

# **Power, ERP Systems and resistance to management accounting: a case study**

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# **Power, ERP systems and resistance to management accounting: a case study\***

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## **ABSTRACT**

This paper reports an intensive longitudinal case study carried out in a Portuguese manufacturing organisation in which attempts to promote change through management accounting were made in recent years. In a first pilot visit to the organisation, two puzzling observations were made. Firstly, and particularly in the manufacturing area of the organisation, management accounting systems introduced in recent years were not being used in everyday interactions and practices. Secondly, a newly introduced ERP system was having no apparent impact on management accounting or on the work of management accountants. We found that these observations were related to issues of power. There were different and conflicting conceptions of which rules should be followed in the manufacturing area, and strategic attempts to enact those conceptions (or to resist alternative ones). This paper draws on the insights of the Circuits of Power (Clegg, 1989a) in order to explain, in theoretically informed manner, the puzzling observations in the case.

## **RESUMO**

Este artigo descreve um estudo de caso intensivo e longitudinal levado a cabo numa organização industrial portuguesa em que, em anos recentes, foram realizados esforços para promover mudança organizacional com base em novos sistemas de contabilidade de gestão. Duas observações relativamente inesperadas foram feitas na visita piloto à organização sob estudo. Primeiro, e especialmente na área industrial da organização, sistemas de contabilidade de gestão introduzidos recentemente não eram utilizados em interações e práticas quotidianas. Em segundo lugar, um novo sistema informático – um Sistema de Planeamento de Recursos Empresariais (ou ERP, como usualmente são conhecidos estes sistemas) não estava a exercer qualquer influência nos sistemas de contabilidade de gestão e no trabalho dos contabilistas de gestão. A nossa conclusão foi a de que estas observações estavam relacionadas com aspectos de *poder*. Havia concepções diferentes e até antagónicas sobre as regras a seguir na área industrial, e manobras estratégicas para impor tais concepções ou para resistir concepções alternativas. O presente artigo apresenta um conjunto de ideias baseado na teoria de ‘Circuitos de Poder’ (Clegg, 1989a), que nos permite explicar, de forma teoricamente enquadrada, as observações realizadas.

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## 1. INTRODUCTION

In recent years there have been numerous calls for research adopting a processual stance in the study of management accounting and its change within organisations (Hopwood, 1987; Chua, 1995; Burns and Scapens, 2000; Burns, 2000a; 2000b). These calls are based on the recognition that a static perspective has been mainstream in the literature: conventional approaches to management accounting envisage the techniques and systems described as being adopted by efficiency-seeking organisations and possible change is equated with movements from equilibrium situation to equilibrium situation.

From its start, the research reported in this paper broadly aimed at looking at intra-organisational change processes: describing and analysing narratives of change/reproduction of management accounting systems and practices within organisations. The paper reports a longitudinal in-depth case study of a Portuguese manufacturing organisation in which a process of organisational change has been attempted in recent years. The choice of this organisation was initially motivated by its recent introduction of a new information technology (henceforth, IT) – an Enterprise Resource Planning (ERP) system. Indeed, early research aims pointed to an analysis of management accounting change/reproduction following the introduction of an ERP system. It was hoped that insights would be gained on the process of management accounting change (or reproduction) in the organisation by tracking events unfolding in a moment in which strong pressures for such change were likely to emerge.

We were especially influenced by studies that had applied the insights of ‘Old Institutional Economics’ (OIE) to processes of management accounting change (e.g. Burns, 2000a; 2000b; Burns and Scapens, 2000)<sup>1</sup>. The concepts of such studies could support, so we expected, the analysis of the relationship between ERP and management accounting systems. Namely, we hypothesised that the ERP system – given the type of impacts described in literature – would cause strong pressures for change in organisational rules and routines, and would eventually constitute a basis for institutional change. The description of how this would come about was our target.

An early visit to the organisation – in January 2000 – aimed at exploring the feasibility of the research project generally informed by the previous objectives and theoretical ideas. Some important issues, however, were raised during this pilot visit that came to

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<sup>1</sup> We will refer to this research as ‘OIE-inspired’.

reshape the research in subsequent stages. One aspect that came to our attention was the apparent absence of impact of the ERP system on management accounting systems and practices, or indeed of any relationship between them. The new IT was being implemented as a system supporting operations, and seemed neither to ‘suggest’ changes in the content of management accounting systems in place nor to produce changes in the way those systems were used in practice. Even in terms of production of management accounting, there were some surprising observations: management accountants responsible for preparing management accounting reports were not involved in the ERP implementation, and hence did not seem to take advantage of the supposed integrative characteristics of these systems, in order – for instance – to gain some control of the databases they needed to perform their tasks. These observations would be confirmed in subsequent visits throughout the study.

Another key aspect raised in this initial visit was that formal management accounting systems were being decoupled from everyday practices. This was especially true of a specific area of the organisation – manufacturing – whose members seemed almost exclusively concerned with a set of production and efficiency indicators calculated within that area, in the production control department. Reports and figures sent by the management control department were generally ignored in manufacturing.

## **2. THEORETICAL DEVELOPMENT**

One important observation made in early visits to the organisation studied was that there were issues of power involved in the failure to ‘impose’ management accounting as the predominant technology of management in manufacturing; and that those issues were also at stake in the way the ERP system was being implemented, and in the relation this system established (or in the circumstance, failed to establish) with management accounting systems and practices. Specifically, there were attempts by one group to intervene in manufacturing through management accounting; and there was apparent resistance to such interventions. Management accounting systems were not accepted by all organisational actors and clearly there were conflicts around their significance and desirability. A divide between two conceptions of management was evident: some senior managers represented the organisation as desirably ‘managed by numbers’ at a distance, with delegation, self-motivation and responsibility through accounting; while

others embraced a style of management more oriented to production figures and direct control.

The introduction of a thematic of power in our work suggests that organisations are not merely 'systems' that respond to whatever pressures are posed on them, but rather may be sites where multiple and possibly conflicting goals (external or internal to its legal boundaries) clash. Under this view, it is likely that power and politics (i.e. the struggles and strategies to acquire power) shape what organisational phenomena, including management accounting, are and become. This has been recognised in the management accounting literature, and studies have attempted to introduce the concepts of power and politics in understanding management accounting and its roles (e.g. Miller and O'Leary, 1987; Hopper and Armstrong, 1991; Bougen, 1994; Miller, 1994; Chua, 1995; Burns and Scapens, 2000; Burns, 2000a). However, some have argued that the linkages between accounting and conflict, power and politics remain relatively unexplored (Miller, 1994).

Further, our review of the concept of power soon revealed to us a field characterised by complexity and multiple voices (Hardy and Clegg, 1996; see also Clegg, 1989a; Robson and Cooper, 1989). Indeed, our representation of the concept 'power' evolved considerably throughout this research. Specifically, there was a progressive shift from a limited view of power as manifested in visible conflict situations in which actors or groups with specific and relatively well-defined interests draw upon resources to achieve outcomes; towards a broader conception of power and the circuits through which it flows (Clegg, 1989a). These aspects are briefly tackled in section 3.

That broader conception of power brings about important consequences for the study of management accounting in organisations. Management accounting may be involved in strategic attempts to fix or reshape new obligatory rules underlying social interactions and practices in a social system. However, such attempts are not likely to produce linear, 'as intended', effects. Prevailing configurations of circuits of power may facilitate, but also hinder those strategic attempts, and counter-strategies and contingent events may occur. These are the basic ideas of the theoretical framework deployed in this research, as described in section 4.

It was thus on the basis of a narrative of strategies of power that we framed the analysis of the case, and attempted to address the research puzzles outlined above. This is described in section 5. In section 6, we draw out some conclusions of the research.

### 3. THE CIRCUITS OF POWER

The ‘circuits of power’ framework (Clegg, 1989a; see also 1989b; 1994) departs from the idea that an individual or collective actor will be powerful if her/his/its powers are solidly fixed in relational terms: if, given rules that are recurrently followed in interpretations, social relations and practices, that actor is capable of achieving goals in multiple contexts. In this situation, the actor has considerable discretion over the power of a collective.

However, and given the character of power as diffused, contingent and emergent, such an advantaged position should not be seen in essentialist terms. Power is not essentially located in an individual or group. It is a property of a field of relations in which certainly some may be advantaged towards others, but in which total control of social powers by one single sovereign will seldom be the case. This is a Foucauldian conception of power (Foucault, 1977; 1982). As Deleuze (1986) puts it, for Foucault networks of power are:

Simultaneously local, unstable and diffuse, do not emanate from a central point or unique locus of sovereignty, but at each moment move from one point to another, in a field of forces, making inflections, resistances, twists and turns, when one changes direction, or retraces one’s steps, this is why they are not ‘localized’ at any given moment (p. 73).

The analysis in terms of circuits of power allows for the conceptualisation of how, despite the instability and contingency of the view of power expressed in the above statement, some relations of power become stable across space and time. The very term ‘circuits’ conveys the idea of conduits through which social relations regularly flow. Sometimes, conduits may be tight and close off courses of action alternative to those that are fixed through them.

Three types of circuit are at stake. The **episodic** circuit of power is the most visible one, consisting of actions conducted by actors engaged in social relations. A powerful actor is one capable of recurrently achieving desired outcomes at an episodic level, either

through the mobilisation of available resources or ‘at a distance’, by being able to count on the disciplined and enabled actions of many others. Importantly, an actor may deploy resources to achieve certain outcomes, and nevertheless causal powers may not manifest themselves. Resistance may take place whatever the consolidation of an actor’s power as something owned and apparently ‘essential’ to that actor. No universal laws are capable of guaranteeing the power attached to specific actors and/or resources across contexts of action.

The analysis of the circuits of power does not limit itself to a causal conception of power which might be traced back to Hobbes (1839; 1968) and Hume (1969), and that has been mainstream in modern political science<sup>2</sup>. Indeed, the achievement of outcomes (i.e. the manifestation of causal powers) will be dependent on the stabilisation of the response of subordinated actors through the fixing of the network of power relations. For example, orders given by a manager to an employee will routinely result in effective actions by the employee only if the appropriate standing conditions are fixed: the employee interprets the meaning of the orders as intended by the manager; the employee is disciplined to accept the orders as ‘legitimate’ and to use his bodily capacities in following them; and finally he is enabled in doing so – i.e., he possesses the adequate means to follow those orders.

In general, the attaining of outcomes in the episodic circuit depends on organisation. That is, on the stabilisation of the appropriate standing conditions for that achievement to be routine. These conditions can be seen at two levels: rules and their following; and material conditions. These are reflected in the two remaining circuits of power: the circuits of social and system integration, a distinction inspired in the classical work of Lockwood (1964).

**Social integration** refers to the ‘relations between people’ in a social system. It is in this circuit that we find the normative dimension, the rules of meaning and membership whose fixing gives stability to the configuration of power in the episodic circuit. The analysis in this circuit marks a move towards a dispositional conception of power which assumes that power exists independently of its exercise. The classical causal conception focuses on situations in which effects of power are produced, thus escaping the key

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<sup>2</sup> Under such a conception, power is to be studied in terms of the effects created by an entity (an ‘agent’) on another one (a ‘patient’): power is the cause capable of producing such effects. For instance, authors engaged in the ‘Community Power Debate’ (e.g. Dahl, 1957; 1961; Bachrach and Baratz, 1962; 1963) tend to equate the presence of power with its (more or less eventful) exercise.

question of *what constitutes power*. That is, what constructs a powerful actor, capable of recurrently producing (whatever kind of) effects? Barnes (1988: 3-4) advances the example of an engine in a car. Clearly, the engine produces effects, such as the movement of the car. But the power of the engine is not merely to be equated with such effects. One may analyse the building of the engine in order to explain what fixes its power. At stake here is a realist conception (Harré and Madden, 1975) as opposed to an empiricist positivistic one.

Realism has been applied to the social sciences (e.g. Bhaskar, 1975), and specifically to the study of power (Ball, 1976; Benton, 1981). The key contention here is that human beings have intrinsic powers to produce specific effects in specific conditions, in a manner similar to an engine. However, there are obvious and crucial differences. These powers are not covered by laws, but rather are fixed in and through rules that are enacted by individuals who participate in social relations.

Rules may be more or less formalised, more or less shared and more or less deeply seated. For instance, we may be talking in this circuit of deep-seated values and beliefs of individuals that, if widely shared in a specific social setting, may become institutionalised. Already stable members of a social system may 'know and follow the rules' prevailing in that social system. Routines may be available allowing actors to perform interactions in relatively recurrent and ontologically secure fashion, as OIE-inspired writers in management accounting (see above) point out. However, less stable situations are always a possibility. Breaches of membership, caused by problems of meaning or discipline, may occur. Importantly, rules are often seen as external objects to the subject who considers and attempts to act upon them. In some situations at least, individuals may assume an external and even strategic stance towards rules prevailing in their social system.

Also to be considered is the possibility that, in a specific social system, alternative and even conflicting sets of rules are available for meaning giving and for affirmations of membership. In this situation, the configuration of the circuit of social integration is not tightly built. An actor aiming to achieve a powerful status – by leading others to follow rules that protect her/his objectives – may be confronted with alternative rules and with strategies, by other actors, to impose these. Nevertheless, it is possible – in social systems characterised by the presence of different sets of rules – that some such rules

become obligatory and widely followed. A third circuit of power may assume an important role in guaranteeing such stabilisation.

Indeed, movements to fix specific rules as the basis for interpretations, interactions and practices across time and space will often pass through the circuit of **system integration**, in the form of the material conditions prevailing in a social system (Clegg, 1989a). On the one hand, this circuit involves prior distributions of resources. That is, specific rules may become obligatory in a social system – fixing strong dispositional powers for certain actors – because multiple resources are mobilised in strategies to sediment those rules (e.g. financial resources may be available to introduce disciplinary technologies). Also, the circuit of system integration is linked to manifestations of power in the microphysics of everyday life; i.e., to power's capability to reach the ongoing actions of individuals, producing (self-) discipline through its normalising and routinising character. Importantly, certain technologies – such as management accounting (see below) – may have an important role in creating such effects, given their ability to open up lines of visibility or to create 'centres of calculation' (e.g. various articles in Munro and Mouritsen, 1996).

Also, in analysing the circuit of system integration, Clegg (1989a) highlights the technologies of production alongside those of discipline. This emphasises that the constitution of powerful actors potentially brings about productive effects. Powerful actors are those capable of enrolling multiple actors to their representations, and to intervene (in all moments and spaces, possibly 'at a distance') in streams of conduct and action. If actions of those enrolled are enabled by suitable technologies of production, the power of the enrolling actor will also be increased. For instance, an actor will be especially powerful if material conditions (e.g. management accounting, information and manufacturing technologies, appropriate distributions of resources) are in place that allow for outcomes 'desired' by that actor.

In the interpretation of the 'circuits of power' framework advanced in this paper, it is noted that the stabilisation of obligatory rules in a social system can explain the (relational) constitution of powerful actors, capable of achieving outcomes across multiple contexts of action. But how to analyse processes leading to the fixing of new obligatory rules? The insights from the *Sociology of Translation* or *Actor-Network Theory* (henceforth ANT; see Callon and Latour, 1981; Callon and Law, 1982; Callon, 1986; 1992; Law, 1986; Latour, 1987; 1991) are proposed by Clegg (1989a) to analyse

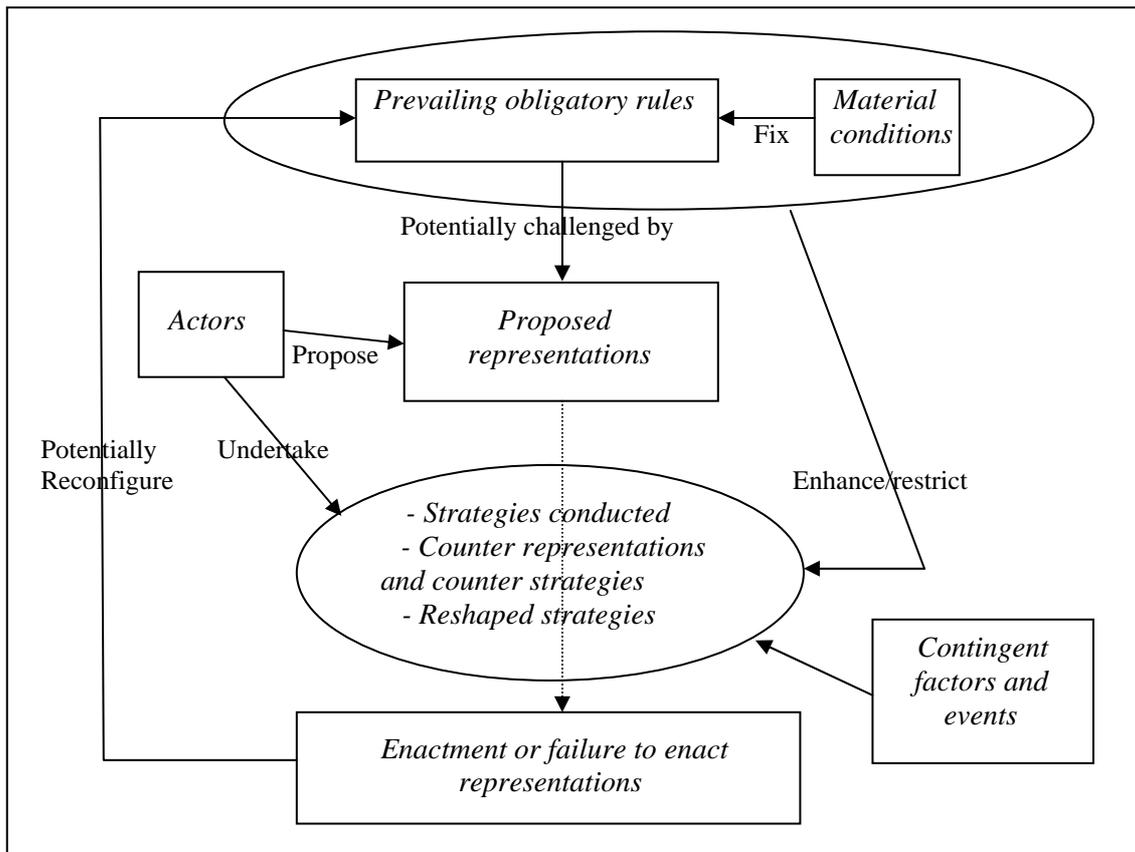
the *dynamics* of circuits of power. The emphasis is on how a network of power relations (or, in Clegg's terms, a configuration of circuits of power) is produced and reproduced through time following attempts by actors to grow and achieve a more powerful status.

ANT constitutes a Machiavellian approach to the study of power. Rather than showing a concern with distributions of power or with a critique of such distributions, ANT studies attempt to 'follow actors', describing their strategies of power and the effects created by such strategies. Indeed, the central purpose of ANT is to explain how networks of power relationships are constituted and stabilised, that is 'describing the way in which actors are defined, associated and simultaneously obliged to remain faithful to their alliances' (Callon, 1986: 224). In short, and to use the above terms, to describe and explain how new configurations of circuits of power emerge as the result of strategies deployed by actors to grow and gain in power. If this is successful, translation may be said to have occurred.

#### **4. A THEORETICAL FRAMEWORK – STRATEGIES OF POWER, ORGANISATIONAL CHANGE/REPRODUCTION PROCESSES AND THE POSSIBLE ROLES OF MANAGEMENT ACCOUNTING**

Figure 1 represents in schematic form the theoretical framework which, based on the ideas described in the previous section, will be deployed in the analysis of the case study presented in section 5 below. The fundamental proposition of this theoretical framework is that organisational change processes may be the result of representations proposed, and strategies conducted, by actors operating in and around an organisation. The term 'representation' is used here to describe putative (i.e. not yet and not necessarily actualised or enacted) sets of rules of meaning and membership that underlie interactions and practices of actors in a social system.

A strategic actor may propose, and embark on a strategy in order to enact, the rules to be followed by many other actors in an organisation. In the terms usually deployed in ANT literature, a new set of rules is presented as a solution to problems identified by the strategic – or enrolling – actor. If the problems identified are accepted, and the solutions proposed enacted, by enrolled actors, new sets of rules may become obligatory and thus widely followed across time and space in the organisation.



*Figure 1: a framework for studying organisational change processes*

#### **4.1. Power strategies and the configuration of circuits of power**

The enactment of representations, that is, the fixing of new rules followed in the organisation studied, will potentially mean a change in configurations of circuits of power. However, as suggested in the figure above, processes leading to that enactment are in turn enhanced or restricted by existing circuits of power. For instance, the prospects of enactment of a proposed representation will probably be higher if prevailing obligatory rules of meaning and membership are not challenged. A strategic actor proposing a new representation to a commercial department may attempt to substitute rules of orientation to contribution margins for prevailing rules of orientation to sales value. If strong rules of financial orientation are institutionalised in that department, it is likely that the acceptance and enactment of the new rules will be facilitated, as OIE-inspired authors would suggest. In this example, new rules of meaning and membership are introduced, but they are consistent with other ones that are

not challenged: a strategy of change in the configuration of circuits of power is framed (in the circumstance, facilitated) by that same configuration.

Also, a strategy may be facilitated (or hindered) by existing material conditions, including distributions of resources and available technologies of discipline and production. As suggested above, it is to a great extent through this last circuit of power (of system integration) that change in rules of meaning and membership is made possible. Coming back to the previous example, one may conceive a situation of confusion in the commercial department following the attempted introduction of the new rules. For instance, if there is no timely and reliable information available to enable the new orientation to contribution margins. Here, the introduction of a powerful information system may be facilitative. Such an introduction may also be facilitative in situations of resistance to the proposed changes – e.g. if the commercial department was previously oriented to sales volumes and actors in that department are not disposed to follow the new rules. Here, the technology may open up lines of visibility and produce disciplinary effects. Once more, in these examples, change in the configuration of circuits of power (i.e. enactment of new rules) is framed (in the circumstance, enhanced) by prevailing circuits (i.e. available technologies of discipline and production).

It is not implied by the previous paragraph that the enactment and sedimentation of new rules in a social system will always depend on available technologies of discipline and production. For instance, in many situations it may be the case that rules become sedimented through a process of ‘natural’ routinisation and progressive taken-for-grantedness, as OIE-inspired authors would argue. However, we do intend to imply that in some cases at least the promotion and sedimentation of rules is facilitated or even made possible by the effects of those technologies.

As the scheme above suggests, prevailing circuits of power may also hinder the strategies being conducted. This will be the case, for instance, if prevailing rules or existing material conditions facilitate counter-representations and strategies by other actors. Also, it is possible to conceive that existing sedimented rules resist change (e.g. because they are taken-for-granted). Finally, available material conditions may limit the strategies being conducted: no resources or adequate technologies of discipline and production may be available, or the existing material conditions fix obligatory rules that resist changes being attempted. These examples constitute possible situations of

resistance to change that are capable of being accommodated within the proposed theoretical framework.

#### **4.2. The non-linearity of the effects of power strategies: counter-representations and strategies, contingent events, reshaped strategies**

The set of rules that are actually enacted in an organisation are conceptualised here as the outcome of past representations and strategies to enact them. If a specific set of rules becomes obligatory for organisational actors, one may talk of a strong configuration of circuits of power: no alternative conduits, i.e. no alternative sets of rules, are available for actors to give meanings to situations and others, and to affirm their membership. As mentioned before, this is potentially facilitated if suitable technologies of discipline and production are in place. However, if such technologies are not available or not appropriate, circuits of power may be less tightly built: there may be alternative sets of rules in the circuit of social integration, alternative conduits that actors may follow. Indeed, it is possible that different and potentially competing representations are exchanged and fought over in a specific organisation at a certain time.

In this situation, it is likely that a reconfiguration of circuits of power is not the linear outcome of successful power strategies conducted by specific strategic actors. Hence, to understand the fate of proposed representations, the present framework argues for a description of the movements undertaken by strategic actors to enact those representations. However, other actors may fail to accept them, and even propose counter representations and conduct counter strategies. Finally, contingent events and factors may be relevant to the unfolding of events. Emerging here is a picture of relative unpredictability in organisational change processes: it is most likely that no single actor is capable of 'pulling all the strings'. Seldom will representations outlined at the outset be enacted in smooth linear fashion. Possibly, initial representations and/or strategies may have to be redefined.

#### **4.3. Possible roles of management accounting in organisational change processes**

Management accounting may be involved in producing and reproducing configurations of the circuits of power in organisations. We contend that the fixing of dispositional

powers is centrally conducted in and through rules that may be carried by management accounting systems. Further, we contend that management accounting may constitute a technology of discipline and production involved in the fixing of, and not only in carrying and suggesting, rules that are enacted in everyday interpretations, social relations and practices.

### **Management accounting as a carrier of rules**

Management accounting can be envisaged as a carrier of rules that may or may not become obligatory in specific organisations. That is, such rules can become institutionalised and become the prevailing basis for interactions and practices. A management accounting system like a budgeting or performance evaluation system points to rules of orientation to financial results.

Hence, organisational actors may give meaning to situations in terms of financial figures – for example, they may assess the operational decisions they are faced with in terms of their impact on budget variances or some performance indicator. Interactions with other actors may also be rooted in management accounting rules. For instance, a conversation taking place in the organisation, or an order, may be facilitated by the use of financial figures. Management accounting rules may also constitute a basis for membership in the organisation. The definition of appropriate or inappropriate behaviour for oneself or others may be defined by reference to financial figures or financial categorisations.

An issue that can be raised at this point is whether management accounting always has the capacity to become a privileged basis for the definition of rules of meaning and membership enacted in organisations. This issue may be linked with the theoretical framework presented before: management accounting may or may not become, in specific organisations, a central source of rules of meaning and membership depending on the way it is involved in the representations, and strategies to enact those representations, within the prevailing circuits of power.

To understand the fate of representations based on management accounting rules, one will have to analyse strategies conducted to enact those representations, and the events and counter-strategies that potentially ensue. Prevailing rules of meaning and membership may enhance or hinder those strategies, and thus the enactment of the

proposed representations. For instance, and as neo-OIE writers have shown, if rules of financial orientation are widely institutionalised in an organisation it is likely that a strategy to impose a supposedly 'better' management accounting system will be facilitated. On the contrary, if other bases for meaning and membership prevail, for instance if financial values are widely perceived with suspicion, it is likely that such an imposition will be more difficult.

One issue that remains is how can specific management accounting rules be enacted if they confront other, conflicting, rules of meaning and membership prevailing in a specific organisation? In institutionalist studies (particularly in OIE-inspired writings) it is typically the case that if conflict between newly proposed and prevailing rules does not occur, then change takes place. If conflict occurs resistance tends to emerge and change is likely to fail. The framework presented in this paper allows for the study of the processes through which new rules become capable of overthrowing previous ones. The conditions for this to be possible are to be found in an analysis of the circuits of power. As Clegg (1989a) highlights, it is primarily through changes in the circuit of system integration that change in the rules enacted in a social system can come about. In the next section, I will suggest that management accounting can also intervene in this circuit.

### **Management accounting as technology of discipline and production**

Management accounting systems are not only 'rule books'. They not only transmit a set of rules of financial orientation, but also – potentially – provide for the very following of those rules. There is a material dimension to management accounting, reflected mainly in the disciplinary and productive characteristics of management accounting reports and figures. For instance, a performance evaluation system probably involves, on the one hand, a set of rules such as an orientation to specific measures of financial performance. On the other hand, such a system will also involve the production of reports that render the following (or non-following) of those rules visible in multiple time-space contexts, such as performance evaluation meetings. Therefore, it is likely that attempts to implement management accounting in organisations will not merely involve the proposal and communication of specific rules, but also the creation of material conditions conducive to their enactment.

Hence, management accounting systems may constitute not only a carrier of rules of meaning and membership that may or may not become obligatory in specific settings. These systems may also function as technologies of discipline and production, facilitating the interpretation and following of those rules. Specifically, management accounting may (1) create lines of visibility (or centres of calculation) that produce surveillance effects, potentially promoting discipline; and (2) facilitate the interpretation and following of rules, by providing timely and adequate information capable of aiding everyday decisions and actions.

The first of these characteristics points to the potential panoptical effects of management accounting systems. Actors in the organisation may know that their conformity or non-conformity to the rules of meaning and membership dictated by such systems are subject to a permanent gaze. Lines of visibility into the actions and performance of specific actors are opened, and the existence of some assessment or normalising criteria guarantees an orientation to the rules carried by management accounting systems. Disciplinary effects – that is, disposition to follow the rules – may therefore be created.

The creation of disciplinary effects by management accounting systems must, however, be seen in terms of prevailing circuits of power. For instance, an employee working in the customer's service department is faced with a recently developed system of financial indicators of performance that advises her to give priority to profitable customers over less profitable ones. However, she knows that this system is not the main basis for her performance assessment. The organisational structure is highly hierarchical, and her hierarchical superior does not accept the terms of the new management accounting system. If no means are available to discipline this last individual, it is possible that rules followed in the department will be insulated from the rules dictated by that system.

However, even if dispositions are created for the enactment of rules dictated by a specific management accounting system, such enactment may not occur. For instance, a system of contribution margins by geographical area may be implemented, and reports assessed in board meetings. However, a sales manager responsible for a certain geographical area may simply not know how to orient everyday decisions and actions in order to increase the contributions of her area. Here, the problem is that rules do not provide for their own interpretation: different meanings may be attached to the supposedly same rules. One manager may wrongly believe that increasing sales

volumes will necessarily lead to better contribution margins. Other manager may understand that selling to non-profitable customers may have a negative effect on those margins. But even if all sales managers interpret the rules being transmitted, and even understand that sales to non-profitable customers are to be avoided, there may still be a problem: how to identify these customers?

These examples point to the above-mentioned second potential characteristic of management accounting systems as a technology of discipline and production. Here, at stake are the enabling features of these systems. They may allow for the enactment of a representation of the sales departments as oriented to rules leading to improved contribution margins. For instance, if an adequate system is enacted, involving simple and reliable indicators that are provided to sales managers on a timely basis, it is possible that the rules enacted at the operational level will be aligned with that representation: non-profitable customers will be avoided, and an orientation to contribution margins will be achieved.

## 5. THE CASE STUDY

The organisation studied is *Air*, an independent business unit of a large and diversified Portuguese group, which we will call *Goldberg*, based in the North West of Portugal, near Porto<sup>3</sup>. *Air* vertically integrates the business chain across various separate companies: the headquarters is in Portugal, including the administrative and commercial areas together with the manufacturing area; and several sales companies are spread around Europe (twelve to thirteen companies during the time of the study).

By the mid 1990's, top management – namely a newly appointed Managing Director (MD) – attempted to promote organisational change. In several interviews with top management, and indeed in documents to which we had access, principles of 'self-discipline and motivation' and 'responsibility for, and orientation to, contributions to organisational profits', framed the representations by the MD of rules to be recurrently followed throughout the organisation.

Our study focused on the attempts made to enrol the manufacturing area of the business to those representations. In this area, individuals with whom we talked seemed almost

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<sup>3</sup> 'Air' and 'Goldberg' are fictional names. The real names are omitted in order to maintain confidentiality.

exclusively concerned with a set of production and efficiency indicators calculated within manufacturing, in the production control (PC) department. Reports and figures sent by the management control department (which had recently been created by the MD) were generally ignored in manufacturing.

The description of the case will attempt to address the key aspects of the framework presented in figure 1 in section 4 above. We will start in section 5.1 by describing the situation in the organisation in the mid-1990's, in terms of prevailing circuits of power. After that, in section 5.2, we will describe the new representations emerging in the organisation by that time, and the way management accounting was involved in the attempt to enact such representations. Finally, in section 5.3, we will briefly explore the way prevailing circuits of power impinged on strategies and counter-strategies undertaken in the organisation in the late 1990's, and we will describe some contingent events that occurred in that period. The analysis of all these aspects allowed us to make sense of the fate of the initially proposed representations, directly addressing, in processual fashion, the research puzzles expressed in section 1 above: why were formal management accounting systems decoupled from everyday practices in manufacturing; and how to account for the lack of impact of the ERP system on management accounting/accountants.

### **5.1. The configuration of the circuits of power in the organisation by the mid-1990's**

Two traits of the institutional context of the organisation studied were evident from our preliminary observations in early 2000<sup>4</sup>. Firstly, there was a wide recognition of the authority of the family that owned the group of companies to which Air belonged. Secondly, in Air's manufacturing, rules of production orientation were sedimented despite the management accounting systems in place which seemed to point to the following of rules of 'contribution to organisational profits'.

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<sup>4</sup> A methodological note here: the research reported in this paper involved three visits to the organisation studied. The first visit was undertaken between the 3<sup>rd</sup> and the 29<sup>th</sup> of January 2000 and was a pilot one. The second visit took place between the 5<sup>th</sup> of July and the 10<sup>th</sup> of August 2000 and was the central one in our research: it was a theoretically informed visit, in which the key research puzzles were addressed and the line of argument was refined. The third visit took place between the 3<sup>rd</sup> and the 24<sup>th</sup> of July 2001, and served mostly to confirm some aspects raised in previous visits. These visits involved staying in the organisation throughout the respective periods. For more details regarding the methodological approach adopted, including the key decisions taken during the research process, and the research steps undertaken (preparation, data collection and analysis) see Ribeiro (2003).

### **The authority of the family and the ‘Group Leader’**

Goldberg is a family-run group. Originating from a small business, launched in the late 19<sup>th</sup> century, it grew considerably in the 1970’s and 1980’s with the third generation of the founder’s family. From a relatively small manufacturing group, with a line of products based on a specific type of raw material (the one mostly used in Air), Goldberg expanded not only through growth of its traditional activity, but it also moved into new areas – both in manufacturing and in services. In spite of this expansion, the family kept control of the business. This is reflected in the capital ownership. The near totality of Goldberg’s capital belongs to three grandsons of the founder.

In general, there is wide recognition of the family’s authority within Goldberg. One of the three grandsons, in particular, has achieved a special status. He is widely recognised, within and outside the group, as Goldberg’s Leader<sup>5</sup>. This points to a rule of meaning and membership that is widely sedimented in Goldberg: the authority of the Group Leader and the obligation on others to follow the rules he dictates, or in general, the obligation to please him. That is, the rule ‘following the Group Leader’ was well sedimented in Goldberg (including in Air) at the time of this study.

Virtually all individuals we interviewed or talked with recognise the Group Leader’s word as final, and manifest total respect for him. Also, membership within the organisation is often associated with an orientation to the rules dictated by the Group Leader and even with the relationship established with him. We understood that the acceptance and following of values associated with the Group Leader (e.g. hard work, respect for hierarchies) were important sources of membership. Also, individuals seen as close to the him were respected organisational members.

The rule of ‘following the Group Leader’ seemed to be taken-for-granted by most organisational members. However, we found some evidence that the sedimentation of this rule could not merely be associated with a ‘natural’ process of institutionalisation, as OIE-inspired authors would probably suggest. For instance, some interviewees were capable of articulating and even criticising the rule. In an informal conversation the controller stated:

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<sup>5</sup> Henceforth we will identify this individual as ‘Group Leader’.

The impact of [the Group Leader] in [Air] is too strong: sometimes I think that things would be easier if he did not care so much with controlling everything.

Furthermore, it was possible to identify the (often material) basis on which the authority of the Group Leader rested, and even some of the strategies he conducted in order to fix the above rule as obligatory. Firstly, the family structure of capital ownership was retained. Indeed, the analysis of Goldberg's reports showed that seven individuals from the fourth generation already hold key positions in Goldberg. The Group Leader himself controlled a majority of capital. In an interview with a Portuguese newspaper in 2000, the Group Leader stated that there were no plans to change that structure in the near future<sup>6</sup>. The ownership of capital is related to the configuration of the circuits of power. It may be directly associated with the circuit of system integration or material conditions, since it promotes a specific distribution of resources (e.g. owners of capital have a privileged position in terms of the disposal of organisational resources) and it is also allied to a set of disciplinary devices (e.g. legal and enforcement apparatus that protect the rights of the owners of capital). Hence, by retaining capital ownership under his control, the Group Leader could maintain a strong position in terms of the circuit of system integration. This allowed him, for instance, to hire and fire employees and in general to decide on the use of organisational resources.

A second basis on which the rule of 'following the Group Leader' was fixed is the strong hierarchical organisational structure. Rather than promoting delegation of authority, the Group Leader maintained a strongly hierarchical formal structure in which important decisions would be defined at the top. Such a structure constituted a strong material condition fixing the obligatory rule of 'following the Group Leader' in Goldberg. It meant that the making of key decisions at levels other than at the top of the group was illegitimate and sanctionable.

A third way through which the rule of 'following the Group Leader' was fixed in Goldberg is more dynamic. The Group Leader did not simply rely on the effects of prevailing material conditions (capital ownership and formal hierarchies) to fix his authority as obligatory. He was very active in exploiting those material conditions in the strategies that he conducted. His intimidating recriminations of subordinates in meetings (some of which were witnessed during the research) had become legendary. Also,

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<sup>6</sup> I omit the reference of this interview in order to maintain confidentiality.

individuals who entered Goldberg with ideas different from the him, or who challenged his opinions, were systematically (and notoriously) expelled. Once more, the widespread recognition of these facts led to a general acceptance of ‘following the Group Leader’ as an important rule to be followed.

The obligatory character of this rule did not mean, however, that the Group Leader was able to achieve his preferred outcomes across all times and spaces. It is one thing to become recognised as the legitimate source of rules, but it is another thing, and potentially more complex, to be permanently capable of dictating and enacting the rules to be followed in all spaces and times in a growing group of companies.

As suggested in the above theoretical discussion, material conditions may facilitate the enactment of rules across multiple contexts. However, for the Group Leader material conditions were not always facilitative. In a conversation between the Group Leader and a group of members of the management control department in Air’s refectory (where the Group Leader often had lunch), he somewhat nostalgically complained of the difficulty he was now having in keeping direct control over the business. He did so in more or less the following words:

Before, I used to control everything through the fax machine and the terrestrial mail. Now it’s impossible.

As suggested by the theoretical framework, power implies organisation, and organisation means controlling the actions of many others through the ability to fix appropriate rules, and to discipline and enable their following; i.e., to act at a distance. When Goldberg was a small group of companies, ‘action at a distance’ was, in a sense, unnecessary. Instead, there was ‘action at the proximity’. Direct communication of rules and direct control of the respective enactment could be conducted. Rules were simple and transmitted directly, thus potentially overcoming issues of interpretation. Also, discipline could be guaranteed, say, by the possibility of assessing decisions made the day before, through the analysis of a fax or a commercial letter. Hence, the necessary measures to enable and discipline the following of rules could be enforced.

As the business grew in size and complexity, however, it became virtually impossible for the Group Leader to dictate and control all the rules to be followed (and how to follow them). The problem was that even the most detailed inscription (such as small plaques sent by the Group Leader to the group’s employees in the years 1998-2001,

describing the principles that had oriented him in his successful professional life) might be insufficient. As a result, there were problems with the transmission of meanings across multiple contexts, not least given issues of indexicality and the presence of purposeful strategic resistance.

As suggested above, such problems may be overcome by the deployment of technologies of discipline and production like management accounting. However, the Group Leader did not trust this technology. He considered management accounting reports as *post-facto* and not appropriate to intervene in everyday interpretations, social relations and practices. One of the researchers recalls, for instance, a conversation he held with the Group Leader, in which he identified management accounting as merely the computation of costs for financial reporting purposes.

In any case, and even if the Group Leader was sensitive to the potential of management accounting as means to ‘act at a distance’, it is likely that powerful technologies of discipline and production were simply not available in the broader environment in which Goldberg was located. The conception of accounting (including management accounting) as oriented to the production of legal reports was (and in some cases still is) well sedimented in Portugal. This is, for instance, reflected in the teaching in Portuguese universities, often oriented to cost accounting and bookkeeping.

In an attempt to overcome these problems, the Group Leader preferred and protected loyal collaborators, often relatives and friends, who supposedly accepted his word as final in all major decisions. These were his privileged representatives in organisations.

### **Sedimented rules in Air’s manufacturing area**

This section discusses an observation also made in the first visit to the organisation in January 2000, and that came to shape the research from then on. Manufacturing managers and their subordinates were oriented to production measures, and above all to production volumes and machine usage. There was, in other words, a strong internal or capacity orientation. In a conversation with a manufacturing manager, the interlocutor referred to the high percentages of capacity usage in his department as a signal of good performance. However, levels of stocks in this area were notoriously high. In subsequent conversations with other manufacturing managers during this first visit, we detected that their key concerns were similar. Importantly, these sedimented rules in

Air's manufacturing may be understood in terms of the configuration of circuits of power in the business unit. These may in turn be linked to the group's characteristics, described before.

Indeed, a key aspect of Goldberg's circuits of power in the early-to-mid 1990's was the attempts to define and communicate rules 'from above'. Vertical lines of hierarchy were well established. The Group Leader strived to control the group in a direct fashion through orders given to those below. From early contacts with Air it was noted that, at different hierarchical levels, organisational members (departments, functional areas) would always follow orders from hierarchical superiors. Organisational members (departments, functional areas) would orient themselves to follow – or to be seen as following – rules dictated from above.

People are used to a hierarchical logic, in which people belong to a certain department and answer to a certain boss (the IS manager, summer 2000).

Today, we still have to solve problems (...) with the bosses. People don't solve the problems horizontally (a member of the ERP implementation team, summer 2000).

Here, people manage the boss. Not the organisation. If the boss is happy, I am happy (the ERP project champion, January 2000).

In Air's manufacturing, 'the boss' was the production director (henceforth, PD). He was at the top of the hierarchy in manufacturing, and hence – given the formal, strongly hierarchical, organisational structure, he had the authority to give orders and dictate the rules for those below him. Importantly, the PD's preferred representations were linked to the rules of production orientation prevailing in his area. He did not see accounting systems as suitable technologies for managing the manufacturing area. In an interview, the PD stated quite explicitly that he doubted the adequacy of management accounting for control and performance evaluation or its usefulness for aligning everyday decisions in manufacturing with organisational performance.

The position of the PD in the organisation's hierarchy constituted an important feature of the circuit of system integration allowing him to impose his preferred representations of production orientation on those below him. But his authority in manufacturing in the mid-1990's was linked to other characteristics of the group's circuits of power. As

mentioned before, the Group Leader would often rely on individuals of his trust – family members and personal friends – placing them in the highest levels of formal hierarchies, in order to be able to ‘be present’ in everyday affairs.

In Air, in the early 1990’s, the PD was one of these individuals. The privileged relationship between the Group Leader and the PD was mentioned in several informal conversations within Air, although in formal recorded interviews it was not so easy to collect this kind of information. Nevertheless, two individuals from quite different functions stated on record that:

[The PD] manoeuvres through [the Group Leader]. (...) [He] stayed in Air because [the Group Leader] wanted him there (the ERP project champion, summer 2001).

The only channel [to the top of the group] is [the PD]. All other channels are closed (a manufacturing manager, summer 2000)<sup>7</sup>.

Hence, the orientation in Air’s manufacturing to the orders and rules dictated by the PD was magnified by the general recognition that he had a privileged relationship with the Group Leader. As the statements above suggest, the Group Leader trusted and protected the PD, and the latter was the Group Leader’s privileged source of information on Air’s manufacturing. The trust and protection of the Group Leader greatly empowered the PD in the organisation. While that trust and that protection were maintained, it was unlikely that the PD would lose his position as ‘the boss’ in manufacturing.

The point to be made here is that characteristics of the circuit of system integration in the group, namely the absence of powerful material conditions, conspired to create this state of affairs. There were no clear and unambiguous lines of visibility into manufacturing performance at the time of this study. This allowed the PD to maintain the image that ‘everything was well’, and to undermine attempts by other actors in the organisation to disclose problems which were apparent within manufacturing. (e.g. dubious investments, high levels of stocks).

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<sup>7</sup> A methodological note here: in one of the interviews from which these statements were selected, the recorder was on and we understood the interviewee hesitated in several answers. In our second interview, we decided to switch off the recorder in order to confirm some interpretations that we had made of the first interview. This way, such interpretations could be (and indeed were) totally confirmed. We also crosschecked such interpretations in many other interviews and conversations in manufacturing, and the striking widespread agreement they raised confirmed them (they were seen as ‘obvious’ by virtually everybody).

Several examples can illustrate the point that sensitive information regarding manufacturing performance was in some cases protected and in other cases ambiguous. Some individuals in the PC department – all loyal to the PD – had become guardians of data. They were the only ones capable of understanding the system and how to collect information. For example, these individuals were the only ones capable of understanding and extracting information for the cost accounts. These accounts included total costs figures, computed for legal reporting purposes, but were meaningless in terms of responsibility or performance evaluation. Furthermore, they were very sensitive to variations in machine usage and the responsibility for them was disputed between the commercial and manufacturing areas (ambiguity of information). Production and quality reports assembled in the PC department were not directly available to the rest of the organisation. They were computed on a parallel database outside the existing information system (a MRP-II JBA system running on AS400), using day-to-day paper-based production documents and were distributed only *within* the manufacturing area (protection of information). In any case, the JBA system had been the object of numerous changes and customisations over time, and had become a somewhat unreliable system. Importantly, the system did not identify mistakes or delays in data entries. Also, it included alternative databases which provided different figures for the supposedly same activities (ambiguity of information). All this meant that visibility of manufacturing performance was absent. This allowed the PD to persuade the Group Leader that any problems were caused elsewhere in the organisation, and to avoid strategies of other actors in the organisation to undermine his position.

Up to now we have emphasised the way material conditions in the organisation – the existence of strong formal hierarchies and the absence of powerful technologies capable of opening up lines of visibility into manufacturing performance – reinforced the authority of the PD in Air's manufacturing area. However, in addition, various means to discipline and enable manufacturing managers and their subordinates were available to the PD. For instance, there were technologies available for the PD to impose his preferred rules of production orientation on those below him. Specifically, we observed that the PD relied on reports containing production and quality indicators compiled by the PC department. These were regularly distributed to manufacturing managers and were the object of detailed monthly analyses in production meetings. We understood that the concern of manufacturing managers and their subordinates with production

measures was due primarily to the effects of these reports. Manufacturing managers were aware of the lines of visibility into their performance that were opened by the production and quality reports, and they used them to enact an orientation to production levels in their departments. For example, two manufacturing managers stated that they regularly discussed these reports with their subordinates, including line operators. Those managers also highlighted the simplicity and ease of interpretation of the indicators and figures contained in the reports, which demonstrates their character as technologies of *production*, and not merely *discipline*.

## **5.2. The introduction of new management accounting systems: emergent representations in Air in the mid-1990's**

The introduction of new management accounting systems in Air in the mid-1990's was linked to the appointment of a new group of actors, namely the MD, as well as a new CFO and a controller (both appointed by the MD himself). The MD was formally at the top of Air's hierarchy, with the PD, the CFO and a Sales and Marketing director immediately below him.

The new actors proposed, and attempted to enact, a new representation of the organisation based on rules of financial orientation. Such rules were to be enacted through the creation of lines of visibility to the contribution of each area of the business, and ultimately of each department, to the financial results of the organisation as a whole, and through the introduction of performance evaluation systems based on this contribution. The new management accounting systems were regarded as the means of transmitting the rules to be followed and also as a device capable of disciplining and enabling their following.

### **The new management accounting systems as carrier of new rules**

The conviction that the new management accounting systems would 'carry' into the manufacturing area the rules to be followed in everyday interpretations, social relations and practices is reflected in the documents and memos describing a 'Management

Control Project' (henceforth, MCP) set up in 1995<sup>8</sup>. In the memo dealing with the 'management control of the manufacturing area', page 10, it was stated that:

[The new management control system for manufacturing] will allow for:

- (...)
- An orientation of (...) manufacturing managers to the tracking of costs of the process, by permanently confronting actual values with standard ones (...);
- (...).

As pointed out before, manufacturing departments were already regarded as cost centres, but costs were attributed to them merely to give a cost to products and to value inventories:

The [current] organisation of costs in terms of cost centres aims (...) to constitute a basis for the computation of the real cost of products (...), which implies a limited utility for management purposes (Internal document: 'Proposal for the functioning of the management control system in a perspective of (...) responsibility centres', page 3).

The use of costs for management purposes was hence an important objective of the new system. Specifically, it was hoped that regular comparisons between actual and budgeted/standard costs would lead to a cost-consciousness. The same could be said about the translation of operational indicators (e.g. levels of stocks or number of employees) into financial terms. Hence, departmental managers would be concerned with issues of cost control instead of (or, at least, together with) the maximisation of production volumes and percentages of capacity usage.

Eventually, a more fundamental change in rules was sought: as the new systems would replace 'cost centres' by 'responsibility centres'.

Because we believe that organisational results depend above all on people, we are conscious that an organisational structure in terms of responsibility centres will contribute to the creation of a spirit of entrepreneurship in the manager, motivating a constant search for improvement in contribution margins and, therefore, in global results (Internal document: 'Proposal for the functioning of the management control system in a perspective of (...) responsibility centres', page 4).

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<sup>8</sup> See appendix 1 for a brief description of this project.

Initially, these principles were to be applied to the main organisational areas, including manufacturing. These areas were to be regarded as profit or investment centres, and it was hoped that 'responsibility centre' reports would carry a financial orientation into each of these areas, and would instil in their managers a 'spirit of entrepreneurship' and a concern for the maximisation of their contribution to Air's financial results. Hence, in the case of manufacturing it was hoped that the PD would manage his area as an investment centre.

### **The new management accounting systems as a technology of discipline and production**

Besides being envisaged by their promoters as carriers of new rules to be followed in the manufacturing area (as well as in other areas of the organisation), the newly introduced management accounting systems were also seen as a means of guaranteeing the enactment of those rules in a disciplined and enabled fashion.

Relating to the theoretical insights of previous sections, it can be argued that the key organisational actors in Air aimed at promoting change in the circuit of system integration in the manufacturing area. This was so at several levels. Firstly, the concern with opening up lines of visibility into the performance of each organisational area was clear in the MCP. For instance, rules of orientation to contribution margins were expected to be followed by the PD given that a gaze would be directed towards the manufacturing area's contribution to Air's financial results, and his performance evaluation would be based on that contribution.

(...) the contribution margins statement (...) seeks not only to identify the contribution for results of each of the (...) activities of the business unit, in a perspective of global financial consequences of their decisions (...), but also to render their managers responsible for the factors (...) on which they can act (revenues, costs, assets, liabilities) (Internal document: 'proposal for the functioning of the management control system in a perspective of (...) responsibility centres', page 1).

Also, the 'variance reports' would open up lines of visibility into the financial consequences of the decisions taken by departmental managers, who were to be accountable for the variances under their control.

[The management accounting system in manufacturing] will allow for:

- a) The identification of consumptions of raw materials in standard and actual terms, and respective [price and efficiency] variances.
- b) The identification of overhead costs, overall and for each manufacturing centre, as well as the respective variances (Internal document: 'management control for the manufacturing area', page 10).

Therefore, the new management accounting system was not merely implemented as a carrier of rules, but also involved the production of figures and reports that were to be used in performance evaluation, thus becoming disciplinary devices capable of promoting and enforcing the very enactment of the rules being carried.

Furthermore, the new management accounting systems introduced in Air were also regarded by their promoters as potentially *enabling* the changes they sought. The failure to enact the MCP (see section 5.3 below) was seen as being due, to some extent, to the failure of the 'budgeting' and 'responsibility centres' systems to *enable* the following of rules of financial orientation at a departmental level. In observations and in conversations and interviews with manufacturing managers we found that the 'variance reports' were commonly regarded as useless by those managers. Some of them simply ignored the reports because they 'did not understand' them. Other managers mentioned the lack of timeliness of variance reports as hindering their ability to support everyday decisions and actions. On the contrary, the 'production and quality reports' sent by the PC department were regarded as simple and timely.

A 'Restructuring Project' (henceforth, RP) developed and set up in 1997 aimed at enhancing the enabling aspects of the management accounting systems. On the one hand, a new IT infrastructure, specifically an ERP system, was proposed with the objective (among others) of improving the timeliness of financial information. The ultimate objective, as stated by the controller and by the MD, was to develop financial performance indicators which would be available 'on-line' to manufacturing (and other) managers. Also, in 1997 there was a concern with the development of simpler and more understandable performance indicators, especially those capable of reflecting the financial consequences of everyday decisions and actions, and of aligning them with organisational objectives and results. In our visits, we understood from conversations with the MD, the CFO and the controller that this concern was still a priority.

Finally, an important aspect of the new systems, and specifically of the ‘responsibility centre’ reports outlined in the MCP (see appendix 1), was their ability to render visible any problems of a financial nature in the manufacturing area. An important potential consequence was the undermining of the PD’s authority over the manufacturing area. The Group Leader would probably be less supportive of the PD, and thus the enactment of the new representations would be facilitated.

### **5.3. The resistance to, and decoupling, of the new management accounting systems in Air’s manufacturing area, and the detachment of these systems from the ERP technology**

It was evident in our observations of the production and use of the management accounting systems formally implemented following the 1995 MCP that such systems, and the representations that underpinned their attempted implementation, were not enacted in Air’s manufacturing area. Resources were mobilised, including the hiring of a new management accountant, and the reports (the ‘variance reports’ and the ‘report of contributions by responsibility centres’ – see appendix 1) were regularly produced in, and distributed by, the MC department from early 1996 onwards. However, we observed that previously followed rules in the manufacturing area, in essence, remained. Manufacturing managers maintained their perception of rules of production orientation as the obligatory ones. Their interpretations of their own performance and the performance of others was based on such criteria. And their interactions with others, their decisions and the measures taken were oriented to objectives such as production levels and percentages of capacity usage. This was linked with the general failure of the MD and his allies (the CFO and the controller) to enact representations of financial orientation in the manufacturing area. Subsequent sections analyse the processes leading to this failure, on the basis of the theoretical framework presented in section 4. That is, strategies to enact new representations may be constrained by prevailing circuits of power, by counter representations and strategies, and by unpredictable contingent factors and events.

### **The strategy conducted by the MD and his allies and the prevailing circuits of power in Air’s manufacturing**

The prevailing characteristics of the circuit of system integration are crucial in explaining the failure of the new management accounting systems to enact new rules in manufacturing. Firstly, an alternative set of reports remained the basis for performance evaluation and self-discipline: a set of ‘production and quality’ reports produced in the PC department, which included indicators that pointed to rules of production orientation. In a very emotional manner, a manufacturing manager complained that:

Yes, there is a lack of awareness of the financial consequences of what we do [in manufacturing]. But it is all very nice to talk of financial indicators if [in manufacturing] we are dogs and in the end of the leash we find someone that does not care [with financial indicators and reports] (July 2000).

He later confirmed that he was referring to the PD in this statement. Clearly, manufacturing managers were oriented to the rules dictated by the PD, and to the PD’s preferred way of assessing their performance – the ‘production and quality reports’ produced in the PC department.

Secondly, the lack of a reliable and integrative IT infrastructure limited the timeliness of the systems implemented after the MCP of 1995, and thus the enactment of new representations of rules in manufacturing. The reports produced after the MCP were not timely: they were distributed on a monthly basis, usually in the third or fourth week of the following month. Hence, the events to which they reported were already ‘part of the past’ and the information was thus perceived as useless for orienting decisions and actions.

Thirdly, the lack of reliability of the IT in place enhanced the ability of the PD to resist the representations proposed by the MD, the CFO and the controller in the period 1995-1997, and to impose his own representations. These involved passing the message (especially to the Group Leader) that the new management accounting systems and the reports produced by them were not valid ways of assessing the manufacturing area’s performance.

### **Counter-strategies and reshaped strategies in Air’s manufacturing**

It is not only the prevailing configuration of circuits of power, in some static sense, that potentially cause resistance to change. The framework presented in section 4 also

suggests a more dynamic perspective for explaining resistance: a configuration of circuits of power underlies (either facilitates or hinders) the counter-strategies, reshaped strategies and events taking place in the organisation.

In Air, resistance to the 1995 MCP in the manufacturing area was to a great extent due to the rejection of the project by the PD. This rejection, and the strategy that ensued, were in turn enabled both by the relative weakness of the strategy deployed by the MD and his allies (e.g. the assumption that the new rules implied in the MCP would ‘automatically’ be accepted by actors to be enrolled – such as the Group Leader and manufacturing managers), and in general by the prevailing circuits of power. Above all, the PD kept his privileged relationship with the Group Leader and hence his strong position as ‘the boss’ in the manufacturing area of Air. And he deployed a strategy to insulate performance evaluation in his area from the reports produced in the management control department following the 1995 project.

In the ‘production meetings’ and in conversations with those below him, the PD would simply ignore the ‘variance reports’. This was pointed out by several manufacturing managers and confirmed in the production meetings we attended in the summer 2000. The manufacturing managers were very aware that their performance was assessed on the basis of production measures included in the ‘production and quality reports’.

To create a ‘buffer’ between the management accounting systems and the performance evaluation of his area, the PD relied on the trust and protection of the Group Leader. Clearly, the special relationship between these two actors remained in the years after 1995 and still persisted at the time of our first two visits. This meant that the PD had total authority over manufacturing in Air. The controller recognised in several interviews that this caused an inability of others to intervene in the manufacturing area. For example, he stated that ‘conditions were not yet met’ for new types of evaluation to be implemented. Later, the controller confirmed what was at stake in his previous statements. As long as the PD and his management style prevailed in manufacturing, changes were not possible. In the words of the controller, the PD did not believe in a style of ‘management by financial numbers’<sup>9</sup>.

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<sup>9</sup> It should be emphasised that there is no moral judgment in this paper on the strategies conducted in Air. To judge, for instance, that the PD’s strategies were ‘divisive or illegitimate’ would imply that some kind of ‘natural’ legitimacy applies to strategies and objectives defined by the MD and his allies. Here, however, we simply describe the emergence of alternative representations in Air in the mid-1990’s – one defended by the PD and the other promoted by the MD (and his allies – the CFO and the controller) – and

The privileged relationship between the PD and the Group Leader, and thus the authority of the PD over the manufacturing area, was also reproduced through a successful management of meanings. Specifically, the PD attempted to create the image that he was irreplaceable and that his absence would mean a loss of control over operations. The MD's and the Group Leader's ignorance of Air's industrial processes reinforced this image. Also probably important was the fact that such processes – very specific in comparison with other organisations in the sector – had been developed in a very painstaking manner through time and the PD had assumed an important role in their development.

Nevertheless, the reporting of 'contribution by responsibility centres' could undermine the authority of the PD. If such reports were capable of showing that the contribution of manufacturing was poor, it was likely that the Group Leader would become less supportive of the PD, and changes in manufacturing might be demanded. Indeed, this was an important component of the strategy deployed in 1995 by the MD and his allies. However, the PD was able to resist this strategy. In meetings at which the Group Leader and other senior managers were present, the PD would cast doubt on the reliability of the 'responsibility centre reports' by presenting alternative figures. This was facilitated by the fact that the information systems in place were very unreliable (see above). Also, the PD often presented operational measures showing positive performance that countered the figures in the responsibility reports. Finally, he would often advance the idea that the 'contribution margin' of his area was hindered by problems created by the commercial area: namely the usually unreliable character of long-term and even short-term demand forecasts.

In 1997 the configuration of circuits of power in Air's manufacturing area remained unchanged. The principles of financial orientation had not been imposed as the rules underlying interactions and practices in manufacturing: to a great extent because of the failure to enrol the PD to those representations. The management accounting systems proposed to enforce and enable the following of the 'new' rules failed to replace the 'production and quality' reports that the PD's preferred rules. Available technologies, such as the IT infrastructure, were also not facilitative of the enrolling strategy.

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the way attempts to impose them unfolded. No moral judgment is passed on the relative goodness or badness of these representations. 'What is good and what is bad' is not something external to the power strategies but it is exactly *what is at stake* in those strategies.

The 1997 RP had a much more high profile and was an elaborate attempt by the MD and his allies to enact their representations in the whole organisation, including the manufacturing area. New material conditions were created – including the implementation of a new integrated IT infrastructure, an ERP system – and the problematisation was much more careful. Attempts were made to persuade the PD, and also the Group Leader and manufacturing managers, about the problems and solutions presented.

Once more, however, the PD undertook a counter-strategy. In the circumstances, the PD did not seem to oppose the project as a whole. During the summer of 1997 he did not challenge the RP or any of its measures. If the PD had directly confronted the project at that time, he would probably have signalled to others his opposition to a project whose terms were generally accepted as positive for the organisation. However, he later undertook a strategy that countered some of the RP's measures; namely those attempting to impose an 'assessment system' based on financial indicators developed by the MC and the Human Resources departments<sup>10</sup>.

The resistance of the PD to the changes being proposed became apparent when, in late 1997, few months after the RP was launched, and when the ERP selection process was beginning, the PD left the organisation.

I would say that given the subsequent facts [the PD] was not enthusiastic [about the RP]. He left in November, a few months after the model was decided – in August (the controller, July 2001).

[The MD] asked [other top managers]: 'are you in the project'? And of course they said they were. But two months later [the PD] left. (the ERP project champion, July 2001)

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<sup>10</sup> This is one area in which methodological issues are especially sensitive. Information on the counter-strategy deployed by the PD could not be collected (and was not collected) in interviews and conversations with him, for the very simple reason that the researchers are not 'outside and above' circuits of power. In other words, the PD would probably not recognise that he deployed a counter-strategy, since this was *illegitimate* behaviour – given membership work in his dialogue with the researchers. Hence, we based our analysis of the counter-strategies of the PD on two sources: observation of events in the years after the project; and the memory of episodes and conversations of other interviewees, some very near the PD, which we systematically attempted to cross-check in subsequent conversations and interviews. While accepting that this may raise methodological reservations, we would argue that any study of power in organisations will normally suffer from such problems: not all strategies of power will have material 'inscriptions' supporting and describing them, especially those that clash with prevailing acceptable rules.

This move seemed to represent a kind of tactical retreat, as the PD kept regular contact with the organisation, via the Group Leader and the MD. While away from the organisation, the PD continued managing meanings, by taking advantage of the Group Leader's and the MD's lack of knowledge and control of the manufacturing area. For instance, he was involved, during this period, in important changes in the factory's processes. In meetings with the MD and the Group Leader, he would identify problems in the manufacturing area (e.g. some poor decisions regarding production planning and some doubtful investments being proposed) which were felt because of his absence: thus reinforcing the idea that he was irreplaceable.

The PD returned to Air in the summer of 1998 at the instigation of the Group Leader, as confirmed by several interlocutors. For instance, the ERP project champion stated that:

[The PD] came back [to Air, in 1998] because [the Group Leader] put him there (July 2001).

Also, the PD's return was seen by the MD himself as a necessary step for the success of the RP, and specifically of the ERP project. The extensive knowledge of Air's rather idiosyncratic production process that the PD was seen as possessing was necessary for the enactment of the operational aspects of the RP and the success of the organisation. At this point, an important change took place: the MD put the ERP project under the leadership of the PD. In explaining this change to us, the MD pointed out that the PD, by leading the ERP implementation, would be visibly responsible for the outcome of the project. This would probably create dispositions in the (especially problematic) manufacturing area to accept the new IT. Furthermore, the MD expected that the implementation of the ERP would be capable of enforcing and enabling some change of the rules in manufacturing. That is, the integrative features of such systems were represented by the MD as promising some operational gains (e.g. better management of stocks and improved lead times).

The appointment of the PD as leader of the ERP implementation project – and indeed the PD's return to the organisation – signalled a reshaped strategy on the part of the MD. This was recognised by the MD himself, and by other senior managers that were present in board meetings at the time. In an interview, the MD stated that he was aware that the PD's return would hinder the enactment of the 'management assessment system' based on financial indicators that was proposed in the RP. Human Resources

managers were not given authority to build, for instance, a performance evaluation system for the factory based on objective, formally accepted, criteria. Probably because of this the turnover of Human Resources managers was high: two managers of the Human Resources department were hired and then left the organisation between 1997 and 2000. At the time of our last visit, a third manager had been hired.

In general, the principles of the MCP were dropped by the MD, as recognised by the controller and by the CFO. The interest of these two actors in the ERP implementation, and even in the RP project, was very limited after the PD assumed the project. For instance, it was at this point that a decision not to involve management accountants in the project was made by the controller. In the summer of 2001, he told us the reasons for this:

I would not waste my department's resources when conditions were not met for the [management accounting] systems to be implemented in the ERP system. (...) And the PD made sure that [my subordinates] would not be involved. For instance, he knew that I would not put [my subordinates] working full-time on the project. But when he presented his plans for the implementation, everybody in the team was there [on a full-time basis].

Hence, the ERP was implemented as a strictly operational system, and its potential in terms of management accounting was not explored. The MC department was not involved in the ERP implementation. The reports compiled in the MC department (for the sales companies and the commercial area, and also the – decoupled – variance reports), continued to be produced using parallel databases. The production of the 'contribution by responsibility centres' report ceased at about this time.

The composition of the teams also reflected the PD's interest in keeping control and authority over manufacturing.

In manufacturing, they did not want to loose power. (...) That is why some people were in the project, and that's why there was pressure from [the PD] in order for them to be the masters of what was implemented. The 'industrial data group' was formed. (...) And the objective was to make them retain all the know-how (the ERP project champion, July 2001).

This 'industrial data group' was composed exclusively of members of the PC department. Their involvement implied that the preparation of the 'production and

quality reports' was improved after the system was implemented in the headquarters (in June 1999). As pointed out by two manufacturing managers, those reports were now available to the PD much sooner than before, and sometimes these managers were confronted with figures from the previous month in the first few days of the following month. As the PD himself pointed out, this meant that control over his subordinates was now enhanced<sup>11</sup>.

### **The effect of unpredictable factors and events**

Unpredictable events can also have a bearing on the fate of proposed representations in organisations. The following examples from Air's case very briefly illustrate this point. As pointed out above, the PD could challenge certain management accounting reports in board meetings, given the problems with their reliability. To some extent, these problems were due to the characteristics of IT in place (see above). However, these reliability problems were also caused by the inexperience of the management accountant hired to develop the reports. Mistakes made by this individual were detected in some of the board meetings. These mistakes were unpredictable factors that concurred with the image of non-reliability that the Group Leader attached to the new management accounting systems.

Also, the return of the PD to the organisation, in early 1998, was due to some extent to a perception – by the Group Leader and by the MD – that the ERP project was delayed or even not under control. The point here is that such a perception was reinforced by some contingent events in the early months of the ERP project. The process of selecting a software vendor was extremely long (see Ribeiro, 1999), and the early stages of the implementation were marked by unexpected delays. Also, the extremely short time frame – given the year 2000 problem (an important contingent factor) – was seen as dangerous for the success of the implementation. With the PD leading the project, it was expected that the implementation of the ERP could be smoother, especially in the complex and problematic manufacturing area.

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<sup>11</sup> The 'production and quality reports' were the object of detailed analysis by the PD and each manufacturing managers in the third week of each month. However, at the time of our visits the PD had access to those reports usually in the first week of the month. After a brief glance at these reports, he would often personally go to the factory and discuss relevant figures/issues with the manufacturing managers. Given the potential of the new system, he stated that he was even planning to ask the PC department to produce weekly reports and to trigger formal meetings on a weekly basis.

## 6. CONCLUSIONS

This paper has reported an in-depth longitudinal case study conducted in a Portuguese manufacturing organisation in which an attempt to promote change through management accounting was conducted in recent years. Starting from an overall motivation to study processes of organisational change in the rich context in which they take place, the study has moved to a concern with explaining some puzzles arising in the first (pilot) visit to the organisation. Why were newly introduced formal management accounting systems becoming detached from everyday interactions and practices, especially in the manufacturing area of the organisation? Why was the implementation of a high-profile IT infrastructure (an ERP system) conducted quite separately from management accounting and accountants?

We presented a theoretical framework capable of supporting the analysis in the present and in future case studies of management accounting change in organisations. In this framework, processes of organisational change, and resistance to it, were conceptualised as being linked with the phenomenon of power. But the perspective on power adopted here is not conventional. It is a strategic Machiavellian conception that considers the importance of rules and material conditions in shaping the powers of different actors and groups and in facilitating or restricting their strategies to gain in power.

New management accounting systems were formally introduced in Air in the context of strategies of power conducted by some key organisational actors – the MD and his allies – to enact their preferred representations in the organisation. These representations involved following of the rules of financial orientation (i.e., orientation to organisational financial results) in all times and spaces in the organisation. The new management accounting systems introduced by those actors were regarded by them as capable of introducing new rules and disciplining and enabling their following. New rules would be suggested by performance measures included in the systems. Disciplinary effects could be created by the ability of these systems to open up lines of visibility into the (financial) performance of each department/area. Enabling effects would be created if the measures and figures produced were capable of driving decisions and actions, especially if they were understandable and timely.

The systems introduced were, however, resisted and decoupled in the manufacturing area of the organisation. Previous rules of orientation to production measures, such as production volumes and capacity usages, continued to be followed in everyday interactions and practices. This was linked to the observation that a set of ‘production and quality reports’ kept open lines of visibility into the performance of manufacturing departments, and were used in evaluating the performance of these departments and their managers. They clearly constituted the source of obligatory rules to be followed in the manufacturing area. On the contrary, management accounting reports were neglected by manufacturing managers, and failed to become a carrier and/or discipliner and/or enabler of new rules in the manufacturing area.

Several reasons led to the failure of the new management accounting systems. One thing to note is that the new management accounting systems proposed in 1995 were limited in their potential as technologies of production, no least because of the lack of reliable and integrated IT (a characteristic of the circuit of system integration). These systems were difficult to interpret by manufacturing managers and their subordinates, and very untimely. Also, a strategic actor in the organisation – the PD – who was the head of the manufacturing area, was not enrolled to the representations proposed by the MD and his allies. This actor did not believe in the adequacy of financial information to manage manufacturing operations, and thus neglected the reports prepared by the MC department as a means of managing his area. Further, he also deployed proactive strategies in order to keep his privileged position in the organisation and his ability to dictate the rules to be followed in the manufacturing area. His (counter-) strategies were enhanced by the configuration of the circuits of power in Air, and by some contingent events during the period studied. We have also shown that the counter-strategies of the PD, enhanced as they were by the configuration of circuits of power in the organisation and by some contingent events, ultimately explained the failure of the newly introduced ERP system to have any real impact on management accounting.

The study also brings about some theoretical consequences for so-called ‘institutional theories in management accounting’ (see for instance Burns, 2000b). Specifically, the case may be used to address the concept of ‘decoupling’ in New Institutional Sociology. Further, it involves a conceptualisation of the sedimentation of rules in social systems, and of power, that may be confronted with the one expressed in OIE-inspired work. These aspects are tackled elsewhere (Ribeiro and Scapens, 2004). Finally, Air’s case

points to a refuting of a technological determinist perspective on the relationship between ERP systems and management accounting in organisations. Many studies attempt to list the potential impacts of these systems on organisations (e.g. Anastas, 1997; Cooper and Kaplan, 1998; Scapens et al., 1998; Granlund and Malmi, 2002). However, in Air, it was the specific context of the organisation and the idiosyncratic processes that unfolded in the period studied that explained 'what the system became'. The conceptualisation of ERP systems as a device involved in strategies and counter-strategies of power allowed us to make sense of its lack of relationship with management accounting and accountants. Further, this conceptualisation and its explanatory power in Air's case replicates the perspective of these systems as 'triggers for change' whose direction and scope are not fully predictable a priori (see Ribeiro, 2001).

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## **APPENDIX 1 – THE MANAGEMENT CONTROL PROJECT IN AIR (1995)**

The MCP was developed in 1995. Overall, the new project was based on the concept of the contribution which the various areas of the organisation make to the overall financial results. It was expected that, by rendering visible such contributions, managers at different levels would orient their decisions and actions to the improvement of organisational results. In manufacturing, this implied a break from previous practices of management accounting which were limited to the calculation of total product costs for external reporting purposes. The new management accounting system for manufacturing proposed in 1995, and formally implemented in subsequent years, involved the following innovations:

- A system of ‘responsibility centres’ which breaks the organisation into its major areas: the administrative area (financial accounting department, MC department, control of payments and receivables), the manufacturing area (including support departments, such as the PC, and the factory), the commercial area, and the sales companies. This system was based on profit centres and, when and where possible, investment centres. On the basis of standard transfer prices (with manufacturing ‘selling’ to the commercial area and to the sales companies, which in turn sold to the market), and of an assessment of the costs of fixed and working capital, the ‘contribution margins’ of each area would be calculated and compared with the budget/standard. Such a report would be presented and discussed in board meetings.
- A conventional ‘budgeting system’ for the various cost centres was also proposed. This system was based on (1) estimates of sales volumes and prices prepared by the sales companies and the commercial area in Portugal; and (2) estimates of fixed overhead costs by each department/cost centre. The computation of variable costs (comprising materials and electricity) would be undertaken in the MC department, on the basis of the sales budget and the standards for the production of each product. Monthly ‘variance reports’ would then be distributed to manufacturing managers, showing variances for which each department would supposedly be accountable (e.g. fixed costs compared to budget; variable costs compared to standard). Also, these reports would include such non-financial indicators as the level of stocks and the number of employees, translated into financial terms;

- It was expected that the system of 'responsibility centres' would eventually be applied at a less aggregated departmental level. For instance, the controller explained that the objective was to apply the system of responsibility centres and standard transfer prices to each of three factory departments – 'basic products'; 'intermediate finishing'; and 'final finishing'. These reports would then be distributed to the manufacturing managers responsible for those departments, in order to orient their decisions and actions. However, he explained that such a development was not planned for the initial stages of the project, given limitations in IT. This was confirmed in the project documents which were collected:

The development of the responsibility centres to a departmental level of analysis (...) [will take place only] if it is considered necessary, useful and possible' (Internal document: 'Proposal for the functioning of the management control system [of] contributions by centres of responsibility', page 1).

There was a concern within the project with rendering visible the performance of each area of the organisation in terms of its contribution to results ('contribution to results' being defined as the contribution margin of each area, calculated on the basis of standard transfer prices, variable and fixed costs, and costs of fixed and working capital). The 'budgeting system' meant that some attempts were also made to instil a level of financial orientation, i.e. of cost-consciousness, at the departmental level. In short, the new management accounting systems were a means of promoting both the visibility of manufacturing performance as a whole, and the enactment of a financial orientation at a more disaggregated level.

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