

Literature Review on the Utility and Roles Assigned to the Accounting Information System and Accounting Data in SMEs

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Abstract

The literature on the management systems of the SME manager shows that many small and medium sized enterprises would have only rudimentary management tools, this would explain the preference of SME managers for more informal media and verbal information (Mintzberg, 1990 ; Fallery, 1983). However, empirical research on this topic has led to nuanced conclusions. Therefore, the vision of an embryonic Accounting Information System (AIS) does not correspond to the real situation of all SMEs. The managers of SMEs are reported to have differentiated attitudes towards such data. In this context, the aim of this article is to try to determine, through a literature review, the extent to which SME managers consider formal accounting data to be relevant and useful. Relevance represents the ability of information to influence user's decisions by allowing them to either assess past, present, and future events or to confirm or correct their past assessments.

The literature review carried out shows that the results of many studies have refuted the finding advanced a priori in the literature that the AIS of SMEs is simple and only produces some statutory data and have called into question the simplistic view of the AIS of SMEs. Even if this work concludes that accounting practices are not generalized to all SMEs, in-depth analysis of empirical studies indicates that SMEs have fairly complex AISs, various accounting practices and that their managers use accounting data in their management. As a result, the idea of a simple, rudimentary and systematically underutilized Accounting Information System would in reality only be a trend.

Keywords: Accounting information system, Accounting data, SME managers, Informational role, Decision-making role.

JEL Classification: M4

Paper type: Theoretical Research

1. Introduction

A great deal of theoretical and empirical research on the decision-making processes and sources of information of SME managers initially suggests that, in general, SME managers would have to make their decisions, most often exclusively resorting to their judgments, intuitions and experiences and would have for the most part a natural propensity to think that they are capable of managing their business alone, without any other management information system other than that established by some accounting data which they consider essential (Chapellier, 1996). Secondly, the research showed that SME managers would rely more on informal than formal sources. The question that arises in this context may be stated as follows: to what extent do SME managers consider formal accounting data to be relevant and useful? Relevance is the ability of information to influence user decisions by allowing users to either assess past, present and future events or to confirm or correct past evaluations.

The study of the accounting literature on the roles assigned to the Accounting Information System (AIS) and the accounting data is not unanimous and reveals that they are numerous. Initially accounting was conceived as a technique for measuring economic facts, but over time it was realized that it became the centerpiece of the company's information system (TELLER, 1992). The accounting information serves as an encrypted support for all the negotiations existing between the company and its partners. Accounting provides all its users with a coherent framework for assessing the company's performance and situation. Accounting information may be internal and external. According to Colasse (2007, p.20), "*accounting is the instrument for counting and, by extension, calculating, supporting, or even forecasting, but it is also the instrument through which one monitors, reports, informs, communicates, explains, analyses, legitimates, justifies oneself, rationalizes one's action, proves and sometimes tells... within and outside organizations*".

The objective of this article is to present an analysis of the theoretical literature and conclusions of empirical work on our subject which should help us respectively to judge the usefulness and roles assigned to AIS and accounting data in SMEs.

However, from a managerial perspective, the accounting literature agrees on two major explicit roles of the AIS for executives (Capron, 1993; Anthony and al., 1999; Teller, 1999; Zimmerman, 2003; Bouquin, 2008): an informational role and a decision support role.

This article is divided into two parts:

- The first part is dedicated to the presentation of the informational role: the AIS is an important source of information for managers on past results and performance and for control;
- The second part aims to explore the role of decision support: accounting information is intended to support decision making and action by managers.

2. Concept's definition

The manager is an actor who is responsible for an organization or one of its entities. It has formal authority over the course of work and the individuals who work in this entity (Hales, 1986). Authority is the power to make decisions that guide the actions of others (Simon, 1983). As a result, the manager needs information to develop strategies, allocate company resources and make decisions (Mintzberg, 2008). The accounting data, produced by this system, are then supposed to respond to its multiplied requests for information. Formal accounting practices are characterized by the production of accounting data and the use of information. Accounting data are internal management data available in the enterprise, and accounting information is the accounting data that contributes to decision-making processes (Dupuy, 1994). In this perspective, data is like a raw material needed to produce information (Ngongang, 2007). Therefore, the concept of "information" retains two dimensions: an

"objective dimension" **linked to the available data, and a "subjective dimension" associated with the use of this data (Chapellier and De Montgolfier, 1995).** This leads Dupuy to define the information system as "a set of relevant data that is effectively and usefully incorporated into the multiple decision-making processes, individual or collective, conducted in organizations" (Dupuy, 1994, cited by Chapellier and De Montgolfier, 1995, p.1055).

These last two authors, following the same logic, specify the distinction between "accounting data" and "accounting information":

"Accounting data is data that, developed in whole or in part on the basis of accounting, are available in the enterprise and accounting information, accounting data that contribute to the decision-making process of decision-makers, that is, the accounting data actually used. (Chapellier and De Montgolfier, 1995, P.1055).

Moving towards the same direction, an **Accounting Data System (ADS)** refers to the available accounting data, while an **Accounting Information System (AIS)** consists of the **accounting data** used. **It can be defined as** "an organized set of structures, means and actors to produce accounting data, mandatory and optional, historical and forecast, used by SME managers to manage their business" (Chapellier and Mohammed, 2010, p.3).

3. The informational role of the ais

Several authors emphasize the usefulness of accounting data in SMEs (table n°1). Chapellier (1996) Mohammed (2010), Chapellier and Ben hamadi, (2012) and Slalmi (2019) point out that the SME manager's information system is partly accounting and that few managers dispense with the use and production of accounting data for management purposes. The study by Chapellier (1994), carried out among a hundred and thirteen SMEs with between ten and one hundred employees, shows that almost half of the managers questioned report using accounting data in the fourteen proposed situations and only a minority (17.7%) Managers show little attention to accounting data in all the proposed situations.

Simon (1980) argues that each company has accounting data and that it is very important because it reflects the success or failure of the company. He argues that these data achieve several objectives: they indicate the situation of the company, they analyze its structure and its branch, they help to pinpoint the origin of the problem and finally they determine the current situation of the company and foresee its future.

Mintzberg (1973, 1989 and 1995) reveals that the informational role of the AIS is to convey formalized and quantitative information to managers and to enable them to actively observe the internal and external environment of the company.

Table n°1: Summary of the main results of empirical studies on the informational role of the AIS

<i>Authors</i>	<i>Country</i>	<i>Sample</i>	<i>Main results</i>
Chapelier (1996)	France	113 SMEs (10 to 100 employees)	<ul style="list-style-type: none"> - The information system of a large majority of managers observed is partly accounting; -If the characteristics and context in which the organization is located on the one hand, and the profile of the professional accountants who assist it on the other hand, constitute, to a certain extent, a source of influence and therefore a source of constraints which limit its possibilities, the manager clearly plays a dominant role in the system of influences which is exerted on the accounting practices in SME.

Mohammed (2010)	Syria	92 industrial SMEs (10 to 250 employees)	The study firstly confirms that the information system of a large majority of managers observed is partly accountable: very few managers dispense with any production and any use of accounting data. It also reveals that the accounting practices are differentiated.
Chapellier and Ben hamadi, (2012)	Tunisia	71 industrial SMEs (10 to 300 employees)	Most SME managers have a minimal management accounting database to run their business. All of them, with one exception, go beyond the production of only mandatory documents. The information system of a large majority of SME managers is therefore partly accounting.
Slalmi (2019)	Morocco	75 SMEs (10 to 200 employees)	The study reveals that the information system of a large majority of the companies observed is partly accounting and shows that the practices found are differentiated and cover different realities.

Source: Authors

3.1. AIS as a tool for performance measurement and control

Because of its nature as a system for producing and disseminating information, AIS is naturally regarded by researchers as an information tool at the service of the enterprise. It has the particularity of translating into numerical information economic events and transactions that concern the enterprise (Capron, 1993). This role as an information tool provides an accurate representation of reality in a single monetary unit, informing users of the accounting of the enterprise's economic situation (Henri, 2006). However, the ability of accounting to accurately represent organizational reality is criticized (Chapman, 1997; Teller, 1999; Verdaasdonk and Wouters, 2002).

The role of an information tool is particularly evident in the assessment of the contributions of individuals, entities, processes, products etc. to collective performance (Teller, 1999; Bouquin, 2004). Zimmerman (2003) points out that the role of AIS as an information tool is asserted as a monitoring and control tool. This tool aims, on the one hand, to measure and evaluate the performance of company managers and, on the other hand, to correct deviations from predefined performance standards (Simons, 1995; Teller, 1999; Bouquin, 2008).

Dupuy (1990) emphasizes the informational role of accounting data. It asserts that these data are a major factor in unifying the managers' languages and that they disseminate models for assessing homogeneous performance, they facilitate control and communication within the organization and subsequently form a serious basis of work since they facilitate the analysis and interpretation of the company's results. Finally, it points out that these data reflect continuity; in other words the survival or disappearance of the company.

3.2. Limitations of the AIS informational role

While the informational role of accounting appears to be established in the accounting literature, it is still considered one information tool among others. Indeed, some empirical research has shown that managers use informal rather than formal sources and prefer external sources more than internal sources or even more non-financial than financial information (Mintzberg, 1990; Bruns and McKinnon, 1993; Bescos and Mendoza, 2001; Marginson and

al., 2000; Verdaasdonk and Wouters, 2002). Accounting as an internal and formal source would therefore be relegated to the second degree by managers.

Criticisms of formalized data in general, and of accounting data in particular, are numerous and convergent (Chapellier, 1994). First of all, the formalized data often seem too limited, too general, not rich enough for the manager (ignoring for example the information on the missed sales, on the risks...), they exclude the non-quantitative and non-communicable information (tone of voice, gestures, facial expressions...) (Mintzberg, 1990; Dupuy, 1990). However, much of the information the manager needs is informal. Because they want their information quickly, they seem to accept a high degree of uncertainty. This informal and speculative information helps the manager to better implicitly understand their organization and the environment in which it is located, it allows them to have a "global vision of things" and real analytical information, reports, documents, and all formalized data in general are not included' (Mintzberg, 1990). Indeed, the majority of managers who participated in the studies of Bescos and Mendoza (1998) and Cheffi (2007) believe that the AIS cannot meet their information needs and state that it is building an informal system in parallel.

Numerous studies have confirmed the shortcomings of non-adaptation and the lack of relevance of accounting information to the specificities of SMEs (Marchesnay, 1992; Julien, 1994; Torres, 2004). Thus, in terms of the monitoring and controlling role assigned to the AIS, it seems that accounting data are poorly adapted to the control mechanisms of SMEs. In fact, the control mechanisms most often identified and exercised by managers of such enterprises are mutual adjustment and direct control by direct supervision of the activities and performance of employees (Mintzberg, 1982). The empirical survey carried out by Germain (2000) among 83 SMEs supports the conclusion that control within this type of enterprise is carried out informally and without recourse to formalized data from accounting.

The failure of accounting information as a control tool can also be explained by the low delegation of authority observed in SMEs. The concentration of power in the hands of the manager and the low delegation to other members of their company should reduce the usefulness of accounting figures as a source of information and a control tool.

In summary, the critics mentioned above illustrate the very strong perception of a discrepancy between the characteristics of accounting data and the expectations of managers in terms of information. The theoretical analysis therefore suggests that the AIS is an important source of information that the manager uses, but always in conjunction with other sources deemed necessary to supplement this information and carry out their work.

4. The decision-making role of the ais

The AIS, the first structured information system in the company (Tort, 2003), is one way to detect problems and propose possible solutions to solve them (Burchell and Hopwood, 1980 in Cheffi, 2007). In the accounting literature, there is considerable research that argues that the AIS, the producer of quantified accounting data, supports management decisions (Capron, 1993).

4.1. The AIS: a decision support system

The role of decision support for the AIS derives from the definitions given in accounting which often link it to decision-making (Anthony et al., 1999; Bescos and Mendoza, 2001; Henri, 2006; Bouquin, 2008; Horngren and al. 2018). Accounting fulfills this role by helping decision-makers analyze the past, anticipate the future and influence behaviour as it reduces uncertainty in the control and decision-making process and identifies possible actions (Teller, 1999; Simons, 1995; Bouquin, 2008), particularly in new or rare decision-making (Verdaasdonk and Wouters, 2002). This decision-making role would be facilitated by the considerable development of information systems and technologies (Maudlin and Ruchala,

1999). Simon and al. (1954) examined the use (or non-use) of accounting by managers in seven organizations. Three main accounting roles from the manager's perspective have **been defined**. ***"The Monitoring Role (Score-card): Am I in the process of achieving my goals? The Attention Orientation Role: What Issues Do I Need to Address?; The role of problem solving: which of the possible options for doing the work is the best?"*** (Simon and al., 1954; p.3). According to the same authors, these three roles are as necessary for managerial work as the others.

Finally, Cheffi (2007) notes that accounting information is considered to be too oriented towards the past and short-term performance measurement. Furthermore, the search for non-financial information such as quality, customers, processes, etc. would explain the use of managers to sources of information other than AIS.

4.2. The shortcomings of AIS as a decision support tool

While much research maintains that accounting supports the decision-making processes of managers, others dispute and even oppose it (Johnson and Kaplan, 1987; Kaplan, 1983, 1984, 1990). Mintzberg (1999) reveals that the AIS is called into question and its ineffectiveness is confirmed. The lack of usefulness of accounting information for managers is mentioned (Ahrens and Dent, 1998). Thus, Bescos and Mendoza (1998) demonstrate that a significant part of the accounting information collected does not directly allow managers to make decisions, but to understand what is happening and to justify their decisions already taken.

Cheffi (2007) empirically disputes this role assigned to the AIS and emphasizes that managers trust the accounting information provided by the AIS but the latter does not fulfill its decision-making role: "If the accounting system does not seem to fulfill a decision-making role, but rather an informational role is because the manager does not perceive their decision-making utility, but perceives a satisfactory degree of representational loyalty "(Cheffi, 2007, p.311).

Chapellier (1994) underlines that accounting data seems ill-suited to the decision-making processes of SME managers. This failure can be explained, according to Dupuy (1987), by the inadequacy of the decision-making processes, which are little or not structured by SME managers, to accounting, as a structured tool by nature. This author states that "the mental processes of the manager of an SME hardly enter into adequacy, in "fit", with the use of formalized management tools" (Dupuy, 1987, p.10). As a result, Dupuy (1987, p.9) explains that as "the manager of a small business is oriented towards the capture of non-formal information and of diverse origins, the globalization of approaches, the speed and diversity of decisions, we perceive all the difficulty of resorting, other than one-off, to formalized management tools".

Various studies have shown that accounting data also seem ill-suited to the characteristics of the SME environment (Chenhall and Morris, 1986; Dupuy, 1987). These authors have highlighted the difficulties of accounting in adapting to major changes linked to the environment. Brytting (1990) points out that many traditional theories and models fail to take into account the complexity and turbulence of events found in SMEs. Dupuy (1987) explains that the use of accounting for management purposes, and in a way other than ad hoc, underlies well-structured types of management models. The vocation of accounting is therefore that of "use by decision-makers located in a relatively stable environment that generates rather repetitive events" (p.5). While SMEs are based on a logic of the small number of events necessarily not very repetitive, not regular. Consequently, Dupuy (1987, p.5) concludes that "the logical structuring, notably temporal, of detailed numerical representations poses obvious problems of interpretation and use". Fallery (1983) deduces that since the small business always evolves in an unstable environment (due to its limited capacity to control this environment and to define long-term strategies), the SME manager has an information

system of "semi-confused type" which favors the rapid renewal of the solutions of principle which serve as a guide to the decision.

According to Cheffi (2007), the disconnection of AIS from organizational processes and performance may explain the ineffectiveness of AIS at the decision-making level. They would be too focused on the past (Bescos and Mendoza, 2001; Lorino, 2001) and would not succeed in measuring the overall performance of a Plan in favor of short-term performance alone (Ezzamel and al. al., 1997; Lorino, 2001). Instead of encouraging or supporting strategy, AIS orient managers towards the short term and management of results (Merchant, 1989; Nanni and al. 1992). Accounting is criticized for its failure to take into account the product life cycle to increase decision-making utility (Horngren and al. 2018). The search for information other than financial, in particular on quality, customers, processes, deadlines, competition etc. (Kaplan and Norton, 1992, 1996, 1998 and 2005) would explain why managers use other sources of information more than AIS (McKinnon and al., 1992).

Finally, it should also be emphasized that there is a relative mismatch in the cognitive capacity of managers to process the available information (Mintzberg, 2008) and in particular that of accountants since most SME managers are not specialists in accounting (Chapellier, 1994; Lavigne, 1999). The limited capacity of SME managers to analyze and interpret the wealth of information available could thus, on the one hand, reveal the low perception of the usefulness of accounting data for decision-making and, on the other hand, justify their recourse to experience, intuition and judgments.

4.3. The need for analysis-intuition coupling

The study of the literature on the decision-making processes of SME managers allowed us to underline that in general, company managers do not follow the classic logic diagram and most often appeal to their intuitions, judgments and experiences. . However, various authors agree in affirming that despite everything, the SME manager cannot allow themselves, in their decision-making processes, to be purely intuitive and that they are almost systematically led to **"combine analysis and intuition"** (Simon, 1980; Dianich and Gupta, 1983; Mintzberg, 1990; Brytting, 1990; ...).

Simon (1987, p 63) is one of the first authors who emphasized that the manager needs to analyze problems in order to quickly find solutions to the problems posed. This author reveals that *"The effective manager does not have the luxury of choosing between "analytic" and "intuitive" approaches to problems. Behaving like a manager means having command of the whole range of management skills and applying them as they become appropriate"*.

Similarly, Mintzberg (2008) agrees with Simon's findings regarding the coupling of analytical and intuitive processes that make management more efficient. In fact, Mintzberg (2008, p.88) explains that *"there is no doubt that exceptional managers are those who are able to couple the effective processes of the right hemisphere (impression, intuition, synthesis) with the effective processes of the right hemisphere. 'left hemisphere (articulated reasoning, logic, analysis) "*

. According to Martel and al. (1985), the role of intuition and analysis in the decision-making process would in fact depend on the type of manager, the type of situation and the nature of the decision.

In the same vein, Simon (1987) notes that, to solve a particular problem, some managers use intuitive processes more easily and others are more comfortable with analytical processes and adds that the place of intuition in the decision-making process also depends on the type of decision. It distinguishes programmed decisions (to which analysis responds "best") from unscheduled decisions (to which intuition responds "best"). He concludes that the nature of the problem to be solved is the main determinant of the mix between analysis and intuition.

All in all, if the authors agree in affirming that on the one hand, intuition is systematically present in the decision-making process of the manager of an SME but, on the other hand, this intuition is almost systematically combined with the analysis, "there is no organization that can afford the luxury of being purely analytical or purely intuitive" (Mintzberg, 2008, p.133). As a result, various contributions seem to be able to be drawn by the SME manager from the use of formalized information and some authors explain that, to a certain extent, this formalized information can be accountable.

5. Conclusion

The ambition of this paper was to try to determine, through a literature review, to what extent SME managers consider formal accounting data to be relevant and useful. Information from the literature makes it possible to recognize that despite the rigidities of the system, formalized data in general and accounting data in particular is an important source of information among others that allow managers to learn and solve problems met. The AIS has, despite multiple criticisms addressed to it, a potential usefulness in decision support but less confirmed compared to its informational role. The specific characteristics of SMEs seem to have consequences for the usefulness and relevance of accounting figures for their manager.

The results of numerous studies (Chapellier, 1994; Curran and al., 1997; Lavigne, 1999; Reid and Smith, 1999, 2000; Germain, 2000, Lavigne and St-Pierre, 2002; Jänkälä, 2007; etc.) refuted the observation made a priori in the literature according to which the AIS of SMEs is simple and produces only a few statutory data and called into question the simplistic vision of the AIS of SMEs. Even if this work concludes that accounting practices are not generalized to all SMEs, in-depth analysis of empirical studies indicates that SMEs have fairly complex AISs, various accounting practices and that their managers use accounting data in their management. Therefore, the idea of a simple, rudimentary and systematically underused AIS, according to Chapellier (1994, p.52), "is really just a trend."

And finally, to advance further in the debate, new research could analyze the results of empirical studies carried out on the subject of AIS and on the accounting practices of SMEs aimed at achieving two objectives:

- Verify the thesis of the relative relevance of the accounting data for the manager of SMEs;
- And determine the dimensions and attributes to be used to analyze and describe the AIS of SMEs.

These extensions should complement the presentations and explanations given in this work in order to better understand the behavior of SME managers in terms of AIS and accounting practices.

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