

# **CONTROL PERFORMANCE THROUGH THE DESIGN AND IMPLEMENTATION OF A BUDGETARY SYSTEM IN SMEs IN THE REGION SOUTH –WEST OLTEANIA**

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**Abstract:** Although traditional economy more SMEs seem to be effective only run on intuition, judgments and experience, without recourse to another information system than the one represented by some accounting data as mandatory (Dupuy, 1987) , the frequent absence of these tools can explain more bankruptcies (Holmes et Nicholls, 1988, McMahon et Holmes, 1991; Calot et Michel, 1996). Hostility current business world, supported by the growing complexity and globalization, requires intuition coupling managers a more formal, sophisticated management tools (Chapellier, 1994) and modern accounting information systems, complex and active (Lavigne, 2002).

**JEL classification:** M41, M42

**Key words:** SME, organizational thresholds, accounting information system, budget costs, influence factors

## **1. INTRODUCTION**

Although in the traditional economy more SMEs seem to be driven effectively only on the basis of intuition, judgments and experience, without appeal to another information system than the one represented by some accounting data as mandatory (Dupuy, 1987), the frequent absence of such instruments can explain more bankruptcies (Holmes and Nicholls, 1988, McMahon and Holmes, 1991; Calot and Michel, 1996). The hostility of the current business world, supported its increasing complexity and globalization, requires coupling intuition more managers with formal, sophisticated management tools (Chapellier, 1994) and modern accounting information systems, more complex and active (Lavigne, 2002).

## **2. THE EVOLUTION OF MANAGEMENT CONTROL SPHERE**

Discipline in full evolution, management control is a field of research which have emerged two schools. The first school focuses on exercising control and power (Gervais, 2000) and emphasizes the need for a set of accounting tools which allow achieving predetermined results. The second school has a more pronounced behavioral dimension (Merchant and Van Der Stede, 2007) and claims that the primary function of a management control system is to influence behavior in order to increase the probability of achieving business objectives. The two schools have promoted two models within the scientific literature.

The limits of this model relate to its emphasis on accounting and financial dimensions in the management control system, on the exercise of power and its

consequences, separating management control of strategic and operational controls (Otley et al, 1995). Another limiting factor is its integration into a normative theory, that dominates the optimization of financial resources in order to achieve the objectives, and this vision makes sense only in a context of market stability, almost impossible nowadays.

The second model, the more behavioral in nature, describes the system as a process that allows influencing behaviors (Flamholtz et al., 1985) and to encourage collective cooperation of individuals and various groups in achieving congruent goals (Ouchi, 1979; Flamholtz, 1983).

Most definitions of management control integrates the processes of organizing resources in order to achieve the objectives arising from the strategic options chosen by the managers. Nonetheless, Merchant and Van Der Stede (2007) points out that the first function of the management control is the influence behaviours in order to increase the probability of achieving the objectives, and the latter must not be merely financial or quantified, nor any viewed from a deterministic perspective. The presence of these objectives serves as a means of identifying the area of freedom of the actors involved. Over the past two decades the management control systems have evolved from a more formalized, quantitative and financial, to a greater extent, and that integrates both financial and non-financial aspects (Arnaud et al., 2001; Chenhall, 2003).

To characterize the management control systems, Santin and Van Caillie (2008) proposed a unifying grid characterization criteria of management control systems in the context of SMEs. Starting from their traditional or nontraditional nature (Ittner et Govindaraj, 1995; Arnaud and others, 2001), and continuing with the temporal expression of concentration, with their proactive or reactive nature, the degree of freedom towards employees (Merchant et Van Der Stede, 2007), with their level of formalism and ending with their mechanistic or organic form, the two researchers identify a wide sphere of control, which may include one or more of these criteria. However, they report that in their formal version, controls can be both mechanistic and organic, while informal controls can only be organic.

### **3. ACCOUNTING INFORMATION SYSTEMS DETERMINANTS IN SMEs: A EMPIRICAL RESEARCH IN THE CONTEXT OF THE SOUTH-WEST OLTENIA REGION**

#### ***3.1. Accounting information system***

Accounting information system is defined by a subjective manner. This term is used mainly in shares of documentation and complements the expression «accounting practices». Chapellier (1996) considers that the practices are defined by two dimensions. The first objective, the size, refers to the system of available data, historical or forecast, which covers the general accounting, financial analysis and balanced scorecards. The subjective dimension refers to the use of such data by the manager, for its own requirements, and allows to assess their relevance for SMEs.

A description of the characteristics of accounting information systems of SMEs (Lavigne, 2002) grouped these in three dimensions, namely the annual financial statements, management accounting practices and internal dissemination of financial results. Referring to practices, Haldma and Laats (2002) include here the methods of calculation of costs, the links between the cost and the object costs (cost of administration), budgeting, performance measurement system and cost accounting (cost

variable, marginal contributor, ABC). For the sake of separation, accounting information system is considered all available information, based on historical accounts, or forecast, which covers the general accounting, management control, financial analysis and balanced scorecards.

### **3.2 Accounting practices in the SMEs**

Most of the empirical research aimed at identifying the accounting practices in SMEs reveals the nuanced conclusions and partial results, sometimes contradictory, do not allow the release of generalizations. Some authors consider that the accounting information systems are mainly oriented towards the production of documents in order to meet the tax authorities (Holmes et Nicholls, 1989; Bajan-Banaszak, 1993), and yet others assert that SMEs are heterogeneous and do not represent reduced models of large businesses. The latter finding calls into question the vision of reducing these systems in SMEs (Chapellier, 1994; Lacombe-Saboly, 1994; Lavigne, 1999).

**Management control practices.** The increasing complexity SMEs environment and their evolution have caused uncertainty in recent years, the development of a management control function from the increasingly formalized, totally integrated within the enterprise information system (Raymond, 1995). Management control system is thus an integrative interface to several data that facilitate everyday management of SMEs. The profile and impact of SMEs managers upon the nature and the use of information management within any management control system, is highlighted by Chapellier (1997). The same author emphasizes the importance of a management control system and planning increasingly richer and evolving into a turbulent environment, such as the current one.

Nobre (2001) believes that the role and functions of a management controller within the SMEs must evolve towards its legal, financial and accounting part with which it is often assimilated to the organizational conception of growth and continuous performance analysis on various links and cost places. For his part, Van Caillie (2002) points out that the main tasks of a management control system in SMEs are fundamentally related to the method of costing.

**General accounting practices.** If the majority of SMEs have a passive behaviour in financial accounting matters, others cannot be neglected, using accounting information also for other purposes. Lavigne (1996, 2000) shows that the financial statements are useful not only for tax purposes, but also for setting goals, monitoring their implementation and corrective measures, in support of decision-making in investment and treasury management and also of the working capital.

**Analytical accounting practices.** Empirical research in analytical accounting in SMEs were not unanimous. One of the positions that have highlighted claims that analytical accounting instruments are not implanted in most SMEs, they have a rudimentary or even embryonic character and are not computerised (Bajan-Banaszak, 1993). In 1994, Chapellier claims that 77% of the managers interviewed within his study make calculations of costs, but only 23% of the cases it is an accounting system.

An investigation of Nobre (2001) demonstrated that 60% of the SMEs surveyed are using the full cost method. Lavigne (2002) identifies two characteristic ways of management accounting practices that are most used in SMEs, namely computerized calculation of the production cost (66%) and working capital preparation (61%). These

two important proportions reveal a new phenomenon in the field of small and medium-sized businesses.

**Financial analysis practices.** In terms of financial analysis (Chapelier, 1994), empirical studies are relatively rare, and the results are converging, pointing out that it is a widespread practice in SMEs, although the practice systems are different in terms of their complexity.

**Development of balanced scorecards.** The few studies conducted in this area reveals that the balanced scorecards are among the instruments most found in the SMEs. Set up essentially of accounting information, they present intermediate forecasts and intermediate situations and can be classified as general balanced scorecards and on functions. Same Chapelier studied the spread of balanced scorecards in SMEs and the typology of information contained in these instruments. The conclusion was that 23% of the SMEs had balanced scorecards of medium complexity, and 48.5% a great complexity, and that the information provided is related to the activity carried on at the margins obtained from staff costs, financial costs and to the working capital.

Bergeron (2002) emphasizes the prospective balanced scorecard, considered to be a useful instrument, on the one hand, the wording, the communication strategy of SMEs and setting objectives and, on the other hand, ensure coherence between the initiatives of the actors to achieve the objective desired and to pursue the strategy. His study sought to know whether the use of strategic integrated balanced scorecard, based on models of Kaplan and Norton improves performance measurement systems in SMEs.

### **3.3. The contingency factors of the accounting information systems in SMEs**

Research on determinants of accounting information systems in SMEs have revealed two distinct perspectives: the contingency theory, i.e objective theory (or structural) and subjective theory (or behavioral). Recent research (Chapellier, 1994, 1996; Lavigne, 1999, 2000; Lacombe-Saboly, 1994) reveals the variety of such systems in SMEs and identifies several factors likely to influence the contingency in the elections.

**Structural contingency.** The factors invoked in most recent studies are usually the size, age, sector of activity and the degree of information of management.

#### ***a) The size of the enterprise***

More empirical research considers the size of the enterprise as a variable which is likely to influence managers' behaviour in terms of accounting information system. The size is measured by several indicators, such as the turnover without VAT, sales volume or number of employees. Most researchers previously remembered considered that accounting data systems grow as volume and complexity with the size of the enterprise. Can thus formulate hypothesis I1:

*The use of accounting data of the SME increases with increasing size of the enterprise.*

#### ***b) Age of the enterprise***

Holmes and Nicholls (1988) argue that the request and prepare a relatively detailed accounting information diminishes as the age of the enterprise increases. The explanation given is that in the early years of its existence the enterprise leader is formed in this area, requesting more information, and then, after a certain period, this claim diminishes, then stabilize. You can formulate a new hypothesis, I2:

*The use of accounting data by SME leaders diminishes as a result of the increase in the age of the enterprise.*

**c) The sector of activity**

Although Chapellier (1994) considers, as a result of his studies, that the type of activity is not only partially related to accounting practices in SMEs, Holmes, Nicholls and others (1989) show that the economic sector in which it currently evolves has no effect on the production of non-mandatory accounting data within them. Bajan-Banaszak (1993) points out that in the construction sector shows gaps in management accounting, in contrast to the industrial sector and the services sector, which employs most of the accounting instruments. Nobre (2001) emphasises the need for a more concrete analysis to reflect the heterogeneity of SMEs and to avoid dividing the results. It can be proposed a third hypothesis, I3: *there is a relationship between the type of activity and the use of accounting information in SMEs.*

**d) The level of informatization of the management**

Davis and Albrightl (2000) point out that the integration of new technologies of information and communication implies considerable changes in the financial-accounting function which becomes more important in the context of organizational structure and whose actors are becoming more active in the decision-making process. Accounting computerization allows processing a higher volume of data in a more reduced period. In 1997, Chapelier reveals that the informatization management is only partially associated with the accounting practices of SMEs. As such, it can be formulated a new hypothesis, I4: *the use the accounting data of the SME increases with the degree of computerization of management.*

**Behaviorial contingency.** Within this approach, behavioral characteristics of each actor involved are considered likely to influence accounting information systems of SMEs. This new orientation complements the objective approach by integrating the actors, who are becoming the center of interest and object of research. As contingency behavioral factors, the best known are the level of manager training, his age, his profesional experience, the mission accountant and his level of training.

**a) The managers training**

Most authors assert that managers who have a higher level of training are marked by a higher degree of use or more intense of accounting information. At the same time, even the type of training itself may explain the usability of this information. Thus, Chapellier (1994) points out that those managers who have a training in management/accounting presents a higher level in utilising the accounting information.

A new hypothesis, I5, can be formulated as follows: *Managers who possess a higher level of training use more accounting information.*

**b) The managers experience**

The results of studies who analyzed the influence of this factor are not unanimous, meaning that some authors consider that the utilization of accountancy data increases with experience of the managers, so that others can lie in an opposite position.

**c) The age of the managers**

Most of the authors consider that the level of utilisation of accounting data decreases as the managers' age increases. The hypothesis to be verified, I7: *Older managers use less accouting data.*

**d) The mission of the accountant in the enterprise**

Chapellier (1994) confirms the relation between the mission of internal accountant and accounting practices. The hypothesis which can be verified in the study, I8 shows that *there is a relation between the employed accountants' mission and utilisation of data in the SMEs.*

**e) The training of intern the accounting officer**

The deficit of training the intern accounting officers cand contribute to an underproduction of relevant information for decision making and underutilization of accounting as an instrument of management. It can thus test a new hypothesis, I9: *managers are assisted by an accountant employed who possess a high level of training using several accounting data.*

**4. THE METHODOLOGY OF RESEARCH**

The survey carried out in the research included a number of 18 SMEs from the South-West Development Region Oltenia with a number between 10 and 500 employees, belonging to different sectors of activity (table 1). Data collection was done through a questionnaire that were filled by the managers of the enterprises included in the sample.

**Table no 1. Characteristics of enterprises in the sample**

<b>Sector of activity</b>	<b>No.of enterprises</b>
Manufacture of prototype	2
Manufacturing series	3
Wholesale trade	3
Retail trade	4
Services that require fixed assets	3
Services that require human resources	2
Others	1
<b>Total</b>	<b>18</b>
Total enterprise	No.of enterprises
10-50	3
51-75	5
76-100	4
101-150	6
<b>Total</b>	<b>18</b>
Age of the enterprise (years)	No.of enterprises
0-5	3
6-10	5
11-25	10
<b>Total</b>	<b>18</b>
Degree of informatisation	No.of enterprises
Limited	5
6-10	13
<b>Total</b>	<b>18</b>

Accounting information system is often described by the utilization of accounting information by the managers. The degree of utilisation can be measured, in turn, through other three items, namely the frequency of use, the weekly average, variety and intensity. Frequency of use is obtained from the manager, who has to choose between the following situations: weekly, monthly, quarterly, half-yearly, on time or never. The average number is the weekly hours devoted by the manager to the use of accounting data, and the possibilities for response varies from none, less than an hour, from 1-3 hours, from 3-5 hours, until more than five hours. In terms of diversity and intensity of use of accounting data, there are five variants of answers, numbered from 1 to 5, the first meaning of the unage, and 5 very important use.

To measure the size of the enterprise was used as an indicator the number of personnel, for the sake of immediate availability, and in determining its age was started from the date of its establishment. To measure the degree of computerization of management we took in consideration two hypostases. The first relates to the existence of a limited information, which is not used in a continuous manner in the developing of management information and the second, a broad-based, used continuously for this purpose. Quantification of the manager's age was made in four installments of 10 years, and its level of training started at the professional school, then high school, bachelor, master or doctorate. The manager's experience was measured by the number of years spent by him in the forefront of the enterprise. As regards the accounting employee, this mission was classified according to three different views of the role performed in the enterprise, such as:

- ensuring accounting (journal recording invoices, tracking, preparation of documents), the role of accounting aid;
- ensuring accounting and timely implementation, from time to time, of accounting information at the end of the fiscal period, the role of accounting officer;
- ensuring accounting and preparing periodic accounting information in the interest of management, role of management controller.

To quantify the level of training of internal accountant is used the same scale used for the enterprise manager.

## 5. ANALYSIS RESULTS

Quantifying use was assessed by the frequency, weekly duration, intensity and diversity of use of accounting data. An analysis of the main component, the variable frequency, shows that the five items form a single component, i.e., a single factor F1. The exam of the Cronbach Alpha coefficient of correlation, with a value of 0,7613, confirms the reliability of the measuring instrument.

The dependence of the three factors imposed to achieve rotations, F'1 (diversity using accounting data for financial needs), F'2 (diversity using accounting data for decision-making), F'3 (diversity using accounting data for correction needs), with the results shown in table 2.

**Table 2. The results of dependence between influence factors**

<b>Factors</b>	<b>Item</b>	<b>Fiability</b>
<b>F'1</b>	I4-I5-I6-I7-I8-I10	0.8615
<b>F'2</b>	I2-I9-I12-I13-I14	0.7815
<b>F'3</b>	I1-I3-I11	0.8714

For measuring the use of accountancy data was used the analyze the main component on the frequency (F1), the weekly average duration and those three factors extracted from the variable intensity and diversity of use (F'1, F'2, F'3), extracting a unique factor, known as “the use of accountancy data”. This factor has been used to characterize the degree of utilisation of the accounting data. To describe the sample of selected SMEs and various characteristics of accounting information systems were analyzed the frequencies.

Regarding the production of financial statements, all SMEs analyzed carried mandatory documents and statutory deadlines. However, the SMEs in the sample are not only geared towards achieving the mandatory documents, but also non-binding documents, such as interim accounting statements to facilitate management. A large majority of them (64.1%) achieved these situations on a regular basis in all semesters. This result contradicts the claim that SMEs are predominantly oriented towards the achievement of mandatory documents at relatively long time in order to meet tax obligations.

Most of the SMEs in the sample (67.6%) have a costing system, calculating the full cost, direct cost or weighted average cost, but in terms of planning, the percentage is lower, about 59%. Most SMEs (91%) have a budget of supply and an inventory tracking system.

Financial analysis is performed more or less complex of about 84% of SMEs observed, which develops forecasts of treasury and calculation of working capital requirements. All these facts confirm Chapelier's statement (1996) that SMEs are heterogeneous and are not small models of larger organizations.

Of the 18 SMEs in the sample, only 15% have a scorecard that is updated monthly.

For this analysis we used multiple regression method to the three metric variables, namely age and size of the enterprise and manager's experience. After using different tests of association, to examine the relationship between each of these variables and the variable usage accounting information system, the followings conclusions were made(Figure 1):

a) the size of an SME is an important determinant factor for the use of accounting information system and, also, directors of larger SMEs use more accounting data as those of smaller SMEs; as such, the hypothesis I1, states that use of accounting data by managers of SMEs increases with their size, is validated, confirming the results of Chapellier (1994), Lavigne (2002) and Bajan - Banaszak (1993);

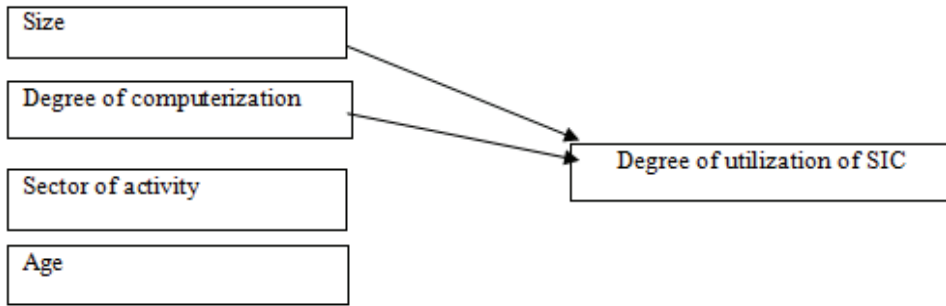
b) the age of SME does not explain the use of accounting information system, and therefore, the hypothesis I2, the use of accounting data by managers of SMEs diminishes as age increases SMEs, is not validated.

It is emphasized that the results of previous studies remain unclear regarding the impact of this variable.

c) the sector activity is also independent of the degree of use of the accounting data. Hypothesis I3, after which there is a significant relationship between the type of activity and use of accounting data, is not validated.

d) degree of computerization is tightly linked to the use of accounting information system, which means that the hypothesis I3 is validated.





**Fig.1 . The relationship between structural factors and accounting information system**

Analysis of the relationship between behavioral factors and the use of accounting data gives the following results (Figure 2) :

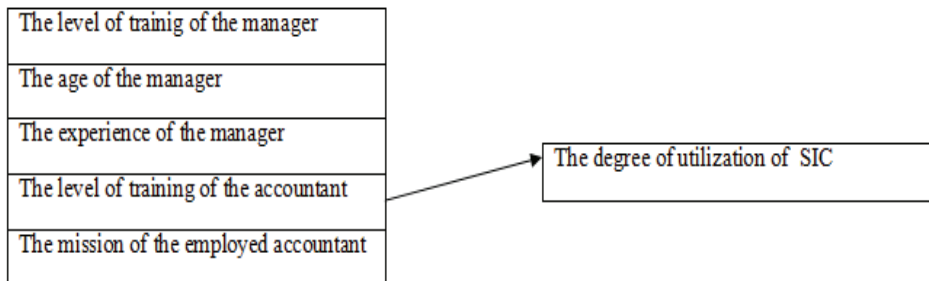
a) the level of training of the manager and use of accounting data are in a significant relationship, but the meaning of this variation is not stable, which means that the hypothesis I5 is not validated.

b) the age of the manager does not influence the use of accounting data, and therefore the hypothesis I7 is also not validated.

c) the experience of the manager is also independent of the use of accounting data, which means that the hypothesis of a link between the two variables, I6, it is not validated, confirming the results of Reix (1981). This conclusion makes the results of previous studies remain unclear.

d) the level of training of the accountant is in a significant relationship with the use of accounting data and the relationship is direct, which confirms the hypothesis I9.

e) the mission of the employed accountant is in a significant relationship with the use of accounting data. This means that the hypothesis I9 is validated.



**Figure 2. The relation between behavioral factors and SIC**

## 6. CONCLUSIONS

This study attempted to describe the management control options in SMEs and to identify the factors causing them. As a result of this approach was demonstrated that SMEs are heterogeneous and do not constitute scale models of large organizations.

Another observation is the fact that SMEs are predominantly oriented only towards achieving the mandatory accounting documents required by authorities.

Management control practices are heterogeneous and employees realize cost calculations and forecast budgets based on expenditure recorded on certain periods (a few months or years). General accounting comply with European rules and instruments are designed to inform management and fiscal authorities.

Regarding financial analysis results show that this practice is widespread in SMEs, but that it has empirical character and is not periodic. The use of scorecards in their classical form is not a common practice.

On identifying the factors that determine the content and structure of accounting information system in SMEs, the results generally confirm the hypotheses of research, particularly those relating to the size and degree of computerization of management. But there are specific assumptions refuted behavioral factors such as manager's age and experience. The level of manager's training is related to the degree of use of accounting data, but the meaning of this relationship is not known what remains in contradiction with the findings of other researchers. Tests confirm, however, the influence of internal accountant profile, ie its level of training and its mission on the use of accounting data.

With all this new information, the study has some limitations that can be avoided in future research. The first aspect is related to the size and structure of the sample, which can be considered quite low in statistical terms. Also, the research was based on a questionnaire and a face-to-face meetings and they have limits.

The method used to describe relationships between contingency factors and use of accounting data was based on multiple regression analysis. The other variables were the subject of an unidimensional description and statistical analysis. Selected contingency factors are also limited. Several variables were not considered in the model due to the difficult data collection and processing, subjective qualities of the manager in terms of the required objectives, his preferences in terms of information and influence other accounting actors.

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