

# Analysis of the Usage of Information Systems for Economic Process Management in Czech Companies

*Šteker Karel*

## Abstract

The paper is focused on problems of economic process management in Czech companies. It summarizes the basic terminology used in the field of economic process management and information systems. The management of economic issues is confronted with the opportunities and possibilities offered by enterprise information systems. The paper presents the main results of researches into the information systems with an orientation on coverage of economic process management in the last two years. The aim of this paper is to analyse the usage of enterprise information systems for financial management in Czech companies.

*Key words: information system, process, management, accounting, controlling, budgeting, calculations, in-house accounting, decision-making roles, cash-flow.*

## 1. INTRODUCTION

The basis for the success of any enterprise is constant improvement at all of its levels as a response to the constantly changing corporate environment. It is thus not enough just to reduce costs and to improve the level of managerial decision-making. The foundation-stone for long-term stable growth of an enterprise lies in the **systematic and long-term management of innovation**. Enterprises manage innovation especially in the fields of products and services, cooperating with suppliers and customers, and especially on the level of the enterprise's processes. All of these innovations are interlinked and mutually influence one another, and each type of innovation has an impact upon the enterprise's processes. The management of these innovations does not directly require the realisation of new processes in the whole enterprise; on the contrary, it presupposes the flexible integration of the requisite changes, including so-called **best practices** – i.e. a standardised approach reflecting worldwide experience with the management of a company's processes (Scheer, 2000; Stair & Reynolds, 2003; Sodomka & Šteker, 2009).

Management's job is to develop the business and manufacturing processes. The operators simply work within the boundaries of these processes. In today world, the key role in the course of the implementation of these best practices is played by modern information systems. A crucial and fundamental condition for its maximal effectiveness is the process-based management of an enterprise. This considers the organisation as a **set of business processes**, which interweaves through the individual departments and provides its outputs either to the internal or the external customers of the enterprise. According to Harrington (1991) the process is any activity that takes an input, adds value to it, and provides an output to an internal or external customer. Processes use an organization's resources to provide definitive results. A process-based organisation tries to organise and manage work as a unified process, which is sub-divided into its individual, mutu-



ally logically interlinked sub-processes (Gála et al., 2006; Sodomka, 2006; Šmída, 2007).

The potential for improvement only of individual activities in these processes is limited – the greatest savings often are to be found in “hidden” places in these processes. In the course of looking for potential improvements, it is essential to look at the process as a whole and to search for improvements in the team of workers who share in the performance of that process. The outputs of these processes are taken right up to the customers – the individual processes are dependent upon each other and have to work together. In order to be able to manage these processes, we have to have pre-allocated aims and a chosen method for their measurement. The final consequence of the improvement of individual processes influences the whole of the **value-creation chain** within an enterprise, which then produces value-added for the customer or, even better – supported by a modern ERP (Enterprise Resource Planning) solution, which fulfils an integrative role within the framework of the supplier-customer chain, and **generates value throughout the whole network structure** (Basl, 2004; Harrington, 1991; Sodomka, 2006; Šmída, 2007).

The implementation of process-based management leads especially to reductions in costs, increased speed and quality, increased use of the invested assets, increased value-added for the customer, the possibility of quantifying some of the phenomena and increased precision in forecasting future events, the ability to achieve mutually incompatible goals, supports teamwork and engagement-levels of the members of the team, averts the endless implementation of the widest variety of managerial approaches and procedures, etc. (Scheer, 2000; Dvořák & Bašta, 2007).

The process-based management of an enterprise brings with it a whole range of benefits, but nevertheless cannot take place and avoid certain negatives. Many managers confuse these negatives with problems which the introduction of a process-based management approach evokes – like for instance, the short-term chaos entailed or increased demands upon time spent at work. It is not possible to convert to a new way of working from one day to another, and for this reason the old and the new systems will have to co-exist side by side until such time as the new approaches take hold and embed themselves into the company culture. An often-discussed negative effect in working praxis is almost always connected with the dismissal of employees. An enterprise can influence this situation however by reallocating employees other jobs, cancelling some of the outsourced activities, stopping the practice of project-related employment, reducing overtime or halting the induction of new staff prior to the realisation of the transformation process (Laudon & Laudon, 2006; Řepa, 2006).

## 2. ECONOMICS AS A SUPPORT PROCESS

We can characterise support processes as a process which provides value-added, which does not take place across the full spectrum of the enterprise, which does not have external customers and which does not generate sales. According to Brady, Monk and Wagner (2001), we can include the following among the economic processes of an enterprise: **financial accounting, cost management, planning and budgeting, and cash-flow management**.

A system for the management of economic processes based only upon financial accounting information is unable to fulfil the requirements of the contemporary turbulent environment. It is necessary to complement the view of the past (i.e. feed-back) by predictions of future events (i.e.

feed-forward). This perspective was often applied by Tomáš Baťa in his time (Sodomka, 2006) in his system of internal company accounting practices, which included calculations, budgeting and operational accounting (i.e. accounting within the individual workshops. Today, this whole system is called managerial accounting. The authors Brady, Monk and Wagner not only include financial accounting among the economic processes, but also the individual elements of managerial accounting.

## 2.1 Financial accounting

The basic function of accounting is to provide all of its users with reliable information about just how a given company is economically capable and efficient. Accounting is required to provide information especially about the financial situation (statements in the form of balance sheets) and financial efficiency and performance (in the form of profit and loss accounts) for a given period. Accounting information is intended not only for managers, but also for a variety of external users who are interested in the enterprise for a wide number of reasons (Kovanicová, 2007). Financial accounting processes all of the accounting matters that express changes which occur in the enterprise's property and assets and related accounting units as well as tracks costs and benefits/contributions from the point-of-view of the accounting units as a whole. **Financial accounting is not concerned with questions relating to the management** of accounting units as a whole nor of their subsidiary organisational elements; neither does it resolve the problem of how to arrive at data about the quantity and prices of produced goods and services that have been created, but rather, of the as yet unrealised inventory (e.g. unfinished products, sub-assemblies and products), which the enterprise has created as a result of its own activities (Kovanicová, 2007; Lazar, 2001).

When recording financial accounting, one must not forget to uphold the general accounting principles (e.g. the assumption of accounting units, the duration of the enterprise, the accrual principle) as well as valid legislation. Among the basic legal framework of Czech accounting practices is the Law on Accounting, the accompanying proclamations to that law and Czech Accounting Standards. In Europe as well as here, the **financial and taxation accounting systems are mutually interlinked and intermingled**; in addition, the tax rules and laws have a significant impact upon the accounting procedures of financial accounting – which under certain circumstances are significantly impacted (Kovanicová, 2007; Petřík, 2005).

## 2.2 Managerial accounting and controlling

The depiction of economic phenomena is, in **managerial accounting, subordinated a priori to the requirements of the top management of the enterprise**. Especially problematical evaluations are, within the overall framework of this type of accounting, resolved rather on the basis of a view to the future rather than on the basis of historical prices, - which are given preference by financial accounting. Managerial accounting makes use of valuations on the basis of pre-set quantities, at the level of opportunity costs and benefits (expressing “lost” benefits or saved costs) or else on the basis of a wider understanding of reproduction prices. This enables one to track the results from the sale of individual products or services for instance (Král, 2002; Lang, 2005).

Operations within accounting units are the domain of **in-house accounting**, which usually tracks operations according to the individual internal departments and within their framework, also according to the individual performance and operations of the enterprise. The forms, organisation and orientation of this in-house accounting process are determined by the accounts department itself in line with internal rules and regulations. Czech legislature only states that in-house accounting must ensure verifiable supporting materials for the financial accounting process on the following (Lang, 2005; Lazar, 2001):

- About the state and changes to the state of inventory created by one's own activities;
- In order to express the activation of one's own performance; and
- For the valuation of inventory and other performances created by one's own activities.

In-house accounting may be organised within the framework of analytical accounts for financial accounting purposes or in independent accounting spheres, or as the case may be, a combination of both approaches.

The beginning of controlling can be found to the end of 19th century in the U.S. manufacturing and transport companies, where the original charge controllers consisted in the administration of financial matters (Synek, 2000). In most literature, dealing with this issue, states the year 1880, which is associated with the introduction of the position controller in the American railway companies Acheson, Topeka & Santa Fe Railway System. Its role was primarily financial accent. The next important point in the history of controlling was a year 1892, which connects with U.S. industrial company General Electric, which was the first in the industry, set up a working position "Controller".

**The Anglo-American literature** does not identify the specialized activity of controllers, but controlling is one of the fundamental functions of management and should be dealt with by all departments of the company. Controlling ensures successful and timely identification of potential variations from the plan and eliminated them by the management (Eschenbach, 2004). According Koontz and Wehrich (1993) controlling represents the control and according Garrison et al. (2010) represents the actual performance measurement and evaluation of the difference between this plan and actual performance. Currently, in the Anglo-American countries is almost unknown the "controlling". Controlling with liquidity management and financing are subject to financial management. Instead of controlling there is used the term **managerial accounting**.

Controlling was spread to **the German countries** through U.S. subsidiaries after World War II. The largest expansion of controlling was in 60s and 70s of the last century. This was a period of stagnation in industrial and consumer markets, which created pressure on the economy and efficiency in management costs. The dominant concept of the German controlling began in 1979 with the first publication of a book titled Controlling by P. Horváth. This author inclined to the coordination function of controlling, unlike to the Anglo-American concept, where controlling ensures planning, organization and operating in main function of management (Horváth & Partners, 2004).

In 80s and 90s of the 20th century the controlling was explaining two main theories. First theory, the coordination systematic access, is based on systems analysis of the company; the representatives are P. Horváth, R. Eschenbach, D. Hahn, H. U. Küpper and others. The second theory, whose representatives are R. Ewert, D. Pfaff and A. Wagenhofer, mainly deals with re-

relationships and conflicts between the parties and the consequent effect on management. In the 90s of the 20th century dominated the **coordination systematic access**, whose core consists of the coordination management of important subsystems and according to R. Eschenbach (2004) include: the value system, planning, control, information, organizational and personal management system. Currently, the controlling in German literature is treated as a separate discipline of theoretical branch in business economics that is based on a systematic access.

J. Vysušil (2004) also mentions that managerial accounting and controlling stand – theoretically and practically, opposite each other despite the fact that they both have the same goals and almost the same methods. Controlling has continued to develop in business praxis and has become an indivisible part of every modern enterprise. In spite of this, there are significant differences of opinion between theory and practice about the term controlling. It is not possible to find an unambiguous one word equivalent for this term in the Czech language, which is why it is never translated.

On the contrary, J. A. Jirásek (2003) finds the aim of controlling in a new approach to cost effective spending, which is based on the Anglo-American concept, i.e. controlling = managerial accounting, and the German definition, where is obtain the coordination concept of management subsystems. According to J. A. Jirásek the controlling connects to the accounting, builds on the role of management decisions, prepares reports and proposals for strategic and operating decision-making and is also a gateway to financial analysis.

In the first quarter of the 20th century there have been improvements in cost accounting, particularly the monitoring not only the actual costs, but also the planning and correlation based on variations. Detection of variations has become the basis for cost management. The 80s and 90s of the 20 century is not associated with only criticism, but also with the coming of new approaches and tools of management accounting, whose development lasts to the present day (Müller & Šobr, 2002; Horngren, 2009; Drury, 2004; Edmonds, 2006; Král, 2006; Vollmuth, 1999). These approaches include:

- Enforcement the importance of relevant accounting information for most frequent types of management decision-making roles.
- In relation to reengineering, which stresses radical reformulation of business processes, has developed the concept **Activity Based Accounting/Costing** associated with the names of R. Cooper, H.T. Johnson, R. S. Kaplan, P. Turney and other. Authors Hekela (2001), Basl, Majer and Šmíra (2003) the **Through-flow Accounting** method completely eliminates the problems caused by an incorrect allocation of operating costs. All local actions and decisions are assessed on the basis of their impact on the economic performance of the firm as a whole (e.g. net income, return on invested capital).
- Attention extension of managerial accounting from almost exclusive monitoring costs of production stages to the whole value process. Pre-production costs periods have become known as domain access **Target Costing** and calculation extension for the entire product life cycle approach called the **Life-Cycle Costing**.
- It was stressed the non-financial criteria (time, quality, customer satisfaction, employee loyalty, etc.), which better reflect corporate events and are included to the Performance Measurement. Ittner and Larcker (1998) concluded that the most relevant issues include the in-

terconnection non-financial criteria with concepts **Total Quality Management (TQM)**, verification of leading non-financial indicators before the development of financial values, and testing of linkage the non-financial indicators on rewarding of managers.

- There is development of tools for support strategic management, which permeate all approaches mentioned in the previous points. Most cited and also the most commercially successful example of this method is the **Balanced Scorecard**, in which R. S. Kaplan and D. P. Norton (2001) have achieved the linking strategic targets with the measurement of progress in operational activities and have shown how the managerial accounting can become an instrument which is used by top managers for communication of corporate vision and strategic targets into their subordinates.

### 3. RESEARCH METHODOLOGY

The key for establishing an appropriate research methodology in the fields to be investigated is an understanding of the meaning and significance of so-called methodological triangulation – i.e. the combination of the qualitative as well as quantitative methodological approaches as a full-valued research alternative (Pavlica, 2000). The research methodology is based upon own experience as well as observations and expertise defined by the professional authors (Pavlica, 2000).

The research investigation itself is realised in the following way:

1. A questionnaire is sent out to Czech companies (this research does not include banks or other financial institutions and non-profit organizations).
2. Qualitative questioning in selected companies (these companies respond to detailed questions on this topic; they collaborate with the faculty long-time).
3. Compare the results from questionnaire and qualitative questioning.

The aims of the research are:

1. To present of usage information systems for economic process management in the Czech companies.
2. To verify general theories about the economics process in these companies.

The collected data were processed by **absolute and relative frequencies** of selected characters. These data are presented mainly in the form of graphs.

It was used a scale to transfer qualitative information into quantifiable form **for evaluating preferences** for each area of the economic process. For this purpose, it was applied ordinal scale. The ordinal scale classifies elements into a sequence that can express their evaluation, importance, etc. Responses to individual variants were assigned numerical values (relative frequency of responses). These values reflect the particular sequence variants on the scale. Spot preferences were converted to relative frequency and cumulative relative frequency of expressing in their final priority.

The **Kendall coefficient of concordance** is used to evaluate the compliance of more than two orders. This coefficient was used for verify compliance of more orders in the qualitative research. This coefficient is a measure of agreement between  $m > 2$  orders of  $n$  units, where  $m$  represents

an object (rated criteria and their order) and  $n$  represent the respondents who clearly hold  $m$  objects (assigned to order).

The Kendall coefficient of concordance is calculated by the formula:

$$r_k = \frac{2}{n^2(m^3 - m)} \sum_{j=1}^n A_j^2 - 3 \frac{m+1}{m-1} \tag{1}$$

This coefficient takes values from interval  $<0;1>$ . The value of 0 means perfect disagreement respondents and the value of 1 means perfect match. The tested hypothesis  $H_0$  (independence of order  $m$ ) is rejected if different concordance coefficient, calculated from the serial numbers assigned to the observed  $n$  units, is significantly from zero.

There is a test criterion for the test of significance  $\chi^2$ :

$$\chi^2 = r_k(m-1)n \tag{2}$$

Finally, there is need to find the appropriate tabulated value for significance level  $\alpha = 0,05$ . And the statistical significance must be confirmed by the relation:

$$\chi^2 \geq \chi^2_{1-\alpha}(m-1) \tag{3}$$

The first research was made in the year 2010 and the next in 2011, but the results from the companies are always related to previous years (i.e. 2009 and 2010). There were collected sources of 177 (2010) and 210 (2011) questionnaires of various companies from the Czech Republic. The structured interviews were made in 9 (2011) companies.

## 4. RESEARCH CHARACTERISTICS

According to the specifications of the European Commission, the companies in this research survey fall predominantly into the small-business category. If we take employee numbers (up to 50 employees), then it is around 63%. Medium-sized enterprises (up to 249 employees) rank second, it is around 30%. And only small part of this sample can be classified as large-scale enterprises. If we take turnover volume (i.e. up to 250 million CZK) then 57% of all companies are represented small-business category too.

At present, the enterprise information systems market in the Czech Republic **is dominated by Czech-made products** (around 70%). This fact has been a long-term result arising from the previous investigations conducted by Sodomka (2006) and Sodomka & Šteker (2009, 2010). Another significant representation is that of American (7%) and German (15%) information systems. All of the foreign products are however localised to meet the conditions prevailing on the Czech market – and especially as regards their compliance with Czech legislative requirements (e.g. the problems and issues of financial accounting practices).

Based on our literary research, were chosen the following basic financial and economic management fields. These fields were the subject of the written questions in the questionnaire too. Management of the **economic processes** is an important component of the range of enterprise information systems on offer. **Economics includes all of the financial and in-house accounting functions, budgeting, calculations, decision-making roles, and cash-flow management and controlling.**

The financial accounting and in-house accounting functions are the well-represented functions in the economic management fields. About 97% of all companies use the information systems for these two functionalities. Only 3% of all companies solve these fields by the information systems on a partial basis. In addition, it is clear that functionality for the management of financial and in-house accounting purposes are thus offered on a concurrent basis.

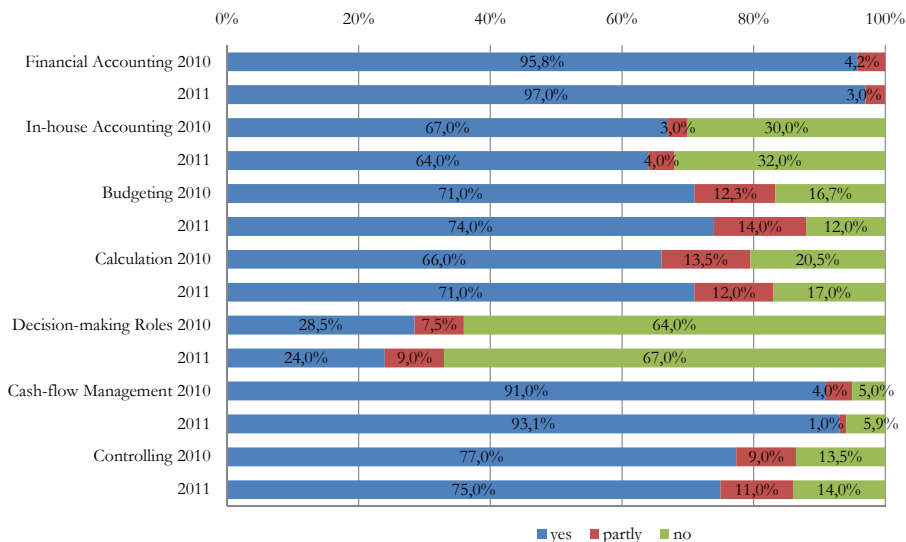


Fig. 1 – Usage of the information system for economic processes in Czech companies. Source: Own processing.

Both cash-flow (91% or 93%) and controlling (77% or 75%) are strongly represented in Czech companies. More than 70% of all companies use budgeting, and about 70% use calculation solutions. On the other hand, decision-making roles have a significantly smaller representation in the economic management field.

The respondents sorted parts of the economic process (in qualitative research) according to their priorities in the information system. The following figure reflects the importance of the sequence of part of the economic process. The results show that respondents place the highest priority to the financial accounting and cash-flow management.



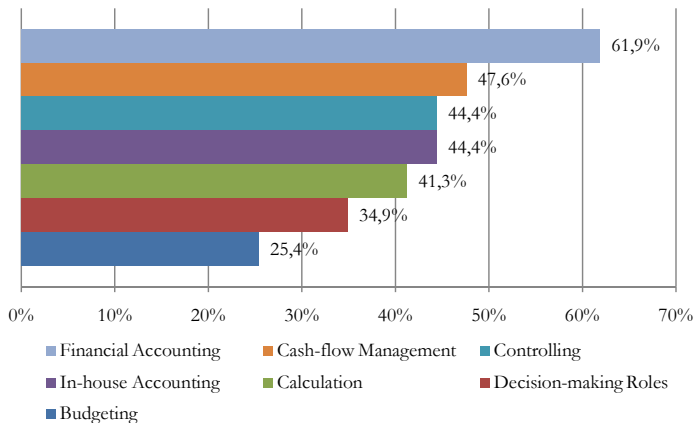


Fig. 2 – Order of the parts of the economic process management in the information system. Source: Own processing.

For the evaluation order of preference was calculated Kendall coefficient of concordance (formula 1) – the result: 0.13, test criterion (formula 2) – the result: 7.19, and the statistical significance of the order of evaluation had to be verified by using equation (formula 3), where the tabled value  $\alpha=0.05$  for this data: 12.59. The final relation (formula 3):  $7.19 < 12.59$ . It is concluded the evaluation order of preference under this coefficient **is not statistically significant**. The views of respondents and their preferred order of management parts in the information system are to a certain independent, i.e. **there is no consensus among respondents**. In addition, in such a small sample of respondents, we must calculate the statistical error and we cannot generalize the results to the population (i.e. business entities).

Another part of the quantitative questionnaire was targeted on the reporting and multilingual functions of the information systems. **It is possible to consider the possibility of preparing and printing out of all of the financial statements** (i.e. balance sheet, profit and loss statement, statement of cash-flow, and statement of changes in equity) **for the enterprise as a whole as standard components of information systems on offer**. A similar result can be observed for the possibility of creating and printing out accounting statements for individual departments within an enterprise, or for selected time frames (e.g. per week, month, etc.).

The possibility of invoicing in currencies other than the standard reporting currency is used about 80% of all companies. According to the Law on Accounting, accounting entities are only compelled to concurrently use other currencies in those cases where the foreign currency, share in the commercial entity, stocks, hares or bonds, derivatives, assets, allocation set-asides and other reserves are expressed in a foreign currency. A similar situation applies to the necessity to use the Czech language in all accountancy materials. Once again, the only exceptions are in those cases where the documentation concerned was completed in a foreign language and which comply with the requirement that they be comprehensible. For this reason, the provision for a multilingual function in (Czech) information systems in the accounting practices field is almost pointless. This functionality is however used by customers for other areas of their business dealings (e.g. in production) or it is simply a component of the bid by a foreign provider of an information system.

From the perspective of the user, and especially the accounts department itself, it goes without saying that that it is advantageous to **be offered the possibility of altering, complementing or adding-to various accounts in the accounting system including the automatic actualisation (updating) of all accounting statements at the same time.** Thereby, users need not manually re-enter or perform checks upon all of the accounting entries in accounting statements separately. About 9% of companies don't use this function of information system.

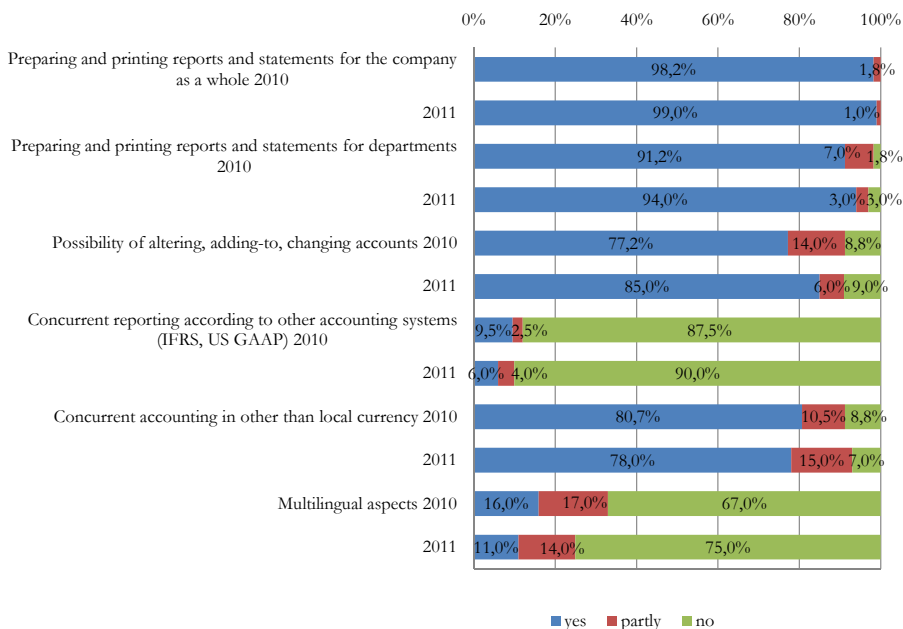


Fig. 3 – Usage of the information system for reporting in Czech companies. Source: Own processing.

The environment of the global economy requires above all the comparability and reliability of submitted information in the field of managing economic issues. Among the two main directions or trends of international harmonisation of accounting practices belong, without a doubt, the International Financial Reporting Standards (IFRS) and the Generally Accepted Accounting Principles (US GAAP). It is precisely because of this gradual harmonisation of accounting standards that will have an ever greater impact upon Czech enterprises and the timely resolution of these problems and issues already today offer competitive advantages to forward thinking enterprises. In addition, those enterprises which emit publicly tradable paper and certificates (bonds, shares, etc.) within the framework of the EU must compulsorily put together a consolidated accounting statement which complies with the IFRS standards. Individual member states within the EU however can also transfer this duty to individual accounting closing statements by means of their own legislation and regulations. This situation now holds true for the Czech Republic. A low percentage of companies (9.5% or 6%) should be use real-time concurrent reporting using other accounting systems (e.g. IFRS, or the US GAAP). It is result of conditions in the Czech Republic mentioned above.

## 5.DISCUSSION

Management of the economic function is currently an essential and important component of information systems offered and delivered to the Czech market, despite this however, there sometimes exist enormous differences between individual information systems (Sodomka, 2006).

The fields of financial and in-house accounts management are the most represented fields in providers' portfolios. Calculation is a typical tool for the management of economic procedures, and especially in manufacturing companies. Not always however, is calculation understood by information systems providers to be an essential component of the economic management process, but rather, this is mainly implemented directly into the production process (Sodomka & Šteker, 2009).

Respondents often did not differentiate between the terms "controlling" and "in-house accounting". Both of these tools are considered to be virtually identical. The controlling tools are however right use in the Czech companies. The outcomes and results of the research confirmed that controlling is often understood in a very simplified manner, and then only as a tool for the breakdown of deviations from the norm of plans or budgets. Among the most important information that managers need for their everyday decision-making processes and the management of the enterprise are items that have something to do with the main or core business activities of the enterprise. There are above all, costs associated with the purchasing (production), revenue from sales and overall profit achieved by the enterprise.

We can state that a common instrument for financial management in Czech companies is also cash-flow management. In addition, the majority of information systems enable, by means of pre-defined models, the tracking of financial and monetary resources as well, and which had not yet been captured and depicted in classical financial accountancy practices (e.g. orders), or which had never even been included in the system itself (e.g. loan planning).

In the reporting field, Czech companies often use the possibilities of preparing and printing out all of the accounting reports and statements (i.e. balance sheet, profit and loss statement, statement of cash-flow, and statement of changes in equity) for the enterprise as a whole and also add to or modify accounts in the accounting structure with their automatic updating on the accounting statements and reports.

From the discussions and interviews with the respondents, the following were mentioned as current trends usage information systems in the economic management field:

- The transformation of financial accounting from a calendar year into the accounting (business cycle) year (often as the consequence of requirements from the foreign mother company).
- Requirements for the support of the consolidation and processing of accounting closure Reporting according to other accounting standards (another consequence of Reporting to owners abroad).
- Requirements for the support of electronic communications (e.g. electronic documentation and signatures).
- The ever greater use of controlling tools (e.g. tracking developments in outstanding debt payments, profitability/feasibility of orders, etc.).

From the above, we can assume the point-of-view that the management of economic processes within the enterprise must have well-mastered financial and managerial accounting sub-processes. The information from these areas is then used by the controller, and should be at least at the level of the above-mentioned MIS (Management Information System).

The stated model (Fig. 4) of the economic process involves three basic parts: **financial accounting, managerial accounting and controlling**. Individual sub-processes communicate among themselves (transmit information) and couldn't exist without each other.

Modern information systems aimed at the economic process management include a wide range of functionalities, whose outputs are then used at various levels of management. These functionalities are a set of interrelated components that collect data in the form of inputs, process the data and convert the processed data into forms of information that provide end-users with a particular meaning and are presented in the form of outputs. Outputs also serve as the feedback of quality of inputs.

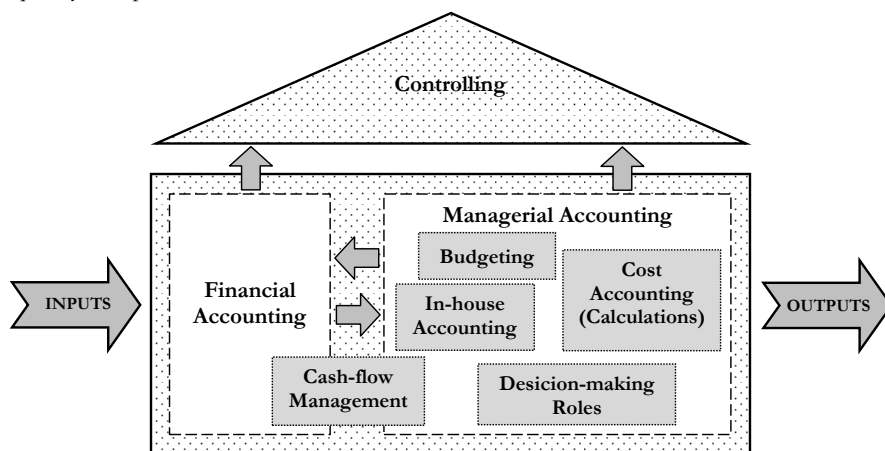


Fig. 4 – Economic processes within an enterprise. Source: Own processing.

**The most significant part of the information** used for financial management **results from the financial and managerial accounting**. This concerns especially information from the accounts (i.e. the general ledger, balance sheet, income statement, cash flow) and other input data (structure of expenses and income of individual company departments, review of overdue receivables, state of contracts in process, etc.). Based on these documents and data, reports are being processed as well as outcomes for company management and owners, business plans and organizational units (centres) and their evaluation. It is also used for the processing and evaluation of planned and actual calculations, processing of statistical reports, making comparative tables of data in time series, outputs for banks and state authorities and other documents.

Documents received by company management and owners are regularly evaluated and upon conclusions there are measures accepted in relation to company and individual departments. The measures are intended to streamline the results in order to meet company objectives and to achieve planned and desired results in the long run.

**Cash-flow management** is another vital component of any enterprise economy. Management should obtain information for the management of funds from financial and managerial accounting; therefore it is on the model boundary.

**Inputs** into the process can be data on the production of finished goods and their transfer to the warehouse, the information from the purchase of new delivery of material, but also reduction of the price of products by company competitors or company plans to build a new shop within three years, etc. Conversely, **outputs** from the process may include prepared financial statements, business plan for next year, the minimum selling prices for customers, the determined goods margin or the profit or loss for the centre as a basis for evaluating the responsible employees, etc.

## 6. CONCLUSION

Before choosing of any information system must be deeply mapped business processes in a company. The business process map is the output of this process analysis, which often detects weaknesses in the strategic and operative processes, helping to change the way of business, operating sequences and for the implementation of selected information system.

The implementation must not take by companies as only mere launching information system, but rather as a instrument for optimalization and reengineering of all company processes, i.e. including the economic process. This implementation is instrumental to the correct setting of all functions (e.g. calculation methods, budgeting, reporting, approval procedure, early warning system settings) that a company will use in economic process management.

It is necessary to clarify what expect from the information system (e.g. changes in the process management), what are the options (e.g. substitute a different information system, provide more detailed information on economic activity of the company) and also what are the restrictions associated with it (e.g. the final decision in a particular situation remains on users of information system).

The company must consider in any practical application of methods and procedures that every business is unique in its own way and its processes are unique. For this reason the company is not able to apply the same method for its processes as another company.

Users of information system should always keep in mind this principle: Any information system does not replace human being but only it helps to manage the whole economic process management of the company.

## References

1. Basl, J. (2004). The Innovation of Business Processes Based on IS/ICT and The TOC. *Center for inVestigations into Information Systems*. Retrieved from: <http://www.cvis.cz/eng/>.
2. Basl, J., Majer, P., & Šmíra, M. (2003). *Teorie omezení v podnikové praxi: zvyšování výkonnosti podniku nástroj TOC*. Praha: Grada Publishing.
3. Brabec, D., & Řeřichová, P. (2009). *Jak připravit podnikový controlling a ABC. Multidimenzionální vyhodnocování ziskovosti*. KPMG Consulting. Retrieved from: <http://www.kiv.zcu.cz/~novyp/nsa/sap-abc.pdf>.
4. Brady, J. A., Monk, E. F., & Wagner, B. J. (2001). *Concepts in Enterprise Ressource Planning*. Boston: Mass Course Technology.

5. Drury, C. (2004). *Management and Cost Accounting*. London: Thomson.
6. Dvořák, J., & Bašta, M. (2007). Procesně řízená firma a její růst za podpory moderního informačního systému. In *International Conference World of Information Systems 2007* (153–164). Zlín: Univerzita Tomáše Bati ve Zlíně, Fakulta managementu a ekonomiky.
7. Edmonds, T. P. (2006). *Fundamental Managerial Accounting Concepts*. Boston: Irwin/McGraw-Hill.
8. Eschenbach, R. (2004). *Controlling*. Praha: Aspi.
9. Gála, L., Pour, J., & Toman, P. (2006). *Podniková informatika*. Praha: Grada.
10. Garrison, R. H., Noreen, E. W. & Brewer, P. C. (2010). *Managerial accounting*. Boston: McGraw-Hill/Irwin.
11. Harrington, H. J. (1991). *Business Process Improvement*. New York: McGraw-Hill.
12. Hekela, J. (2001). TOC jako proaktivní nástroj moderního řízení podniku. In *Systémová integrace 2001*.
13. Horngren, Ch. T. (2009). *Cost Accounting: A Managerial Emphasis*. New Jersey: Pearson Prentice Hall.
14. Horváth & Partners (2004). *Nová koncepce controllingu: cesta k účinnému controllingu*. Praha: Profess Consulting.
15. Ittner, C. D., & Larcker, D. F. (1998). Innovations in Performance Measurement: Trends and Research Implication. *Journal of Management Accounting Research*, 10 (2), 205-238.
16. Jirásek, J. A. (2003). *Strategie: Umění podnikatelských vítězství*. Praha: Professional publishing.
17. Kaplan, R. S. & Norton, D. P. (2001). *Balanced Scorecard: Strategický systém měření výkonnosti podniku*. Praha: Management Press.
18. Koontz, H. A., & Weihrich, H. (1993). *Management*. Praha: Victoria Publishing.
19. Kovanicová, D. (2007). *Abeceda účetních znalostí pro každého*. Praha: Polygon.
20. Král, B. (2006). *Manažerské účetnictví*. Praha: Management Press.
21. Lang, H. (2005). *Manažerské účetnictví – teorie a praxe*. Praha: C. H. Beck.
22. Laudon, K. C., & Laudon, J. P. (2006). *Management Information Systems: Managing the Digital Firm*. New Jersey: Prentice Hall.
23. Lazar, J. (2001). *Manažerské účetnictví: kontrola a řízení nákladů v praxi*. Praha: Grada.
24. Molnár, Z. (2000). *Efektivnost informačních systémů*. Praha: Grada.
25. Müller, J., & Šobr, J. (2002). Řízení nákladů pomocí ABC. In *Systémová integrace 2002*.
26. Pavlica, K. (2000). *Sociální výzkum, podnik a management: průvodce manažera v oblasti výzkumu hospodářských organizací*. Praha: Ekopress.
27. Petřík, T. (2005). *Ekonomické a finanční řízení firmy: manažerské účetnictví v praxi*. Praha: Grada.
28. Řepa, V. (2006). *Podnikové procesy: procesní řízení a modelování*. Praha: Grada.
29. Scheer, A. W. (2000). *ARIS – Business Process Modeling*. Berlin: Springer. <http://dx.doi.org/10.1007/978-3-642-57108-4>
30. Sodomka, P. (2006). *Informační systém v podnikové praxi*. Brno: Computer Press.

31. Sodomka, P., & Šteker, K. (2009) Economics as a Key Support Process in ERP Systems. In *Creating Global Economies through Innovation and Knowledge Management 2009*. Kuala Lumpur: International Business Information Management Association, Proceedings of the 12th Conference.
32. Sodomka, P., & Šteker, K. (2010) Analysis of Products Offered on the Czech ERP Market for the Management of Economic Processes. In *Global Business Transformation through Innovation and Knowledge Management 2010*. Istanbul: International Business Information Management Association, Proceedings of the 14th Conference.
33. Stair, R. M., & Reynolds, G. W. (2003). *Principles of Information Systems: A Managerial Approach*. Boston: Thomson/Course Technology.
34. Synek, M. (2000). *Manažerská ekonomika*. Praha: Grada.
35. Šmída, F. (2007). *Zavádění a rozvoj procesního řízení ve firmě*. Praha: Grada.
36. Vollmuth, H. J. (1999). *Nástroje controllingu od A do Z: přehledné a srozumitelné metody v řízení podniku*. Praha: Profess Consulting.
37. Vysušil, J. (2004). *Metoda Balanced Scorecard v souvislostech: implementace a úspěšná realizace v řízení podniku*. Praha: Profess Consulting.

### Contact information

*Ing. Karel Šteker, Ph.D.*

*Tomas Bata University in Zlín, Faculty of Management and Economics*

*Mostní 5139, 760 01 Zlín*

*Email: steker@fame.utb.cz*