

THE IMPACT OF INFORMATION TECHNOLOGIES ON THE PERFORMANCE OF THE FINANCIAL-ACCOUNTING DEPARTMENT OF THE COMPANY¹

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Abstract:

The characteristic of the modern organizations is the use in a bigger and bigger proportion of the information systems, based on computers and telecommunications. Among the implications of using the information technologies in the financial-accounting department we can suggest: the increase of the productivity of the employees, the improvement of the decision making process, the increase of the performances. The main target of this paper is to suggest a model for the assessment of the performance of the financial-accounting department. A model of assessment of the performance has to group financial and non-financial measures. The model suggested was built starting from the one conceived by Morin, Savoie and Beaudin in 1994 and improved, which relies on four dimensions: the economic efficiency, the human resources value, the legitimacy of the organization and the continuity of the organization.

Key words: *information technologies, performance, model, accounting-financial department, company*

JEL classification: *M40*

1. Introduction

The concept of performance, always present in the management literature, covers various aspects, such as efficacy, efficiency, economicity, competitiveness, relevance and financial viability (Florescu, 2008). All the other researches concerning the company's performance have to rely on a definition and a rigorous measurement of this concept and of the ones that come before or after it (Jouirou and Kalika, 2004). Bourguignon (1998) suggests a definition of the performance starting from three general senses:

- Performance result*, used especially in the management control, relies on the comparison between the result obtained and the objective set (also called financial performance);
- Performance action*, that includes the means, processes, competencies and qualities deployed for obtaining the results;
- Performance success*, that depends on the representation of the goal.

The researches devoted to the organizational development deal with the performance at four levels:

- Of the individual employee, *individual performance*;
- Of the team or small group, *team's performance*;
- Of the program/project, *the performance of the program/project*.
- Of the organization, *the organization's performance*.

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We will consider further the organization's performance, as we consider that the financial-accounting department's performance is a component of this one. For Marmuse (1997) **the organization's performance** represents the manner in which the company is organized to reach the objectives and the way it manages to reach them.

Marchesnaz and Fourcade (1997) consider that the management of a small company could try to win a competitive advantage referring mainly to the potential of the organization it runs (quoted by Dos Santos, 1992). This manager will consider the organizational performance criteria as indicators for the maintenance of the financial performance and the organizational capabilities become the way to access a satisfactory financial performance. The organizational performance can be built with the help of three main dimensions:

- ☑ *Organizational climate*, reflected by a conflict, familial or "team spirit" atmosphere;
- ☑ *Organizational culture*, the common values existing between the organization's members;
- ☑ *Administrative competency*, which has a more procedural aspect, identification of the administrative, coordination, conceiving and decisions diffusion tasks responsible, at the level of big and average organizations, because at the level of the small organizations the administrative competencies are sometimes delegated and, thus, frequently assumed by the manager.

In order to measure the organizational performance, we can use different criteria (Kalika, 1988): information circulation quality, service relationships, coordination, cooperation, control level, communication, decentralization, flexibility, integration.

In the last years the *global performance* of the company concept appeared, defined as the sum of the economic, social and environment performances (Germain and Trebucq, 2004).

2. The performance of the managerial-informational system

The characteristic of the modern organizations is the use in an increasing degree of the information systems, based on computers and telecommunications. As a consequence, we notice a substantial increase of the size and speed of the information flows, under the circumstances of the reduction of the frequency of the appearance and of the action of the organizational deficiencies. Another major consequence of this evolution is the increase of the information flows with the external environment, including the suppliers from a long distance, as, through the modern technologies, Internet, the distance between the transmitter and the receiver doesn't matter. The fundament of this evolution is the increase of the open character of the organizations.

These facts impose on a new attitude towards the performance of the managerial-informational system. It is *performing* in the company all and only what contributes to the improvement of the couple value-cost and to touching the strategic objectives. On the contrary, it is not necessarily performing what contributes to the reduction of cost or to the increase of value, isolated. To be performing means to be *efficient, efficacious and economic* in the same time. An accurate definition of the concepts is required.

Efficiency means the touch of the objectives established (output) by observing the negotiated resources (means). For the information system, the efficiency means to conceive, deploy and use the system so that the measurable and not measurable effects are bigger then the efforts required for these phases.

Efficacious means to obtain the result (output) while observing the expectations of the partners. For the information system, the efficacy means to conceive, deploy and use the system so that it generates superior results and satisfy the needs of the achievement of the managers and employees objectives.

The efforts and effects, expressed quantitatively, refer to:

- ✓ **Efforts:** *labor expenses* for the employees that work for the functioning, improving and deploying the solutions of the managerial-information system; *managerial consultants* expense, when needed; consumables (paper, various documents, printer and copier cartridges etc.) as well as other indirect expenses; investments, such as the purchase of computers, the building of a computer network, Internet etc.
- ✓ **Effects:** *profit increases* registered at the level of the organization as a consequence of achieving a work, being involved in a work process etc. with smaller expenses, still maintaining the parameters influencing the revenues – selling prices/product, price/service etc.; the increases in the turnover, obtained as a consequence of the reduction of the expenses (in the circumstances of using the same practices) or of the valuation of commercial, economic, research etc. opportunities that can generate increases in revenues directly or indirectly; decrease in the number of managers; decrease in the time allocated to the managers for an efficacious management, as they have operative, pertinent information, that can be used in real time; savings in the total expenses, as a consequence of the deployment of the most of the improving ways for the managerial-informational system.

To be performing sometimes means to exceed targets. A smaller number of employees that obtain the same result show the performance. There are companies searching for management controllers able to define budgets whose achievement will be confirm with the performance objectives.

3. The relationship between investment in technology and performance of financial accounting department

In this section we intend to broaden the research on performance by encouraging the development of new perspectives of IT investment – performance relationship. The impact of information technology on financial accounting department performance can arise in two ways:

- Management can do more detailed analysis. This leads to:
 - better decisions;
 - Identifying better business opportunities, for example by data mining;
- Unusual, unfavorable directions can be identified more quickly, helping management to better control the company.

In recent studies on the relationship between IT investment and performance and productivity were reported significant positive effects of such an investment. Some researchers, however, bring into question the results, because studies involve cross-examination of primary data. Perhaps a better method in determining the performance of IT is an analysis that covers both the transverse and longitudinal database containing hundreds or even thousands of entries from different industries. Large databases are used to eliminate extremes and provide a clearer picture of the relationship between IT investments and performance.

Some have categorized the findings as “the great lie of the information era”. These criticisms go at least partly on the premise that the benefits of IT investments can be made only in long periods of time. However, it is possible that in many cases IT has the potential to bring significant benefits in the year of the investment. In any case, research that reflects the relationship between IT investment and performance and productivity is more persuasive if based on comparative data. Although some authors have speculated on the delayed effects of IT investment, so far there have been no empirical studies demonstrating a relationship between such investment and performance and productivity in subsequent periods.

Conclusions of research studies reveal that “while the average yield of investment in IT is positive, there are wide variations from one firm to another: some have spent large sums and obtained small profits, while others have spent similar amounts with a huge success” (Mahmood and Mann, 2000).

Logically, there are differences between different groups of researchers investigating the effects of IT investment. A group that focuses on the need to use qualitative analysis considers that quantitative measures had a preferential consideration in the research undertaken. “Quantitative group” comments on the superiority lesson from the rigors of this approach. Some members of this group go even so far as to announce that they do not believe in measuring the quality of IT productivity. They commented that the pack can be used only if the quality is first combined with the quantitative. Other studies show that there is room for both sides of IT productivity research. Ideally, each group work should be completed with that of the second.

In their paper, Ryan and Harrison (2000) interviewed 50 people with decision-making powers of different industries on the cost of IT decisions. Ryan and Harrison's study supports the observation that IT decisions are traditionally focused on financial and technological elements. The results indicated that staffing costs are often not considered or are minimized and ignored until after implementation of information technology, resulting in less than optimal decisions and thereby reducing the potential benefits of IT investments. The paper extends existing theory describing systematic patterns of inclusion and exclusion of costs and benefits involved. In addition, it provided a decision tool to help IT management frameworks to begin to think about the social costs and benefits that should be considered in many decisions.

Research conducted by Ragowsky et al. (2000) had two objectives. The first was to find support for the premise that the benefits derived from use of information systems depends on the operational characteristics of a firm (eg. number of suppliers and buying time for orders). The second was to show that the relationship between the benefits of an information system and operational characteristics of a firm was stronger for a specific application of the information system than for the whole portfolio of applications. Using data from more than 500 production companies in Israel and U.S. authors have found positive correlations between information systems within organizations and organizational characteristics of firms from any country. However, such a relationship could be established for specific applications identical in both countries.

We believe that these technologies are not single investments. Spread tends to be far higher for standard technologies and profitability as the issue of competitive advantage arises increasingly less. We believe that now is the idea of investment in information technology especially for not risking the loss of connection with market developments and competition.

Information technologies may impact on performance, but they are not sufficient for this. NTIC (new technologies of information and communication) should be regarded as additional resources added in an organizational and technical context. They should be supported by other organizational and managerial means. Thus, the effects of this difficult set of vectors can be isolated contributions of each factor.

Performance you can get in a company or a department within it with NTIC is, among others, connected with the learning phenomena associated with the use of these technologies. In a case study, Neo (1988) noted that “the most successful implementations of information technologies in the organizations are the ones that have already registered an experience. The effectiveness of an information system is therefore dependent not on the technology itself, nor the organization seen in isolation, but the combination of the two.” NTIC contribution should not be regarded as static but as a technical and organizational coevolution.

4. Performance measurement for the financial accounting department

Analyzing firm performance on the functions, interest and attention must be given to the performance of the financial accounting department. The management use of the resources must preserve the overall balance of the organization's activities. Quantifying the performance proper is essential for a realistic assessment of the situation of the company and relevant comparative studies so that this work provides a diagnosis as accurate of the reality as possible. Financial accounting management should be based on effective strategies and their development must take into account past, current and projected performance.

The implications of using information technology in financial accounting department of a firm can be summarized as:

- personnel labor productivity growth, further increasing data processing speed, communication speed and increased volume of findings;
- completion of field activities for making mutations in the coding of documents to field data (using bar codes and automatic generation of documents by computer applications);
- use clear procedures for the correction of any errors arising in information flows;
- improve decision making;
- increase performance.

In a broader sense the effects of computerized financial and accounting departments of companies are mainly the following:

- Reduce the number of errors committed in the preparation of documents;
- Establish a high data processing;
- Significant reduction of errors of calculation and editing;
- Increase data processing speed;
- Perform automatic financial diagnosis and interpretation of results;
- Automatic dashboard obtained with a variety of indicators and high power of synthesis and characterization.

Management controllers use the indicators to synthesize non-accounting information and accounting across business and to control financial and physical flows. They have a wide range of indicators (financial and non financial indicators, indicators of management, operational and strategic indicators, indicators of results etc.). But each type of indicator is used according to the requirements management.

The performance evaluation must regroup financial and non-financial measures (Kaplan and Norton, 2001). It is important to measure all forms of performance which make a significant contribution to global competitiveness and integration into a whole of financial and non-financial measures. According to Waterhouse (2005) non-financial performance measures relate to: effectiveness of operation, intellectual capital and know-how acquisition, ability to innovate and respond to requirements, quality products and services and acceptance by the market, relationship with customers, relationship with investors, relations with associations and other stakeholders, dealing with the public, environment, health and safety. Jouirou and Kalika (2004) show different approaches to measure performance:

- ratios or quantitative targets are generally based on financial data such as financial results, indicators of labor productivity etc.;
- ratios that use subjective or qualitative assessment of the managers of the creation of intellectual assets, strategic flexibility etc.

We consider that a model that could be adapted to measure the performance of financial accounting department is that proposed by Morin, Savoie and Beaudin (1994, 2001). Initially, the model was developed around four perspectives: economic

efficiency, the human resources, validation against external groups and continuity of the organization. Subsequently amended, taking into account developments in the representation of organizational effectiveness, the added fifth perspective, the political dimension, was placed in the center of the model. The improvement includes the following dimensions: *economic efficiency* (productivity, saved resources), *the human resources* (mobilization of employees, working climate, staff efficiency, competence of employees), *continuity of the organization* (quality product / service, competitiveness, meet business partners needs), *legitimacy of the organization* (regulatory compliance, social responsibility, environmental responsibility) and the *political arena*. The model is based on a multidisciplinary scientific foundation the authors have done and research to evaluate the validity.

To assess the performance of financial accounting department we propose the following model, starting from the one suggested by Morin, Savoie and Beaudin:

Table no. 1 *Model for the performance valuation of the financial-accounting department*

<i>Economic efficiency</i>
The strategic use of the information technologies
The use of the information technologies for the reduction of the production costs
The use of the information technologies for significant savings
The use of the information technologies for the improvement of the company's productivity
The use of the information technologies or the improvement of the company profitability
The use of the information technologies for the improvement of the products and services quality
The use of the information technologies to observe the deadlines required by the customers
<i>Organization's continuity</i>
IT environment
The use of an external information network for identifying the information technologies requests
The knowledge of the information technologies used by the competitors
The surveillance of the information technologies on the market to change rapidly the technologies needs used by the company
The assurance of the fact that the choice of information technologies observe the environment's evolution
The use of information technologies that will allow a quick reaction to the environment's pressures
Planning and controlling the information technologies
Managing the existing IT products
Maintaining the control over the projects involved in the acquisition of the new technologies
Developing a technological culture within the company
The existence of the human and organizational resources necessary for the management of information systems
The existence of the ability to efficiently identify and to cover the information technologies needs
The strategic planning of the information systems in the financial-accounting department in connection with the organization's objectives

The management of the technologies used at present in the financial-accounting department
The use of an integrated system for accessing the information all over the company
The acquisition and deployment of the information technologies
The structural approach of the acquisition of the information systems needed
The use of the selection criteria specific for the acquisition of the new information systems
The use of the financial instruments in planning the acquisition of the new information systems
The choice of the information systems to be used within the financial-accounting department according to the strategic focus of the company
The knowledge of the impact that the information technologies will have on the different functions of the financial-accounting department
The assessment of the potential problems connected to the strategic focus of the company, concerning the financial-accounting department
Organization's legitimacy
Observing the rules
The level at which the information technologies that function within the financial-accounting department observe the laws and the rules that govern this activity
The number of incidents noticed, the level of conformity with the rules in force
The number of internal controls, the number and value of the deficiencies encounters
The number of external controls, the number and value of deficiencies encountered, the value and number of the fines and penalties
The value of the human resources
The involvement of the employees of the financial-accounting department
The identification of the possible sources of resistance to change before the deployment
The total number of employees, the wages
The degree of the employees fluctuation/ the cost
The analysis cost-benefits-motivation
The report between the training costs and the stability of the employees in the organization
The time spent by the employees in the organization
The reasons of the employees for leaving the company
The total training costs
The work climate
Staff turnover: number of people leaving the financial accounting department during the year / number of employees in the department, outlining the reasons for departure
Stability of personnel: number of persons working in the company after months of employment N
Absenteeism rate
Staff return
Number of transactions introduced wrong in the database
The average duration for the achievement of a transaction with the help of the information technologies
The employees competencies
The assessment of the employees aptitude to use the information technologies chosen
The number of employees that know the information technologies deployed

Conclusions

The model suggested by us for the assessment of the performance of the financial-accounting department under the circumstances of the existence of the information

technologies relies on the four dimensions presented by Morin, Savoie and Beaudin in the original and improved model: the economic efficiency, the value of the human resources, the legitimacy of the organization and the continuity of the organization. The assessment of the validity of the suggested model is the object for our future researches. This model is a qualitative one. In the future researches we will refine it by adding quantitative ratios.

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