

The Current Role of Accounting Information Systems

ZSUZSANNA TÓTH
PH.D. STUDENT

e-mail: sttoth@uni-miskolc.hu

SUMMARY

The primary purpose of this paper is to present the actual role of accounting information systems. After the description of the theoretical background I state the main characteristics of modern accounting systems, and explain how these software packages can efficiently help not only the work of the accountant, but also of the management.

*Keywords: accounting; accounting information system; accounting software; ERP system; management information system
Journal of Economic Literature (JEL) code: M10, M41, O10*

INTRODUCTION

Within the information system of management systems the accounting subsystem ensures the numerical figures can correspond to reality – of the property, financial and profit status of the enterprise. As a consequence, processing the accounting information is one of the most decisive elements of the pre-decisive, i.e. pro-decisive process of managers.

As a result of the important and spectacular development of informatics and information technology, wide-spread automatization can be observed relating to accounting work-processing. This is proved by the appearance and spread of the different user software. Nowadays accounting software packages have a quite wide market – there are numerous software programs supporting book-keeping, reporting, recording economic events or processing – and in many cases they support the activity of the enterprise as an organic part of a complex, up-to-date, integrated information system.

The Concept of the Information System

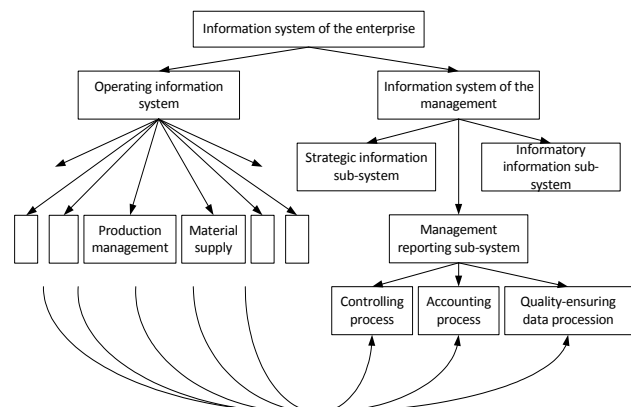
Accounting, as a closed-system recording (which is the collection of procedures, methods, techniques, legal regulations, rules and experts), includes the identification, tracking, measuring, recording, processing, storing, systemizing, valuing, controlling and publishing of the phenomena influencing the property, financial and profit status of the enterprise, ensuring the conditions of continuous, undisturbed activity. In this regulated, closed system the accounting information system records the economic events influencing the enterprise, then processes them – according to the demands – and conveys them to the persons or units responsible for decisions. In addition, the system greatly contributes to preparing different reports,

financial statements, working out an expense management system and compiling controlling reports.

Accounting is – at micro-level – i.e. the level of the enterprise – the sum of activities which are done within the framework of an accounting information system by the experts of the enterprise.

The Function of the Accounting Information System, its Position in the Hierarchy of the Enterprise

The accounting information system, i.e. the accounting process, can be defined as a subpart of the information system of the enterprise, and within it as a subpart of the information system of the management.



Source: Pál 2006

Figure 1. Information System of the Enterprise

On the basis of the diagram in Figure 1 it is obviously seen that the task of the accounting information system is to meet the data demands of the management information system through the management reporting sub-system. So it provides information for the managers of the enterprise, certain functional areas and the body of the owners and the supervisory authorities. The information supplied by the accounting information system has an important role in basing the decisions on, inside or outside of the enterprise.

The accounting information system is in close connection with the management information department, the accounting and administration department, the inner control and the information technology team. The harmonic and efficient activity of these areas characterises the centre of the accounting information system, which provides for the basic data of the informational database.

The information system works within the enterprise and includes two, closely related sub-systems: a data-processing/information supplying sub-system and a decision-making sub-system. The data-processing system is responsible for acquiring, coding, storing, processing and forwarding the information necessary for the activity and operation. The task of the decisive sub-system is – on the basis of information from data-processing systems using them – to influence, directly or indirectly, with the management processes and the operation of the system. However, the decisive sub-system is special, as in practice it has “only” a pre-decisive, pro-decisive role. Accounting, as the decisive sub-system of the information system, can have a special role because within the enterprise accounting as a functional area does not have decisive competence related to the activity and operation of the enterprise, but does have a great role in preparing and supporting the decisions of the management.

The accounting system includes two main activities according to Schehl's categories concerning the activities of the enterprise (Schehl 1994):

- processing information and
- supplying information.

According to the above categories, the dual purpose of the accounting information system can be defined: on one hand to fulfill the registrative, accounting and reporting duties; on the other hand to provide information at the highest possible level for the manager's decision-making activity. This dual function defines the contents of the sub-system, its tasks and its connections. The characteristic sub-systems of the accounting information system are the following in practice:

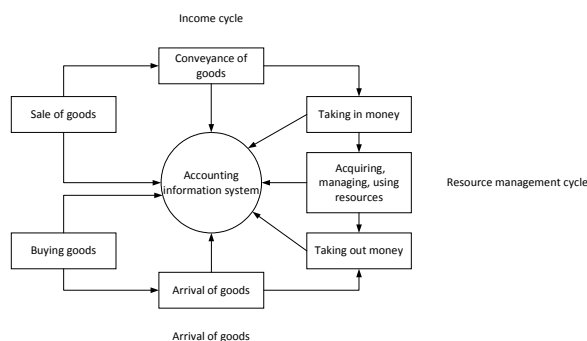
- Ledger and current account sub-system
- Financial sub-system
- Sub-system of labour and wage accounting
- Sub-system of investment
- Sub-system of invoice and sales
- Sub-system of stockpiling.

The most important criteria for organizing the sub-systems – in relation with the given system – are the exact knowledge of purposes, connections, processes, vertical and horizontal relations, personal aspects, codes, basic data, inputs, transformations and outputs.

The processes of the account information system can be summed up in three essential groups:

- income cycle
- expenditure cycle
- handling the resources.

The income cycle means sales and obtaining their income, the expenditure cycle contains the processes from getting the material to fulfilling the payment, and handling the sources means getting the sources, storing, using and optimizing them.



Source: Chikán 1992.

Figure 2. Components of the Accounting Information System

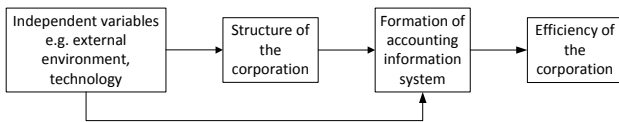
The complete tracking of the economic processes can be realized if there is a complex and up-to-date database behind the above-mentioned processes.

The Accounting Information System and its Environment

The accounting information system is the frame of practical accounting activity, as it tracks the events of the enterprise, supplies data for the managers' decisions, and organically contributes to the reports for the managers, to the financial statements, to compiling the expense management systems and last but not least to the controlling reports. The processes in the environment of the enterprise influence the elements of the accounting information system, too. Among the constituents of the accounting information system the human factor has an outstanding role (nowadays there are great demands concerning the employees' competence, expertness and experience) and those activities which belong to accounting (in brief, book-keeping and reporting). The analysis of the system means the analysis of the system and also its environment for the sake of better and more complete knowledge.

Different models have been formed to illustrate the constituents of accounting information systems and the external effects influencing the system. The contingentist attitude has been prevailing since the 1970s in the research of accounting and management control, as it was thought that an effort to form a situational explanation – starting from the analysis of the environment – can be useful in the research of these systems.

The early contingentist model of the formation of accounting information systems was based on corporatetheory:



Source: Otley and Wilkinson 1988

Figure 3. The Early Contingentialist Model of Accounting Information Systems

On the basis of the model the influencing factors of the formation of the system are independent variables and the structure of the corporation. Later the independent variables were split into non-influencable factors by the corporation (like external environment, economic, technological, legal-political, socio-cultural and natural) and purposes/strategy drawn up by the corporation. (A factor that can be influenced by the corporation can be defined by the size, legal status, ownership, technological conditions, management and the corporate behaviour.)

The accounting information system is continuously changing with the economic surroundings, so it is considered to be a dynamic system as it is developing in reaction to the environmental changes. Furthermore, it is an adaptive system, as it is able to react and adapt, contributing to the better results of the enterprise.

The working of the accounting information system mainly depends on the people operating it and their professional knowledge and experience. The change in the system goes together with the change of the elements of the system. In recent years the demand for the human factor has grown; as a consequence of the rapid development, the expected skills and abilities are different. However, the demands for the managers of the enterprises are not unified, they greatly depend on the special features of the enterprise.

The changes in the direct environment (processes within the enterprise) – and indirect (economic and social) have led to modifying the accounting information, the demands for it have also changed. New clients have appeared claiming the database created by the system and, in parallel, the contents of the required information have been modified, as well – the role of quality has risen.

In recent years the quality requirement has appeared more and more frequently in professional publications that define the requirements concerning accounting (Pál 2010). The continuous development of the accounting information system usually does not belong to the primary purposes of the enterprise, as the management usually considers it too obvious that the information system is continuously increasing to meet the expectations. As a result, the development of the accounting information system is primarily defined from the side of requirements, so the quality demand changes concerning the accounting information, i.e. the output of the system, while newer demands may appear in relation with the process.

The development of the accounting information system is induced by the above-mentioned increase in demands, which may cause the modernization of the whole information system – if the enterprise can fulfill all necessary conditions. Regarding the increase and changes in demands, the primary purpose of

development is improving quality; meeting this target is mainly supported by modern information technology. This is a serious job demanding time – and money – which is able to produce the required data at a newer and higher level.

The Accounting Information System in Practice

After the registration of a new firm at the court – which means the birth of the enterprise – in addition to the essential economic activity in close connection with it – the formation of the accounting information system has outstanding importance.

Concerning the accounting information system, the first important step is to decide how to realize the book-keeping of the enterprise:

- > working within the enterprise (inner book-keeping)
- > entrusting a book-keeping office (outer book-keeping).

The choice is greatly influenced by the size of the enterprise, as well as its economic competence. A further emphatic aspect can be how to ensure the adequate flow of data, as the ability to react and decide thoughtfully greatly depends on the obtained information.

In the case of forming the accounting information system, among the requirements of the system I would draw attention to the conformity to the laws: both to the rules of accounting law and to conditions of the accounting policy (newly formed firms are obliged to prepare their accounting policy within 90 days after their formation) and to the registration and obligation to the tax authorities.

The most important purpose of the accounting information system is to promote the activity of the enterprise, to form a reliable and real picture of it. The accounting information system promotes the activity of the enterprise effectively in the case of the following points:

- > preparing up-to-date statements,
- > providing as much information as possible so that the data should be understandable not only for the experts (book-keepers),
- > contributing to different statistics by means of the links of the system,
- > tracking liquidity.

Further questions may be asked in connection with the effective support of the economic activity concerning the accounting information system, e.g.:

- > Does book-keeping support the system in controlling liquidity?
- > What kind of income covers the expenses?

The Accounting Information System and the Information Technology

The spread of informatics has given rise to a completely new way of providing information. The development of information technology is a great help in accounting to manage the piles of data. In the 20th century the world-wide expansion of technology and informatics created the possibility of using

the information obtained from the accounting information system consciously and efficiently.

As a consequence of automatization, nowadays accounting software (accounting software: a programme which makes accounting work processes easier and faster and which makes it possible to meet the information demand of the management) supports the accountants' work, helping to compile reports by recording and processing the events concerning the enterprise, (according to the law, since 30th April 2009 accounting statements/reports must be published electronically) and preparing tax returns (the system of electronic tax returns was introduced on 1st January 2007; since then statements on paper have been largely abolished, with some exceptions).

Besides supplying the basic information the accounting software should meet the demands for providing data that management can base its decisions on and for informing different sub-systems dealing mainly with planning.

One of the areas demanding extra information within the enterprise is management accounting, the efficient operation of which needs the working of the accounting system at a high level – its instruments are the modern computing programmes. Proper decisions made in proper time need accounting information which is produced by the information system supported by accounting software.

In perceiving, recording, processing and forwarding information the accounting information system has indisputably a central role, which requires the quick and efficient processing and forwarding of data. Informational support is indispensable to reflect the economic changes in our globalized world; in its interest the accounting software efficiently assists the users to obtain the adequately transformed information in time. In respect of thoughtful decisions, obtaining information ensuring the adequate flow of data is very significant because it greatly determines the reactive ability of the enterprise. Nowadays (as a consequence of the economic crisis) the demand for “real and valid” data given by the accounting information system has risen, and their quality and feedback depend on the applied accounting software, the integrity of the database and the professional skills and flexibility of the accountants.

In the business world those enterprises and firms can be successful which are ready and able to renew. An essential element of this ability is applying modern software in the economic processes – connecting the modules supporting different areas for the sake of more efficient operation – which naturally concerns the accounting information system as well.

To automatize the processes of the enterprise it is usual to apply targeted software, i.e., complex solutions supporting the whole business processes have not spread yet, and the so-called island-like applications (Bányai 2010) are dominant in the domestic market, too. The introduction of business software usually happens in cases of processes which can be easily automatized (usually accounting, book-keeping or wage-accounting) simply, isolated from other processes. Such software can be found even in smaller enterprises.

The well-chosen Resource Planning (ERP) system within it the proper accounting information system is a quickly recovering investment, by which the processes become transparent, the expenses can be planned, the managers'

decisions are more supported; shortly, the firm is more capable of growth.

It is very advantageous if, besides the accounting system, the basic activity of the enterprise is supported by software modules which can be linked and are able to co-operate efficiently. In a complex system created like this it is important for the software to support the main activity, the different business processes in details, but in an integrated way. To realize this, it is essential to have a common database reflecting the whole activity of the enterprise, up-to-date data, and reliable information. The target of the complex information system is to support the planning and strategic decisions of the management (in which the management information system has an important role) and to support the inner mechanism of the enterprise and the interenterprise processes.

At the beginning of the formation of the system meeting the demands for the accounting and financial regulations and the management's expectations were essential. Expectations appearing later included increasing efficiency, making the most of capacity, optimizing the supply processes, reducing the expenses, and the ability for planning. At that time the commercial and logistic areas were the primary areas of interest. Nowadays the main aspects are reducing risks, creating and keeping stability, and obtaining reliable data for the decisions of the management.

It is an important requirement to have a quickly, reliably operating system which can be used easily and can be complemented with further elements or functions, depending on the modifications, and therefore can react to changes. That is why the link among the different modules for automatic, efficient co-operation has become highly important, as it promotes the calculations, planning and decisions because the accounting information system is in direct connection with the relevant areas.

The old applications are inflexible. Their adaptation to changes is difficult, they are dissected vertically, and only certain areas are automatized, so the data relating to different areas must be entered separately, which is time- and work-consuming. It is indispensable to know the exact demand of the users so that the different levels of management can obtain the data relevant for them. Asking for the necessary information does not always give the expected results: giving the aggregated data takes too long because the proper links are missing from the databases. A further fault of this management information system is that it fails to provide complex information with a strategic view.

The information of the enterprise has the following requirements:

- providing information for the management and creating a management information system which supports the decisions efficiently,
- besides the functional aspects it manages the processes outside the borders of the enterprise,
- for the sake of these, by forming an information technological environment for the whole enterprise which relies both on the inner and outer data, it creates links among the applications.

To meet the above-mentioned demands ERP systems have been produced. An ERP system is a package of complex software for realizing the planning of sources in the enterprise by which the firm completely electronizes its own inner management, from following the movement of material to comparing the bills and invoices. It is an application formed out of modules which offers an up-to-date, integrated software solution to manage the functional areas and operational processes of the enterprise.

With the formation of an ERP system both the accounting and controlling and management obtain a huge informational database. With the continuously widening functionality these systems are the bases of the informational support of the enterprise.

CONCLUSION

In recent ERP systems accounting – from the book-keeping items to the instruments for reporting, controlling and output-management – is an highlighted area. ERP software should

ensure a connected application for management and reporting, among which the elements (ledger, different analytics) supporting the accounting information system have special significance. These applications provide the necessary transparency and the access to the financial and accounting data for the employees concerned.

The book-keeping programmes mainly help the book-keepers' and financial managers' work. Though their work has a crucial importance for the enterprise, it is limited to preparing tax returns and reports on the budget and finances. Unfortunately it occurs in practice that the managers of the enterprise sign quarterly or yearly reports which are not transparent and representative, i.e. they are not understandable for them. The standardized statements are not made for top managers, rather for the operative leaders. By using ERP systems it is possible for those in the top management to view the financial and accounting indices and to understand their meaning, as it is possible to follow the indices and data to the lowest level.

Acknowledgements

The described work was carried out as part of the TÁMOP-4.2.1.B-10/2/KONV-2010-0001 project in the framework of the New Hungarian Development Plan. The realization of this project is supported by the European Union, co-financed by the European Social Fund.

REFERENCES

- BÁNYAI, F. (2010). Changing an ERP – Maximum return. *Business IT Plus*, pp. 99-103.
- CHIKÁN, A. (2001). *Business Economics*. Budapest: Aula
- OTLEY, D. & WILKINSON, C. (1988). *Organizational Behavior: Strategy, Structure, Environment, and Technology*. In: Ferris, K.R. (Ed.): *Behavioral Accounting Research: A Critical Analysis*. Century VII Publishing, Columbus; pp. 147-170.
- PÁL, T. (2006). *Accounting systems*. Miskolc: Economix
- PÁL, T. (2010). *Quality in Accounting. Conference performance*. In: *Financial Magic – Financial Egresses*. Academic Conference, University of West Hungary, Faculty of Economics, Sopron.
- SCHEHL, M. (1994). *Cost accounting of industrial companies from the background of external and internal structure change*. Berlin: Duncker & Humblot