CHANGES CAUSED BY COMPUTERIZATION IN ACCOUNTING MANAGEMENT

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The use of financial and accounting computerized systems has a significant impact on the organization and management of the financial and accounting department, on the accounting work and profession, the management of the financial and accounting information, as well as on the financial and accounting control and audit. This study is the result of a research carried on in 25 business entities, regarding the impact of using computerized accounting systems on the accounting organization and management. With accounting's massive computerization and the development of intelligent systems, the accounting work and profession is seriously called into question, as they are significantly moving towards the synthesis, the analysis and the management of the accounting system.

Key words : computerized accounting systems, accounting management, accounting work, accounting profession

JEL codes : M40, M41

I. Introduction

The business management's centre of gravity in dynamic economic environments is represented by the ERP (Enterprise Resources Planning) integrated management system. The fundamental objective of the ERP systems is rendering a clear, accurate and complete image on the business's management, results and cash flows. The emergence and widespread use of these advanced information systems has led to significant changes in general as well as specific business management: finance and accounting management, human resource management, production management, commercial management, documentary management, etc.
The computerized accounting information systems represent a higher stage in the evolution of accounting, which is why we can observe the need to study the impact of using these systems from a scientific point of view.
The present study aims to investigate adjustments and changes determined by the use of ERP systems in accounting and financial management, trying to reduce and even eliminate the overshadows surrounding accounting's organization and management in the conditions of computerization, in order to maintain a normal correlation in the mutual relations accounting - computerization and computerization - accounting.

The research's objectives were oriented towards establishing the changes produced by the computerized systems in the:

- organization and management of the financial and accounting department

- management of the accounting and financial information
- accounting work and profession
- financial and accounting control and audit.
- The actions of the research activity have resulted in opening and completing observation sheets separately for each objective, in 25 business entities which are using advanced ERP systems.

II. Literature review, previous research and practice in the field

Literature in this area is insufficient, the existing one being limited to describing computerized information systems, without considering the consequences of using these systems. Accounting rules and accounting standards do not raise for discussion the computerized accounting management. The accounting practice shows the widespread use of computerized management systems that cannot be treated simply as automatic data processing systems, while the management of information resources is their main attribute. One can fell the lack of an advanced theoretical foundation to compensate for the quick development of the computer applications in this field.

III. Research methodology

The present study is an applied research having the goal of identifying the changes generated by the use of ERP systems in the accounting management, the accounting work and profession as well as the financial control and audit. The chosen research method was the method of research through observation. According to this method, each analyzed entity had four sheets of observation opened, in order to achieve the four objectives of the research. As for the sample of 25 business entities we believe to have chosen companies managed by performing ERP systems, the selected businesses being part of the category of large (11) and medium (14) companies.
After collecting and processing data, we have reached the results and conclusions rendered below.

IV. Results of the research

After processing the data collected during the observation research we ascertained that the use of ERP systems has a significant impact on the following accounting sectors:

- organization and management of the accounting and financial department
- management of the accounting and financial information
- accounting work and profession
- financial and accounting control and audit.

The organization and management of the accounting and financial department is dependent on the organization and management of the computerized system, namely:

- the number of its component computerized applications
- the degree of application integration
- the manner of collecting and validating data.

Work in the accounting and financial department is organized based on data collecting, validation, processing, transmission and archiving requirements, in correlation with the volume of property transactions to be handled by each computer application separately.

Due to the improvement of the computerized applications and the management principles specific to modern management (collecting information at the place of the transaction / event and automatically processing it to ensure the final information in real time) part of the work in the accounting department shifts to other departments, namely:

- stock data collection is performed in the storage/administration places
- collecting data on tangible and intangible assets is done in the investment departments
- collecting data on employees and wages is done in the human resources department
- billing data collection is done in the sales department, etc.

All the economic and financial transactions which remain wholly within the management of the accounting and financial department are those related to the financial activity, namely:

- collection and payment transactions
- receivables and payables management
- calculation and recording of taxes
- contracting / reimbursing financial credits
- making financial investments
- company's budget management.

In conclusion, the role of the accounting and financial department is to issue internal standards / procedures related to the collection and management of financial information where the economic operations take place. Procedures should also be accompanied by details related to the consultation of the stored information on a specific category of assets, liabilities, revenues and expenses.

For the data collected on the site of transactions and events, the accounting and financial department will proceed to their final validation, but only after receiving supporting documents for verification and archiving.

Supporting documents, both those received from outside the organization as well as those drawn by the computer system will bear the signatures and endorsements of preparation, testing, operation and approval of the people entitled to property management.

Thus in terms of computer information systems, the finance and accounting department:

- retrieves and validates accounting items from secondary computer applications
- collects, validates and processes data on economic transactions that are carried out in the financial department: collections and payments, taxes, etc.
- processes and manages information from the level of the accounting item to the level of the annual financial statements, ensuring the financial and accounting function of the company is in accordance with legal terms
- issues internal rules / procedures regarding the collection, processing, management and archiving of accounting and financial information and monitors their implementation
- checks for accounting errors or anomalies and takes action to remedy them

The accounting and financial department based on the information system manual, must draw up a manual of the computerized accounting system to include procedures for collecting, processing, managing and storing the accounting and financial information, tables and computerized attributes to identify and describe the company's objects , events and transactions.

The objective of the modern accounting management, through its data exchange computer networks is to eliminate all factors that slow down the flow of information, blocks controls and increases costs, including useless staff which the company can redistribute or it can dispense with.

However, we are witnessing a shift from the hierarchical pyramidal organization, "bureaucratic", taylorian, to the network organization, systematic and dynamic. In computerized environments,

the head of the accounting and financial department who is chief of the accountant workers turns into coordinator of the information management.
As a result of the computerized systems development, spread out over large geographic areas, the accounting and financial department can disperse territorially, at the endpoint of every computer network that collects accounting and financial data, or the accounting work can be done at the worker's residence if his presence at the workplace is not necessary.

The management of financial information in computerized environments is achieved at a highly superior standard in comparison to manual management. Financial and accounting information is transformed from a passive instrument of ascertaining the reality, in an active instrument of control and enterprise system adjustment.
Computerized accounting starts being a science of informational dosage. By defining informational attributes for the identification and characterization of objects, transactions and events, by defining the structure of financial reports and by data management, accounting should provide an optimal ratio between over-information and lack of essential information, between information and misinformation as well as between useful information and useless information.

Some conclusions on information management are enlightening:

- when it comes to accounting items one can insure the multi value administration that favours accurate captures of the business's realities. For example: the management of a finished product besides default price per unit also comprises the price differentials per unit and the provision per product unit. With the sale of finished goods one will automatically perform all accounting records regarding the financial management discharge, distribution of price differences and annulment of the impairment provision created for the ending balance operations, only essential data is collected for object identification (code, storage location, etc.) and identification data of the recipient, other information being automatically retrieved from the system;
- one is offered the opportunity to create multiple information structures on objects, transactions and events. These information structures can be of type 1-n or type 1-n-m.

The accounting work and profession have been radically transformed by the implementation and use of computerized management systems. The computerization of information systems has always been and is still being accompanied by "fear" of job loss and uncertainty in their power to exploit the information managed by such a system.
Given the repetitiveness of some economic and financial operations one can conclude that the largest volume of work is generated by the financial and accounting calculations that make up the "routine work" and require a larger number of staff. By introducing computerized systems the inaccuracies in calculations are removed, as well as the routine work and other types of activities are generated:

♦ work in designing computerized systems with multiple functions / work options and high quality characteristics

♦ analytical work performed at each job individually for the field managed by each computer application.

Introducing an integrated computerized system for database management does not mean a reduction of jobs in the field of accounting, but it means a change in the work organization of the accounting employee. Orientation towards using a well organized, integrated, computerized database management system, requires removing the intermediate link called calculus office and

transferring data collection and processing in the accounting and financial department. This allows the accounting user to immediately verify and analyse the data collected, processed and managed by the system.

Of all the effects of using integrated computerized accounting systems on the accounting worker we may enumerate:

- ✓ adapting the user to individual work integrated with collective work
- ✓ changing conception on some economic phenomena and economic processes which the user has erroneous knowledge or is misinformed
- ✓ stimulating the user into making improvements to the computerized system
- ✓ real-time creation of a variety of analysis and forecasting situations based on collected and processed data.

Modern management requires knowledge on the state of costumer contracts completion, running production, shipped production, etc. When using manual accounting, the access to these data is more difficult. An accounting and financial report prepared at a certain time may no longer be relevant due to some transactions and events that significantly change the present state of fact. Modern computing and information management will produce and supply information after each data collection, on every synthesis level starting with informative reports and going on with accounting synthesis documents. Also, computer networks and software allow a user to verify data related to those he is collecting and processing. This cross check testing option gives an extra efficiency in terms of quality of the provided information.

By using computerized accounting systems the accounting work acquires new meanings: routine is replaced with data analysis, dispersal of the information supplied by the manually prepared documents with the focus and accuracy of the printed documents, the malaise of having to search for data referring to previous periods of time is replaced with the pleasure to find this data in a few seconds, etc.

The use of computer applications in processing and managing accounting and financial information generates its own communication language between workers in the accounting and financial department. This language consists of names given to the system's functions, names or encodings attributed to financial reports, names given to databases and their attributes etc.

A negative effect of using computer applications in accounting work can be the possible emergence of a state of comfort and narrowness of the worker, who will limit himself to only apply the system's functions he has the right to access, without allegation for significant improvement in the use of the overall computerized system.

While there are trends to achieve intelligent computerized accounting systems that will automatically create accounting items through the functions of the applications, the user only having to set the document's type, number, date and the amount stated in it, the accounting worker's labour around collecting data is being seriously debated and it is considerably moving towards accounting synthesis and the management of the information system.

The lack of sufficient knowledge on computerized information systems and data management in computerized environments leads to difficulties in the accounting work and profession integration. Accounting auditing in computerized environments takes new shapes, which replaces the characteristics specific to manual accounting audit with those of the computerized audit.

The financial and accounting control and audit in computerized accounting systems include:

- ➢ *verifying the data retrieved, processed and managed by the system*
- ➢ *verifying data's processing and storing procedures*.

Controlling the data in the system is done by the instrumentality of the preliminary and final validation functions. In order to facilitate optimal control and audit, accounting and financial data management must be carried out starting from the supporting document and going on to the data that characterizes the economic operation, namely to the accounting item which is generated in the context of that transaction or event. The person empowered with the control or audit activity

must have access to the main document identification data and then to the data in the original document, respectively to the accounting formulas elaborated for recording the economic transaction.

Scanning documents at the time of data collection enables the controller / auditor to view their image and compare the data contained in the document with the collected data, as well as to analyze the elaborated accounting formula in the context of the explanatory document. Mandatory document scanning involves removing the possibility of registering data that is not based on legally drawn up and approved explanatory documents in the computerized system.

Controlling the data processing and storing procedures aims to verify the final results obtained by automatic processing based on data processing procedures used by the computerized system. Verifying data processing is done based on the different existing analyzing and updating operation types, especially in systems where the user can define a wide range of parameters[i] that manage transactions and events accounting models, on calculus algorithms for different types of transactions, record keeping accounts, etc.

Verifying the data storage procedures refers to controlling the data and software archiving activity, inside and outside the computerized system. The persons empowered to control or audit accounting and financial records must check the existence of archives organized by chronological data collections, by categories of computer applications and in the case of software by their versions.

In the process of financial and accounting controlling and auditing the assessor will also proceed at checking:

- unauthorized access to computers, data and applications
- the possibility of collecting unauthorized transactions
- if unauthorized personnel or those unqualified in this respect use the computer applications
- the possibility of unauthorized modifications in the databases
- the use of unauthorized computer applications.

Computer systems offer the possibility of cross-checking by comparing data recorded in secondary computer applications side by side with data recorded in the main computer applications. In performing information technologies, a continuous monitoring of the links and correlations between applications is provided in order to avoid data distortion or error generation.

Preventive control through preliminary validation procedures, further control through final validation procedures and contextual verifications by comparing the scanned image of the document with the data collected in the system, controlling the database processing and updating procedures as well as the system parameters, are sufficient controls as to reduce the risk of erroneous information collection, processing and management.

The tendency in the computerized environments is to transfer most of the control procedures over to the information system, which is capable to manage control procedures and based on them to detect the possible errors.

Thereby the accounting and financial control and audit convert from a passive activity subsequent to the event and transaction occurrence into an active activity which prevents and stops errors and fraud.

V. Conclusions

The results of this research are the basis for future studies on accounting and financial management which suffered significant transformation under the massive accounting computerization.

Understanding the changes caused by the use of computerized systems is the starting point both in the training of the future financial and accounting departments' leaders as well as of the future financial auditors. In this era, to study accounting and auditing outside computer systems is

similar to using the steam engine. Unfortunately computerized accounting practice has taken a significant swing in front of the theoretical foundations of computerized accounting systems. The international accounting approach is based on the accounting methods and procedures specific to manual accounting. There is currently no international standard to address accounting management in the computerized environments.

Most of the accounting theoreticians regard these modern systems as advanced data processing procedures, not understanding the changes that happened in the organization and management of accounting, in the management of financial and accounting information, in the accounting work and profession, as well as in the financial and accounting control and audit.

The contribution of the authors consists in interceding to insure the application of the research's results in order to adapt the national accounting rules and the international accounting standards to the changes generated by the use of computerized accounting systems. The study which was conducted on this topic, deals with issues that have never been directly addressed in other specialized papers internally or abroad.

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