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Using Management Control System to Improvement the Strategy

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ABSTRACT
A management control systems (MCS) is a system which gathers and uses information to evaluate the performanceof different organizational resources. This paper used the management control systems for strategic changing. The case study is industrial service operations. There is not adequate theoretical and empirical research on the concept of management control systems as main important of ideas in management accounting literature for decades. This research try to develop two main ideas including extending four dimensions: the management tool, the organizational structure, the use of control system, and the compensation system and also investigating about the interacting these four dimensions.
Keywords: management control systems, Strategic Improvement, diagnostic control, service industries.

1- INTRODUCTION

Management control systems (MCS) are both affected by and affect the strategy process itself [1]. There are some reasons for studying the MCS package phenomenon is important. Firstly, management control systems do not operate in isolation. While much of the management control systems research considers single themes or practices that are seemingly unconnected from each other and the context in which they operate, these invariably sit within broader control system [2]. In this study, we argue that strategy represents a very important contingency variable. This may provide the underlying reason for assessment of MCS contingency research when he argued that wholesome relationships have been found between some contingency variables and MCS, on the whole the "relationships are weak and the conclusions are fragmentary. Distributed energy management systems in buildings have gained significant attention due to their high potential in energy savings and reduction of consumed energy expenses. Moreover, higher demands are placed on cost minimization of such systems, ease of installation and standardization of various components comprising the system [3] and [4]. Open distributed control systems feature desirable benefits, such as fault tolerance, expandability and maintainability. Although the installation of distributed control systems in existing buildings was, up to now, cost ineffective, due to the extended wiring required for communication demands, recent developments in the building automation and control sector resulting from the introduction of various transmission media, helped dramatically the feasibility of energy management in existing buildings. In his more recent examination of contingency research, Chantal (2003) supported Dent's (1990) point and argued that the variables considered have-not provided consistent explanations of the kind of MCS that fit organization types or drive performance. Some author suggest that the strategy choice the company makes will affect its MCS, meaning that different types of organizational plans and strategies will tend to cause different control system configurations [5].Simons [15] proposed the top management "not to usurp the decision rights of subordinates. The rest of this paper is organized as follows: section 2 presents the proposed method step by step. Section 3includes implication of proposed method. Section 4 contains results, discussion, conclusion and future research guideline

2- MATERIALS AND METHODS

This section aims at making a synthesis in terms of framework to analyze management control systems in use and of propositions related to our research question. It also justifies and details the methodology we followed to study the relevance of this framework that is a case study. In the analysis of management control system should include: use of control systems (diagnostic or interactive or joint use), the type of management tool (generic or specific), and the compensation systems (with two polar possibilities, formula based or compensation-based). In addition we know that, that the interactions between the top management and project teams are not only structured by the management control system, but also by specific organizational structures that interact with the control systems. and result, we suggest analyzing management systems using a four-dimension framework: organizational structure, use of control systems, management tool, and compensation systems.

We chose to conduct a case study even before having defined the research question because we believe this Methodology is relevant to study the existing questions about the use of management control for which the Knowledge has not yet structured. This choice is in line with the calls of authors for a greater commitment to more in-depth (case-based) research [16-18].
Step 1: Getting started: A research focus is important to avoid becoming overwhelmed by the volume of data.

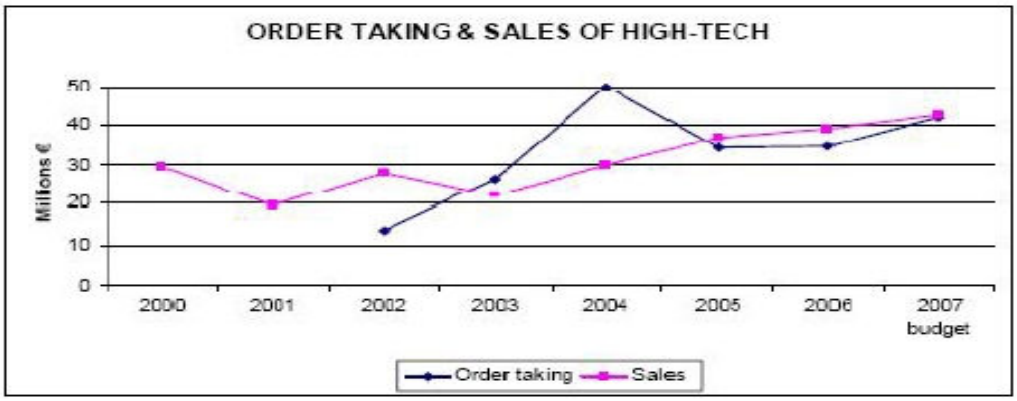
The definition of a research question within a broad topic enables to specify the organization to be approached and the kind of data to be gathered [19]. The case study strategy is most suitable for "how" and "why" questions [20, 21].In order to ensure a good coherence between the academic goals and the operational ones, and to assure the validity of the research [22], a dynamic interaction between academic world and enterprise world was organized. A sort of two steering committees of the paper project was created: one is the functional committee, another is the operational committee. The first was created in Dec. 2002 and consisted of the management control director and then the financial director [23]. The second was created in Dec.2005 and consisted of the Strategy director (who is also Vice Executive President) and Holding management controller.
Step 2: Selecting cases: Ferreira & Merchant [24] pointed out that there are two main types of sample
Selection: purposive or non-purposive. The purposive selection means that "field researchers often look for companies that would appear to be "outliers" in a large database study, and hope to learn something new from them". The non-purposive means the sample is opportunistic and precedes the research questions.
Once the research question was chosen, the selection of Hi-Tech and Electra case studies was rather purposive. Indeed, we chose cases that could fit our question in which there had been a real strategic change. It means the change in strategy content or strategy-making process at the corporate or business level or a fundamental change in strategy implementation (organizational value, structure, systems, and personnel.
Step 3: Crafting instruments and protocols: Our four main sources of evidence are interviews, direct
Observations, archival records, and documents. In addition, the informal exchanges with my colleagues and observations of daily life in INEO Suez also provide me an important source of evidence. All of them
Are interdependent and complementary. More concretely,
Step 4: Entering the field: As recommended by Bruns& Kaplan [25] we carefully prepared our interviews. The preparation is indeed essential to gain confidence with the interviewee. Indeed, it is not evident to present the position of a researcher being at the sometime employed by the company at the holding level. If I presently as someone who had worked in holding management control department, the informant would think of the image of"police"125. If I presented myself as someone sent by his superior of the informant, he would consider me as an" auditor" of his works. If I presented myself as a student, he would consider me as an "outsider" of their business difficulties. That is the reason why, according to my experience, the best way to gain confidence is to present myself as are searcher and to guarantee the anonym of their answers. It allows emphasizing on the academic objectives of the research. To know much about the operational questions that the interviewees faced, I thus prepared as much as possible all concrete information related to informants and my research questions (characteristics of their projects –from financial results to general description, evolution of their entities, or their position).

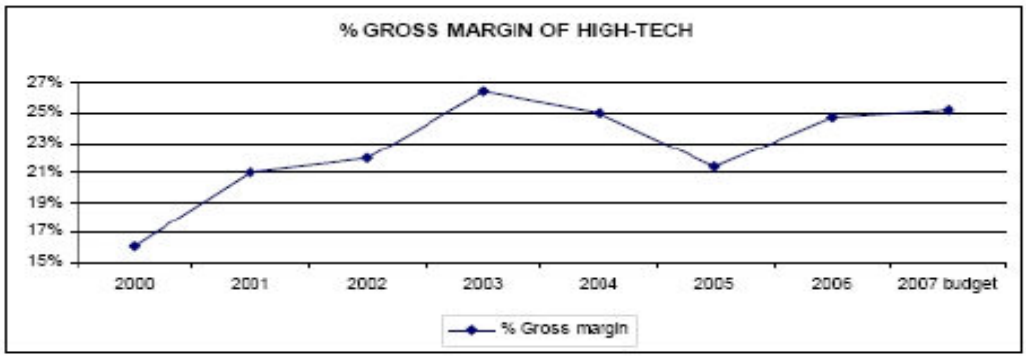
Step 5: Analyzing data and reporting data: Data analysis is one of the most important process, but the least developed and the most difficult [26-28].A case study database was created, including case study notes (minutes of interviews and analyses), case study documents (such as its budget presentation or financial analyses, annual reports, balance sheet, minutes of observation meetings), and recorded interviews. We used this database to carry out within-case analysis and cross-case analysis.
Step 6: Reaching closure: Three important issues which enable to reach closure are when to stop adding
Interviews, when to stop adding case studies, and when to stop iterating between data and theory128. The answer is the saturation [29]. The saturation means the incremental improvement to the theory and to learning is minimal. And due to the time constraint, we selected only two case studies.

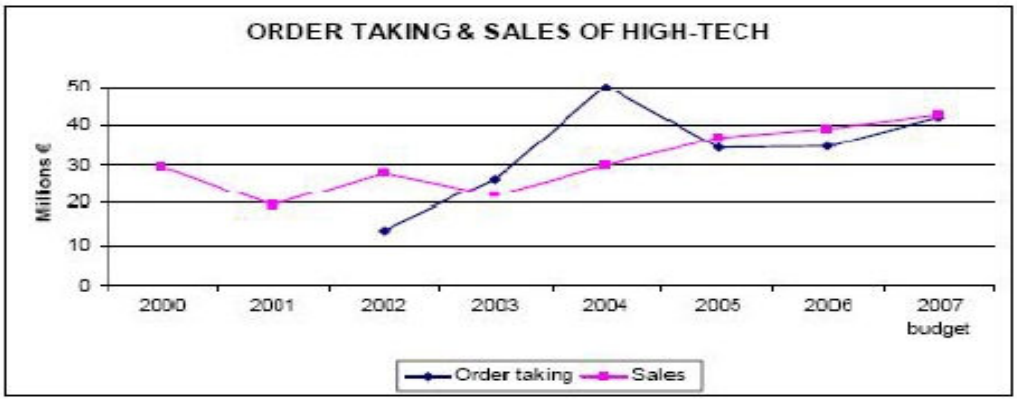
3- RESULTS AND DISCUSSION

Hi-Tech case: I-Tech is specialized in implementing management systems of public transport networks(tramways, bus, metro, and so on), road signaling systems (information on traffic net workflows), and toll systems. These systems of different sizes and complexity require specialize Three milestones highlight the Hi-Tech's evolution:

before 2002, 2002-2006, and after 2006.Each period is accompanied with changes in organizational structure, use of control systems, management tools, and compensation systems. The way in which these four dimensions interact during each period is discussed in details. This illustrate show they can complement each other to implement a strategic change. The case study covers the period from 2000 to 2007. It illustrates how a company organizes itself to expand from a small firm consisting of a handful of projects to a medium size one managing quite a large portfolio of projects. The changes that occurred along these years are suggestive of some key issues that need to be solved to efficiently manage a service company in which its capabilities rely more and more on its technical excellence as well as on its ability to promptly satisfy customer demands.







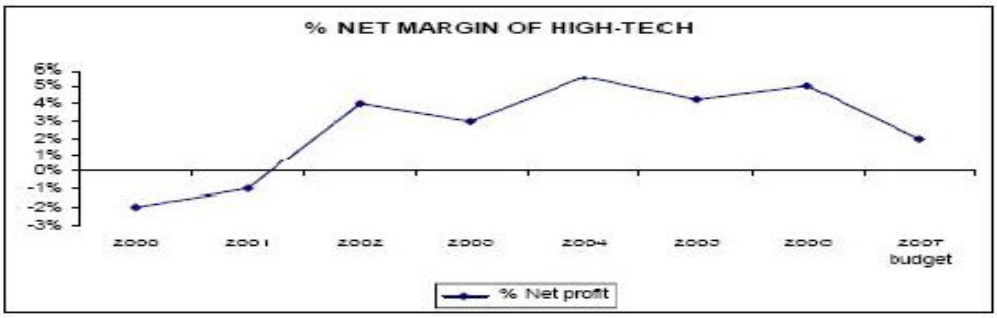


Figure 1: Evolution of financial results of Hi-Tech in 2000-2007

Data collection: Regarding Hi-Tech's source of evidence, we rely not only on interviews, historic
Record, documents, direct observation, but also on a visit to a showroom that exhibits one example of project.

Challenges: As mentioned gaining cooperation from the managers was a key issue. In this case, though Hi-Tec Director allowed us to interview any manager, we had to face an explicit refusal to cooperate from himself later.
Three months after our first interview in Hi-Tech, he sent us an email (Sept. 2005) to require a cessation of our interviews with the following reason: "Hi-Tech employees are paid to work, not to spend their timeforinterviews"133. He said that he agreed to give us a final interview on Dec. 5th 2005.
Interpretation of the strategic changes with the proposed grid: All through the periods considered in the case study a project in Hi-Tech proceeds along three phases:- An offer phase in which a proposal is sent to the customer,- A production phase in which the actual project is conducted that is, the software and hardware are elaborated andimplemented to be used by the customer,- A maintenance phase in which Hi-Tech provides assistance. The case study concentrates on the first two phases.
However it should
The communication on the global strategy, on the objectives of the company, and on the critical problems of the company is not clearly apparent from the data that has been collected. Based on the development of the company, we may assume that the main strategic orientation from 1997 to 2002 is to conquer market share and to establish its core products on hardware and software.
Involvement of top management: The implication of the top management in the formulation and implementation of the strategy is more active and more frequent than prior to 2002. The newly-appointed director sets as a principle that all company problems, its strategy, its global objectives should be clearly communicated to all employees in the annual meeting. Moreover the monthly report on the achievements of the company objectives is sent to each employee via email and via internal news. This report includes the following indicators: quality, satisfaction of customers, commercial order taking, turnover, gross margin, offer cost, treasury, structure cost, normative net result by project, net result before taxes and participation. The implication of top management is much more active in the daily life of project management. In addition to the same involvements as before 2002, the senior managers also involve in the nomination of offer supervisor and the strategy definition of offer responses.
The top management has weekly meetings to discuss on the general advancement of all projects in Hi-Tech.
The primary objective of top management is to reinforce coordination, dialogue, and transparency in the organization. But, as will be seen later, this objective is not completely attained due to unsuitable definitions of operational managers' roles, of tool use, and of compensation systems.
Involvement of operational management: The period 2002-2006 is highlighted by the omnipresent and over-powerful Technical department, especially in both phases – offer response and project realization. The top management wanted to reinforce the roles of technicians and to weaken those of the project leaders and the salespeople, yet the used method could not keep the relating actors' roles in balance. Relating to the phase of offer response, the salespeople and offer supervisor now have to formally take into account the technical costs as estimated from the Technical department. Contrary to its limited roles before 2002, the Technical department plays

an essential role in this phase. The Sales department is no longer responsible for making the technical description of the offer and estimating technical costs, these are now done by the Technical department. In fact, a complex and detailed procedure makes precise how the technical cost estimation is to be made. The Technical director designates a technical supervisor and a technician team to make an estimation of offer cost. All the services of the Technical department have to estimate the corresponding parts of the total cost and then negotiate with the director of the Technical department. The outcome of this negotiation gives the technical cost commitment for which each service and each technician are accountable. This estimation is quite detailed and becomes a collective commitment of the department which is confirmed by the signature of Technical director and of the corresponding technical supervisor.
There are regular meetings between offer supervisors and technical supervisors to discuss about prices, commitment of the Technical department, costs, and conditions of contracts. The technical supervisors are so powerful that it "kills" the dialogues with the salespeople and offer supervisors.
During the realization phase, the project leader is in principle responsible for: 1)communication with the client and external sub-contracting, 2) project coordination between horizontal departments, and 3) monthly financial project control and reporting with the production manager and the director of Hi-Tech.
The resource allocation is in fact no longer made by project leaders. The Technical department is in charge of the allocation of its workforce on the different projects for all operations relating to software, and then similarly it is the Installation department who allocates its workforce for all operations relating to hardware and materials. The horizontal departments have the right to recruit their personnel, which belonged to the production director before2002. The latter is now in charge of identifying and analyzing the causes and the responsibility of project losses (if any).New quantitative and qualitative indicators are introduced. No a specific management control system is created to support the role of the project leader or to facilitate the dialogue on project management. The horizontal departments have a tendency to keep information on workforce allocation and relating information on project advancement in private. If a problem occurs, they often try to solve it by themselves before delivering information to the corresponding project leaders.
An important change takes place to reinforce commitment on part of each employee and at the different levels of the company. The bonus of each employee now contains three components: individual, collective and global(respectively 50%, 25%, and 25% in total bonus payouts).Concerning individual objectives, after an open dialogue on the objective negotiation with his/her direct superior, an individual objective is selected and becomes his/her commitment. The individual objectives are often based on the legitimate zone on which the employee may have control. For example, sales revenue for sales manager, or gross margin for project leader.

Discussion: The financial performance of the company is summarized in the Table 1. One of the most remarkable changes is the positive net margin from 2002. Sales and net margin of 2002considerably respectively progressed+46% and + 650% with regard to those of 2001. Except for an increase of 20% of gross margin and 95% of order taking, 2003 saw a reduction of sales (-21%) and net margin (-36%). After a peak in 2003, the gross margin continued to degrade until 2005, which signaled the need of new change.

Tablel: Hi –tech's financial results after 2002

Millions of euro	2004	2005	2006	2007	2008
Order taking	13.5	26.3	50	34.5	34.7
Turnover	28.1	22.3	30	36.9	39.2
Gross margin	6.2	5.9	7.5	7.9	9.7
Gross margin %	22	27	25	21	21.4
Net profit	1.2	0.7	1.7	1.5	1.9
Net profit%	4	3	5.5	4.2	5
Ebit	1.5	0.7	1.6	1.2	1.5
Ebit %	5.5	2.9	5.4	3.9	3.7

The lack of coordination between the different departments is reinforced by the use of formula-based incentive systems since 2002. Recall the main characteristics of the new incentive system:
- Three objective components – individual, collective, and global – associated to the key performance indicators and clearly communicated to all employees,- The incentive system is formula-based. It is determined thanks to financial performance indicators (like sales revenue, margins) and some qualitative indicators(like satisfaction of customers). In fact, the Hi-Tech director aimed at making compensation which is explicit, objective, and fair for all employees. Unintentionally, he transformed even the contribution-based bonus to formula-based one on the basis of satisfaction notes and required the evaluation of the relating actors (i.e. they are evaluated not only by superiors but also by subordinates' counterparts). But not all indicators can be mathematically calculated.
Ex: For example, the indicator "satisfaction of performance of the Installation department" is evaluated by other departments (like Production and Technique).- The justification of bonus distribution is explained by direct superiors.

4- Conclusion

This paper is concerned about the use of management control systems for implementing strategic change. It has developed two new ideas. The first idea is that Simons' original framework of analysis, based on the use of control systems by managers, could be extended to cover three other dimensions: the organizational structure, with an emphasis on horizontal as well as vertical coordination; the management tool, with the distinction between generic and customized tool; and the compensation system, with the distinction between formula-based and contribution-based incentives. The second idea relates to the balanced interaction of these four dimensions. Some configurations along these four dimensions are more efficient than others. A more efficient configuration simultaneously exhibits some interactive and diagnostic features. Rather than opposing diagnostic and interactive systems, a balanced approach that combines the two approaches may be an interesting reference. These ideas have been used to interpret the strategic changes that occurred in two organizations dealing with industrial service operations. It is believed that they have some general value and that they could be used in other activities. In this general conclusion we discuss some avenues for future research.

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