities resulted in a major improvement in the management of data and in the reporting of results.

II. INFORMATION TECHNOLOGY – SUPPORT FOR ACCOUNTING SYSTEM

The main benefits of adopting information technology in accounting are:

- The speed of data collection;
- Reduced processing errors;
- The possible increase in the quality of their processing in the consolidated financial statements;
- Value added by streamlining value;
- Increasing the quality of products or services offered by the entity;
- Increased speed of detecting and correcting of errors;
- At the user level system (manpower) may allow the development of a structured and logical thinking, which then generate algorithmic thinking (computational) (Kim, n.d.)
- Improve control and facilitate audits of financial statements.

Certainly, the added value of information systems on accounting profession is great, yet we can mention some negative effects:

- Maximizing labor productivity directly involved in the use of IT tools can be a lengthy process. Moreover, this process may fail.
- Adopted computer systems have generated intrinsic structural changes of accounting activity. The deepest is linked to the process of redesigning the financial department (decrease the number of employees in this sector by taking of their expertise by information systems).
- The drastic reduction in demand for labor can lead to financial and accounting outsourcing. With the help of advanced financial accounting systems, specialized persons (accounting experts, auditors) can take over the task of controlling the information management and data processing of entities.

According to a study commissioned by the American Institute of Certified Public Accountants (AICPA) (Driscoll, 2015), the average cost of the financial accounting function within the firm fell from 2.2% in 1988 to

1.4% of total revenues in 1996. The study estimates a reduction to a half of that amount in the coming decades due to the reduction by one third of the workforce in the sector.

An additional reason for the drastic reduction in the sector is represented by the small power of labor force to adapt to new realities. Thus, the transition from traditional accounting systems, based by data collection processes to modern systems based on value flows and decision-making processes have had a profound impact.

At the firm level, the changes in accounting - financial paradigm, induce the mutations of the profession itself.

Of those who collect, introduce, analyze and report information, human capital employed in this sector will aim the future objectives:

- the study of activity of flows value;
- making predictions based on statistical functions and advanced tools. Subsequently, the results will then be used by managers in decision making;
- modeling the intrinsic processes of entity.

III. THE FOOTPRINT OF INFORMATION TECHNOLOGY ON THE FINANCIAL - ACCOUNTING SYSTEM

The information technology has changed morphologically the activities in the economic entities. With the help of the new tools which include software, managers can better control and analyse the financial activity of company. Thus, useful and necessary information can be obtained easier, eliminating the time-consuming activities.

The classic style of accounting, evolved from handwritten form to integrated computer systems. The next step was to discard the material paper in favor of electronic writing. Today, this concept (dematerialisation) is frequently used.

The Dematerialization has direct benefits by eliminating the costs of producing and using paper but also increases productivity indirectly related to changes in documenting practices and simplification and automation of processes.

From the legal point of view, the recognition of dematerialized and electronic documents as evidence, was a huge step in helping the companies who wanted this simplification.

Companies can archive documents in their electronic management system, which leads to reducing the cost of printing, handling, filing, copying, transmission, archiving, associated to material support.

The types of software instruments used within the accounting profession can be diverse:

- **EDI Systems (Electronic Data Interchange).** These type of tools are used to send electronic documents between the partner companies. EDI uses a standardized format for documents that can be sent, read and processed electronically. Formats have certain standards imposed by various organizations and associations.

Initially, EDI was used to transfer documents related to buy or sell processes. Later, the system was improved, allowing the handling of payments or other activities (Deshmukh, 2006).

If implemented right, EDI systems can reduce labor costs, errors and improve processing speed and can accelerate cash flows.

- **Spreadsheet programs (LibreOffice Calc, Microsoft Excel, Corel Calculate, etc.).** These are interactive computing tools that can be used for financial – accounting operations (Essential Guide N/A, n.d.). They contain tools for creating graphs and charts, folding the accounting information (sometimes arid) on managerial decisions.

Spreadsheet programs have the advantage and ability to handle different amounts of data being optimal and accessible to both large companies and small ones. They are distinguished by the speed and ease with which process and report data.

- **Statistical analysis tools (Matlab, R, Python & NumPy & Pandas).** Statistical tools mentioned are used mainly in the economic entities who handle large quantities of data. In small entities, spreadsheet programs augmented with statistical and analytical functions could be the answer to the need for analysis and synthesis activities. Frequently used programs (eg. Matlab) (MathWorks, n.d.) analyze large data structures and then generate predictive models of future activity.

An open source alternative to Matlab is the R program or Python libraries SciPy, NumPy, pandas. Like Matlab, they analyze data structures and apply statistical functions, financial, etc.

- **ERP (Enterprise Resource Planning).** The business environment which is in constant motion, requires extensive support of information technology. The main purpose of this support is to inform managers and to provide the necessary support in the decision making process. Through ERP systems, financial and accounting data are transformed into information and knowledge and then used by all levels of management. ERP systems exploit the dynamic market conditions and improve the

relationship between the entity and the external environment. They also facilitate control of enterprise-wide operational chains, plans and controls the flow values (Samara, 2015).

Systems of the second generation have been improved, adding to their capability the functions related to marketing, decision and e-commerce, covering all major processes of the enterprise from end to end: management accounting, management control, production management, purchasing, stocks, quality management, maintenance, sales administration, personnel management and project management. A single database management system manages all the information.

A logical step in the synergy accounting – technology is the concept of **cloud accounting**.

The strengths of these systems are:

- Easy access to resources using various devices (desktops, phones or other mobile devices, etc.)
- Increased flexibility and speed of obtaining information
- Low cost of implementation and administration
- Increased information security of these cloud systems (Cloud Accounting FAQ, n.d.).

When we talk about information – accounting systems, we must consider the safety of data stored within them. This means stratified limited access of various person to the data and information contained therein.

A correctly implemented security policy can prevent or stop data theft or unauthorized use of them. Much of the software used in the financial - accounting are layered in terms of information security. Different users or operators only have access to part of the information and not the whole.

IV. CONCLUSIONS

The future brings with him a congruent and accelerated development of the information and accounting systems.

As before, the technology will be a reliable and strategic partner of the accountancy, this having a positive impact on organizational performance.

Entities, irrespective of their size, using these systems will have multiple benefits like:

- economical ones by reducing costs and automate processes;
- strategic ones by streamlining the information which is used to adapt more quickly the management decisions to market realities.

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