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Madeleine Besson, Hélène Loning, Carla Mendoza

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The use of budgeting
in high PEU (Perceived Environmental Uncertainty) contexts:
the contribution of projective techniques

M.Besson, Associate Professor, INT-Evry

H.Löning*, Associate Professor, HEC School of Management, Paris
&
C. Mendoza, Associate Professor, ESCP-EAP Management School, Paris

*: Corresponding author:
Email: loning@hec.fr
HEC School of Management, Accounting & Control Department
F-78351 Jouy en Josas Cedex, France

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Abstract

In an increasingly uncertain context, budgeting faces at least two categories of concerns: how should realistic objectives be set in a poorly predictable context? How should a fair year-end evaluation be performed when uncertainty has affected the results and their controllability?

Since Hopwood's (1972) paper, performance evaluative styles have provided a rich vein for empirical behavioral studies in control, largely based on contingency approaches. Perceived Environmental Uncertainty (PEU) has been specifically examined in many empirical studies. However, two decades of literature on the RAPM-PEU relationship have produced results that are at best inconclusive. In the meanwhile, broader management control systems (MCS) theories have emphasized how the strategic uncertainties perceived by the managers affect the use of MCS (Simons, 1990), which in turn shape emergent strategies. Calls have been made for renewing contingency accounting research based on seminal organizational contingency papers (Chapman, 1997). They suggest that uncertainty may relate to how information is processed and how MCS – such as budgets - are used in the organization.

In our view, there is a need for better understanding of the constructs commonly used in budgeting research. To meet this need, we used a field-based study and projective techniques to interview fourteen senior marketing and sales managers in a variety of industries. The interviews were designed to capture the managers' perceptions relating to budgeting, and to uncertainty.

Our results highlight important distinctions between sources of PEU, which is based on a manager's ability to improve the predictability of change, and/or to be able to react to changes in the environment with an additional effort. When PEU is high and perceived as non-actionable, the paper examines what kind of social and organizational adjustments take place. The results emphasize that budgeting and performance evaluation are a multiple-year game, where trust and knowledge of social rules build up over the years, and learning takes place.

Keywords: budgeting — uncertainty — projective techniques — MCS - marketing and sales managers.

“I don’t have trouble sleeping at night... Sometimes I wake up early because of the kids and then I can’t get back to sleep because I start thinking. OK, sometimes I think about my budget. But I don’t take pills. Maybe some people do, I don’t. Maybe my competitors do (laughs). I achieved my objectives four years in a row... I did it. But it’s not just plain sailing. You have to make it happen.” (*Senior marketing & sales manager, Pharmaceuticals*)

For many companies, budgets are a key control instrument from a behavioral perspective. Traditional budgeting systems rely on goal-setting and performance evaluation based on accounting measures. The goal-setting theory (Locke, 1968; Locke & Latham, 1990) has provided arguments for the appropriateness of reliance on accounting performance measures (RAPM). However in an increasingly uncertain context, budgeting faces at least two categories of questions: how should realistic objectives be set in a poorly predictable context? How should a fair year-end evaluation be performed when uncertainty has affected the results and their controllability? The “incompleteness of accounting” as uncertainty increases (Chapman, 1997:202), which points to the need for operational measures for performance evaluation in high PEU contexts, lends additional force to the argument that budgeting is questionable in high uncertainty contexts. Given this context, our paper examines the following set of questions: where budgeting is not abandoned, how is it actually implemented in high-uncertainty situations? What kind of social and organizational adjustments take place that can avoid the potential negative behavioral consequences of budgeting when managers’ perceived environmental uncertainty (PEU) is high?

Several streams of literature have discussed the roles and use of budgets in relation to performance evaluation, since Argyris (1952, 1953) started this debate. A large stream of socio-psychology-based accounting literature has grown in different directions over the past thirty years, since Hopwood’s milestone paper (Hopwood, 1972). The behavioral empirical literature, generally known as RAPM, has not yet provided conclusive answers to the above questions on budgeting in high PEU contexts (Hartmann, 2000). Besides, examination of these questions has recently subjected budgeting to considerable criticism in the managerial literature (Hope & Fraser, 2000, 2003(a), 2003(b); Jensen, 2003), but only a very small proportion of companies has in practice gone “beyond budgeting”. Meanwhile, the MCS literature has developed broader theories, which can apply to

budgeting practices and help better understanding how uncertainty affects budgeting (Simons, 1987(a), 1990) and calls have been made (Chapman, 1997) for renewing accounting contingency frameworks based on seminal organization theory contingency works such as Burns & Stalker (1961), Woodward (1965), Lawrence & Lorsch (1967), Galbraith (1973), Thompson (1967), or Perrow (1967).

Our study seeks to gain some insights into the concepts and fine-tune certain existing constructs (budget emphasis, budget participation, PEU). It builds on “loose” contingency relationships to furthering understanding of the complex mutual interrelationships – rather than simple, or even complicated, cause-and-effect linkages – between budgets and PEU. It seeks to contribute to theory development through the use of projective techniques.

We conducted semi-structured interviews using projective techniques with 14 senior sales and marketing managers from a variety of industries. Evocative, carefully designed visuals stimulate people – here managers – to talk and express their feelings in an open manner on pre-determined constructs and topics. The research method relies on constructs grounded in a broad base of existing literature, and uses semi-structured interviews. To that extent, our paper explores an unconventional methodological route, far away from surveys but not close to in-depth case studies either. Large sample studies are well-designed to capture and establish robust contingency relationships, but they are of little help when it comes to specifying the concepts. We believe in the “explanatory power” (Scapens, 1990) of more qualitative, field-based studies, a route suggested by Chapman (1997). However our study is not based either on a single case study, as it is construct-driven and acknowledges the existence of several decades of budgeting research. It lets “new” constructs –partly imported from non-positivist sociological research – emerge, which could be included in later causal models and survey research.

Our results indicate that when PEU is high, the use of budgets and their socio-organizational dimensions are emphasized. Budgeting is an ongoing process, which takes place in a social context, rather than a once-a-year evaluation time involving just two people – a manager and his/her superior. The paper also identifies various PEU dimensions that influence managers’ perception of budgeting.

The results shed light on how the managers process the information and deal with budgets in high PEU contexts. They display several types of social adjustments such as risk- and effort-sharing, closer and more intense relationships up and down the lines (managers with their teams and superiors), taking a more detached view of the formal evaluation system, or building trust with the hierarchy. The results emphasize that budgeting and performance evaluation are a multiple-year game where trust and the knowledge of social rules are built up over the years and a certain amount of learning takes place. Trust and reputation may be important moderators, and they develop with increased communication along the line.

The remainder of the paper is organized as follows. Part 1. presents our research objectives and discusses the conceptual framework and theoretical background to our study. Part 2. summarizes the research method chosen to best answer our questions, presenting the arguments in favor of using projective techniques imported from marketing literature, where they have long been in use, and describes how the interviews were conducted. Part 3. reports our field-based data, and subsequently *discusses certain existing constructs in the light of our results, together with a selection of concepts emerging from our study, thus offering new perspectives on the relationships between budgets and PEU.*

1. Background literature and research focus

This paper helps to answer the following sets of managerial and theoretical questions:

- How do managers characterize high PEU situations? What makes managers perceive uncertainty and drives changes in the way budgeting is implemented and experienced?
- Do organizations and managers still use budgets in high uncertainty situations, and how? If so, how do they adjust the process in order to avoid dysfunctional effects? If not, what substitutes are used for control purposes?

The first set of questions asks what makes a manager perceive high environmental uncertainty and how this perception affects his/her attitude towards budgeting. The purpose is to identify different forms of PEU that would make the relevance of budgetary

practices vary. In going deeper into the uncertainty concept, this paper sets out to achieve a better understanding of the mechanism underlying the uncertainty paradox. The second set asks whether budget control is still relevant in high PEU situations and how it adjusts in such circumstances. In high PEU situations, what are the new criteria for performance evaluation alongside or instead of budgeting?

Several streams in the accounting literature have suggested tentative answers to this important practical and theoretical question. In the 1980 & 1990's, empirical RAPM studies have tested the negative behavioral effects of a high RAPM in high PEU situations. They have hypothesized that a high PEU is likely to lead to lower RAPM. However, the results of these studies remain conflicting and non-conclusive (1.1). In the early 2000s, a more practice-oriented/managerial literature, initiated by some CAM-I works, has called for “beyond budgeting” practices (Hope & Fraser, 2000, 2003). It comforts the idea that when uncertainty increases, results are non-predictable and pre-set targets do not constitute a valid basis for performance evaluation (1.2). Meanwhile, several management theoretical frameworks have been applied to MCS, which show evidence of the existence of different control mechanisms and suggest that budgeting is either a formal mechanism which is not appropriate in high uncertainty conditions (Hofstede, 1981; Ouchi, 1980) or – although basically a diagnostic tool, can be used in a more interactive manner (Simons, 1990) to respond to the challenges of a competitive and rapidly changing environment (1.3). Our field study illustrates the latter MCS theories: budgeting is used in an interactive manner and distinct informal mechanisms of control develop *next to* it. Our results also help for better understanding the PEU construct and better relating it to existing MCS theories.

1.1. RAPM and PEU: conflicting results

More than two decades of RAPM literature have produced, at best, mixed results. The state of this literature is paradoxical. RAPM is one of the few research avenues in managerial accounting and control that can boast a “critical mass of empirical work” (Brownell & Dunk, 1991:703), but it is also criticized as “an example of an area of

unsuccessful replications” (Lindsay & Ehrenberg, 1993:224) which “has yet to yield a cohesive body of knowledge” (Young, 1996:55). More specifically, studies on the effects of uncertainty have produced conflicting results. Some papers have shown a positive relationship between high uncertainty and the use of APM (Ezzamel, 1990). Others in contrast have emphasized that uncertainty makes high budget pressure dysfunctional², creating job-related tension (Hirst, 1981), myopia or data manipulation (Merchant, 1990), slack (Merchant, 1985; Van der Stede, 2000). Yet others fail to prove that uncertainty affects negatively performance (Merchant, 1984; Brownell, 1987).

Among the reasons for such conflicting results regarding the RAPM-PEU relationship, some authors have emphasized the shortcomings of the theories and concepts used, and certain methodological caveats (Otley & Fakiolas, 2000; Vagneur & Peiperl, 2000, Hartmann, 2000). Our results give support to a construct-validity issue: specifically, they suggest a mis-specification of the RAPM and uncertainty concepts. Variables such as reputation-building, trust, which are critically associated with both the dependent and explanatory variables might have been left out. They also suggest an under-specification of the PEU concept, as there may be a critical distinction between sources of uncertainty.

1.2. Beyond budgeting practices and theories

This managerial literature (Hope & Fraser, 2000, 2003a, 2003b) has suggested among other things that the frequency of rolling forecasts should increase for planning purposes, but should not be used for control purposes. Performance evaluation should be based on comparison of results in a competitive setting, benchmarking the results *ex post* with what “the best” have achieved in a similar situation – whether the situation has turned out tighter and more difficult than expected, or at the opposite whether new opportunities have arose. However such theories are largely normative, lack a theoretical framework

² : with a different perspective, working on strategy and control, Govindarajan,(1984) and Govindarajan & Gupta (1985). have also observed a greater use of subjective evaluation and non-accounting measures when the PEU is higher.

with some descriptive studies but little scientific evidence to support them. Besides, they tend to underestimate the cultural background – both organizational and national - in which the field studies are conducted.

1.3. Control theories

Management control theories have yet a lot to bring to the specific issues of budgeting. Conceptual frameworks such as Ouchi's (1980) categorize the MCS and show evidence of different categories of control mechanisms. Further work has posited that the measurability of outputs and the knowledge of transformation process affect the MCS (Hofstede, 1981); when both are low, informal controls would tend to substitute to formal mechanisms. Applied to budgeting, such frameworks suggest that in high uncertainty contexts, budgets would turn into a routine or a ritual, while other –informal- mechanisms would develop for the purpose of performance management and control³, including action controls (rules and procedures) and human or personnel controls as defined by Merchant & Van der Stede (2002). If a higher PEU results in a lower knowledge of the transformation process, it makes sense to suggest that a higher PEU – eg. a lower knowledge of the transformation process- will increase the probability and *fasten* the emergence of such informal controls, instead of, or besides the budget, which then does not play anymore mainly a control role.

Even more recently, the Simons concept of control has gone beyond such theories of MCS. The diagnostic vs. interactive models of strategic control by Simons (1990, 1995) tell us that, although basically a diagnostic tool in its “variance analysis” version, budgetary control may also be used in a more contemporary manner to help monitor the strategic uncertainties of the firm. In its more sophisticated version and highest management use, the budget could activate organizational learning and allow new strategies to emerge through interhierarchical dialogue (Kloot, 1997), in the same way as more recent PMS like the balanced scorecard. As most interactive MCS, interactive budgets would enable the firm to cope better with perceived strategic uncertainties.

³ : As control may be defined in a broad sense, as the capability to exert power over individuals and make them behave the way one expects.

Our field study provides evidence, which illustrates the two above ideas and theories: (1) interactive use of budgets; (2) informal controls substituting to formal budgeting practices. It also digs into the different categories of PEU to help understand what causes (1) or (2) to occur. When PEU increases, it seems that:

1. budgetary practices evolve through social adjustments which allow organizational dialogue and learning (see 3.2.a)
2. above a certain level of PEU, informal mechanisms of control either replace or come in addition to the budgeting practices, which are bound to other –non control- purposes (see 3.2.b).

1.4. The concept of uncertainty

Uncertainty was one of the earliest and most prominent variables examined in the early contingency research of the 1960s (Burns & Stalker, 1961; Woodward, 1965; Lawrence & Lorsch, 1967; Thompson, 1967; Perrow, 1967).

PEU⁴ needs further conceptual examination. Many authors would agree on defining PEU as an information deficit (Galbraith, 1973), a definition reminded by Chapman (1997):

“Uncertainty is defined as the difference between the amount of information required to perform the task and the amount of information already possessed by the organization. Thus the amount of task uncertainty is a result of a specific task and a specific organization.” (Galbraith, 1973:5)

More specifically, many studies have operationalized PEU as the lack of predictability of certain factors, such as competition, changes in demand, technology, and so forth. However, the managers may perceive more than one kind of uncertainty (Hartmann, 1998, 2000:476), and the literature has not considered the effects of such different sources of uncertainty on budgeting.

The “uncertainty paradox” (Hartmann, 2000) has argued that there is a crucial conflict between the *need* for and *desirability* of control, enhanced by the PEU, and the *possibility* of control, related to *controllability*, which deteriorates as uncertainty increases.

⁴ Our focus is the Perceived Environmental Uncertainty for the following reasons: 1. If it not perceived, it does not impinge upon the managers’ behavior; 2. From a methodological point of view, managers can only depict their perceptions and opinions.

However, the uncertainty paradox does not dig into what is going to occur in such situations. This paper seeks to go beyond the paradox and cast some light on the nature of uncertainty and the perception of the limits of “reasonable” uncertainty by managers.

Several distinctions need to be made.

First, one issue with most survey-based studies is that they all deal with proxies of “actual uncertainty” instead of the uncertainty perceived by the managers. “Actual” task complexity and environmental changes and complexity are easier to capture and measure than the Perceived Environmental Uncertainty (PEU), which relates to how the information is processed. However, following Galbraith definition of uncertainty as an information deficit, namely the difference between the information necessary to manager to perform a task and the information possessed by the organization, PEU deserves more attention. This distinction also relates to Simons’ views on uncertainty (1990). Interactive MCS enable to reduce the perceived uncertainty by enhancing discussions and organizational learning in the organization. Simons (1990) shows how different strategies can drive top management into different perceived strategic uncertainties (in the set of the potential actual uncertainties) and eventually lead to different choices in terms of which management information systems will be used in an interactive or programmed manner. This “selection” of strategic uncertainties heavily relies on the top management perceptions.

Such an approach to PEU is also consistent with the duality of control systems – central vs. local – emphasized by Lawrence & Lorsch (1967) differentiation/integration framework. The more an organization sub-units are decentralized, empowered, differentiated, the higher the need for integrative control systems. When the PEU increases, the cursor extends as in the figure below. A high uncertainty makes the need for differentiation and for integration growing.

Insert table

In accounting terms this could also mean that a higher PEU implies **both** a higher accountability, more control systems and more accounting, **and** a more flexible, adaptive and interactive use of these accounting systems.

Last but not least, there is a need to dig into the different sources of uncertainty or complexity – actual and thus perceived. Chapman (1997) has distinguished between matters of :

- interdependence (Thomson, 1997) ; this kind of uncertainty can be reduced by increasing communication and interactions, justifying the need for interactive MCS;
- non routineness (Perrow 1967) which is an issue of diversity of situations; as experiences do not repeat very frequently , organizational learning is longer or timely impossible to acquire, while perceived uncertainty can be high.

PEU maybe is not a linear concept. Up to a certain level of PEU, the desirability of control is higher than the difficulties of controlling. However, beyond that level, the possibility of control is so tenuous and the risk perception so high that desirability is not enough to compensate. The perception of that level is probably related to some individual psychological and cultural features, among which risk aversion and the attitude towards uncertainty, which are beyond the scope of this article. However, it might also be related to the sources of perceived uncertainty and their different nature.

2. Research method: the use of projective techniques

2.1. A field-based, construct-driven study

The objectives of the study were to clarify what makes operational managers “*feel*” (e.g. perceive) environmental uncertainty, what environmental uncertainty *means* to them in their professional context, and how they *deal* (e.g. process information) with uncertainty in the budgetary process. Such questions called for a specific research design. We used a field-based, construct-driven method, and implemented projective techniques.

Despite a long-standing case for qualitative, field-based research in management (Morgan & Smircich, 1980; Yin, 1984; Bruns & Kaplan, 1987; Miller, 1996; Ahrens & Dent, 1998), very few budgeting studies (Lukka, 1988; Simons, 1990) have used a field-based approach. However, as our study is grounded in a pre-existing literature, we designed a research method that is construct-driven, not case-driven, and close to “cross-

sectional field studies”, as defined by Lillis & Mundy (2003): instead of survey instruments, these field studies consist in limited in-depth studies, with a positivist epistemology, relying on relatively short interviews in multiple research sites.

In taking this approach, we chose an unconventional methodological route, far away from both surveys and interpretive case studies.

A field-based cross-sectional design seems appropriate to budgeting research at this point, since the field has: “extensive established theory relating to the constructs under study; established variable specifications and measurements used in prior studies; significant doubt about the precise specification and measurement of variables, their empirical interpretation or the relations among them.” (Lillis & Mundy, 2003:25).

“[Such studies] offer a means to improve our understanding of important constructs that may otherwise remain poorly understood and operationalized.” (Lillis & Mundy, 2003:3)

Cross-sectional field studies may enable researchers to uncover the reasons that explain conflicting results, ambiguities and tensions in prior research (Lillis & Mundy, 2003:6). Even though this approach is less documented and less common than survey or case-study methods in accounting and control research, it has been successfully used to explore important constructs (Merchant & Manzoni, 1989; Bruns & MacKinnon, 1993; Abernethy & Lillis, 1995).

The field-based stories contained in this paper are construct-driven, not case-driven, and seek to explore the “interpretive fuzziness of the constructs” (Eisenhardt, 1989). We are looking for patterns across companies and interviews. Cross-sectional studies fall neither into the survey nor the in-depth case studies category: our approach is not interpretive, and data analysis is not based on “telling individual stories that make sense” (Ahrens & Dent, 1998) as would be the case in case studies. Instead, our data analysis is largely theory-related. It helps specifying some concepts, which have been mis-specified (budget participation for instance) or under-specified (PEU for instance)

The rest of this part describes our data collection process and our sample characteristics.

2.2. Data collection: projective techniques

The main specific feature of our study was the use of projective techniques to conduct 14 semi-structured interviews with senior sales and marketing line managers in large companies in France.

Our aim was to identify the managers' perceptions and *feelings* in relation to budgets and PEU, rather than to just collect "factual" data about their companies. As a result, we used a data collection design that enabled us to discuss the managers' perceptions and personal experiences in relation to uncertainty, budgeting and performance evaluation. To this end, we used specific interview techniques known as projective techniques, imported from consumer analysis studies (Dichter, 1964; Mason, 1996). Our questions to the managers were accompanied by carefully designed visuals onto which the interviewees were able to *project* their perceptions and feelings (Anzieu & Chabert, 1992). We had a professional illustrator draw deliberately elusive pictures suggesting a range of situations and attitudes. The interviewees were invited to identify with one or with several picturesⁱ, but then, since the drawings were only evocative, they would elaborate on that and tell their own stories. The way the interviewees interpreted the pictures revealed much about their own emotions, feelings and perceptions. Within a time-constrained interview, the visuals helped us to focus the managers on the "heart" of our subject: their perceptions. This serves to minimize the "politically correct" discourse that interviewees tend to produce.

The interviews lasted one and a half to two hours on average, and we were able to discuss the following topics with the managers: the organizational and external environmental contexts of operations, goal-setting and target-setting in the budgeting process, the role of budgetary information in guiding action and decision-making all year round, target achievement, and performance evaluation.

Four series of pictures were used during each interview; a visual sample is provided in appendix 1 (series B & D). The A & B series focused on goal-setting and helped us elaborate on certain constructs used in the literature: the A series was especially helpful in assessing perceived budget tightness, and perceived budget pressure; the B series offered the managers an opportunity to reflect on budget participation at goal-setting time; the C series depicted phenomena occurring along the management period: they enabled to highlight "*mutualization*" and the ongoing, collective nature of budgeting; the

D series, at performance evaluation time, let “new” constructs emerge, such as reputation and trust-building.

Fully transcribed interviews – 18 to 25 single-spaced pages – provided a very rich set of data. Most of the collected discourse was usable and directly related to our research questions. The use of projective techniques meant the number of interviews was limited (14) compared to previous cross-sectional studies (Merchant & Manzoni, 1989; Bruns & MacKinnon, 1993), since the interviews were longer and more open-ended, aiming at collecting not only comparable evidence, but also feelings and personal experience. The high quality of the data is possibly due to the high level of respondents' sincerity, which is enhanced by the use of projective techniques and our sample characteristics. The richness of a qualitative raw material involves some subjectivity in interpretation, but the participation and decoding by three different researchers ensured an acceptable degree of triangulation.

2.3. Sample characteristics

We decided to conduct our interviews with marketing and sales managers for four reasons.

First, a non-random cross-sectional sample required a relatively homogeneous group of managers in terms of nature and level of responsibility: the managers had to be “fully” responsible, in budgetary terms, for cost and revenue objectives, which left no room for production center managers, who are mostly in control of costs. Some studies (Merchant, 1984, 1985) have focused on first-level profit center managers. This provides an interesting sample, but one that represents a wide range of actual decision rights – depending on the corporate decentralization philosophy, the organizational structure, and so forthⁱⁱ. We interviewed senior operational marketing and sales managers reporting to a divisional managing director (MD). They sometimes had a hierarchical link to a Corporate Marketing & Sales VP/Director too. Such managers are in charge of clearly identified and measurable objectives from a budget perspective: turnover, cost of resources to achieve those turnover objectives, and additional longer-term issues related to customer satisfaction, customer loyalty, brand awareness and image.

Second, marketing and sales departments have undergone high levels of external environmental ambiguity in rapidly changing markets in the past twenty years, and disturbances are not always easily predictable, so this is an appropriate field to capture uncertainty over the consequences of action, and the need for developing adaptive behaviors to cope with what can be rapidly changing environmentsⁱⁱⁱ.

Third, senior marketing and sales managers are at a “managerial crossroads” and illustrate the intermediate level of management to which management control applies (Anthony, 1981). Like “the ham in the sandwich”, they are in ongoing dialogue with both top management (directly pressured by the shareholders and financial markets), and the operational teams. Interviewing this level of management means we can go deeper into the “organizational thickness”.

Last, technically speaking, the sales budget is the starting point for corporate budgeting. An (in)appropriate sales budget cascades down over the rest of the organization’s budgets – production, purchasing, investments, and so forth, thus making target-setting and the achievement of objectives even more crucial at the marketing and sales level.

We also looked for as much variety as possible in terms of industries, group size, and distribution channels. Although the group sizes were different, the divisional unit sizes were comparable, so as to minimize the size effects, and all companies had established formal procedures. The respondents’ companies represented a variety of industries: drugs/pharmaceuticals, computers, information technology, environment, healthcare, transportation, transportation equipment, telecommunications, luxury, packaging, tobacco, food, and beverages.

Careful attention was paid to building trust with our interviewees, working on the assumption that the quality of interview data is highly dependent upon the level of trust achieved with the interviewees. We carefully “recruited” our respondents from our network of direct or indirect professional relationships. While this may lead to some bias, it greatly improves the level of trust, especially in relatively short interviews when we wish people to “unlock” their feelings. Interviewees in all cases remain concerned with their reputation and are prone to painting a picture of themselves as hero, but at least they feel more “comfortable” talking to acquaintances. We contacted them directly, never through a hierarchical line or via control or finance managers in their companies; this was

intended to reassure them that absolutely no organizational or institutional use would be made of what they expressed. With this pressure lifted, they had an opportunity to reflect on themselves in a “safe, private” place. We thus avoided one of the pitfalls of action research and in-depth case studies where some feedback has to be returned to the organization, generally in the form of consultancy work, which means the researcher becomes an actor herself. The interviewees were giving us two hours of their time, and we would give them back those two hours, to take a step back from their experiences and talk about themselves in a structured way.

3. Results

We present our results in two sections. Section 3.1 reports our findings in terms of how PEU affects the use of budgets by the managers. This helps us understand *in which circumstances* PEU can influence budgetary practices and make budget emphasis either dysfunctional or, on the contrary, a driver of managerial performance. Section 3.2 describes the social adjustments occurring in high PEU contexts; it shows how marketing and sales managers develop certain mechanisms to “compensate for” or avoid the pressure imposed on them, which might otherwise turn into job-related tension, anxiety or other dysfunctional behaviors. It also discusses the budgetary participation construct, and highlights the importance of “new” constructs, like trust and reputation, in improving understanding of the budgeting process.

3.1. Perceptions of Environmental Uncertainty and effects on the use of budgets

A deeper understanding of PEU and its relationship to control has emerged from the field. PEU, defined as an information deficit, can take different forms, which may be actionable to the managers, or non-actionable. When associated with a high budget emphasis, PEU is only a source of dysfunctional consequences when it is *not* actionable. In other words, budget emphasis in situations of high uncertainty can lead to increased motivation, positive behavior, and goal congruence when managers believe that their actions can reduce PEU: for instance, in improving information systems, organizational structures, knowledge of markets, managers believe they can reduce the information deficit; by improving their knowledge of actions, they can also increase their efforts in

order to achieve their objectives. Conversely, budget emphasis will become a source of stress, anxiety, job-related tension, and maybe decreased performance due to the hidden costs of mental dismissal when the information deficit is believed beyond their control.

Actionable situations

In perceived actionable situations, the marketing and sales managers emphasize their role in managing risk. They would consider it “their job” to deal with certain PEU situations, find ways to reduce it, and “meet the budget” as expected. The absence of uncertainty, total predictability, would describe situations with no need for managerial jobs, no need for management control. And yet control implies *some capacity to act upon a situation*. Managers are paid for “reasonable” risk sharing and *their perception* of the limits of “reasonable risk” conditions the effectiveness of management control. This managerial perception seems to be triggered by (1) the possibility of acquiring more information, so as to reduce external, environmental uncertainty, (2) the possibility of taking actions, and the confidence that actions and efforts will turn into results.

Some field scenes highlighted (1) the importance of the possibility of acquiring more information when you plan, thus making the environment more predictable:

“I would say... you can see trends, and you can take into account some commercial factors, like possible changes in your distribution system, or the tax system, which have an impact on volumes. You could say that as long as you have enough information from the markets, forecasting is relatively easy...” (*Beverages*)

“We used to sell mostly 75cl bottles. Then one day our distributor said, “well, for restaurants, it’s important to have a different size, a 1-liter bottle” (...) Within two years, this has become the best-selling product. Had I not had this kind of information, we would have forecasted the same volumes as previously on the 75cl and 1l bottles, and we would have been out of stock on the 1l bottle, and left with far too many 75cl bottles. Manufacturing and purchasing can’t be aware of all those things... So it’s crucial that I keep in constant touch with the markets and any information coming from the markets.” (*Beverages*)

Other situations focus around (2) the possibility of increasing effort, combined with a belief that efforts will turn into results. In these cases, the managers anticipate change but they are no better at predicting change, so they rely on their capacity for rapid reaction. Managers feel confident when they know that they are able to increase their responsiveness and that actions turn into results:

“I have a ROI for each action. For instance, I know that if I'm running a mega-Public relations operation and take 500 doctors to Budapest, my ROI is about 8 patients per doctor... and I know how long it takes those 8 patients to buy our product. What I have to decide is which product to focus on, whether I should do the PR for product A or product B. But if I deprive a product manager of a promotion campaign, well, that means less patients and less turnover too.

(...) I mean, you know, at some point, YOU are the market too. I mean if you need to achieve 28% growth, one competitor's on 22%, another one 18%, well it all depends how much effort you put in. (...) If the doctors are pressured with the government telling them to prescribe generics, well, the government is in a pretty weak position. There's only one Minister telling them that, while I have 540 medical representatives in the field, paying over 2,500 visits a day..(...). So the market, no, the market comes down to just how much effort the competitors put in.” (*Pharmaceuticals*)

It might be tempting to argue that if the PEU is actionable to the managers, then there is no actual PEU. This however would be misleading since the managers make a difference between non-PEU situations (which is very seldom for a manager whose task is generally to manage uncertainty) and actionable PEU situations where they perceive the challenge and the environmental pressure but they feel up to it.

Different explanations can be tempted for such a situation: (a) it might be related to individual characteristics such as the level of self-esteem and trust/faith; (b) it might be again an issue of knowledge of the transformation process, when the managers know the causal model but the level of targets is clearly ambitious. In such settings, the managers feel the external pressure and characterize it as PEU, but they also know how to respond to it provided they increase their effort level. This might compare to a certain extent with motivation/aspiration levels theories, traditionally applied to the level of targets in the budgeting literature. Up to a certain level, it is a matter of achieving the results by putting quantitatively more effort; beyond that level the matter is qualitative instead of quantitative – there is a need to modify the process and the managers do not know how-then the motivation suddenly shifts down.

Non-actionable situations

In other situations, managers believe that PEU is not actionable to them, as they have no way to process further information or discuss how to manage the perceived uncertainties.

“We are 2/3 dependent on the North-American markets. You are always very concerned about political issues between Europe and the US. (...) When boots are marching in Irak or things like that, of course it has some impact...”

“(…) Planning gets far more complex when we need to forecast exchange rate fluctuations. We sell in the market’s currency (...) of course when a currency depreciates and we charge them in euros, the margin we'd agreed upon shrinks and what's worse, the distributor loses his incentive to push our products if he isn't making enough money on them, or he might need to increase the market prices, which is also dangerous... So we decided to bear the currency risks and hedge to protect our distributor from them. That means the burden is back on our shoulders...(…) Fluctuations can be huge (...) 10% of our sales and profits vanishing... And of course, there's not much we can say or do about it. We could try and talk to Mr. Bush...” (*Beverages*)

“There are plenty of analyzable reasons to explain large variances, but most of the time variances are due to independent factors, I would say non-controllable factors, factors that aren't related to the brand’s development or performance...[...]

Look at that, -27%, that’s Greece. There's been a dockers’ strike, all the docks and goods were blocked for two months and [the customers] got their deliveries in January, after the holiday season, when nobody needed them anymore.... Take America, not long ago (...) We ship to the West Coast, it takes a month and a half... Then a strike begins and your ship is stuck in the middle of the ocean... the goods are going to have to wait one or two months on the ships (...) We do every possible kind of acrobatics, we ship containers to the East Coast, get freight companies to take the goods by land to California, it’s getting impossible... it's all acrobatics... You can forget about your forecasts and plans in those circumstances! The kind of spanner in the works that brings the whole setup down...” (*Beverages*)

In sum, when complexity or interdependence requires such things as fine-tuning or an increase in the level of organizational knowledge, or improving internal information processes, managers are willing to take up the challenge. However, when assumptions become a roulette game, extrapolations are infeasible and managers refuse to turn into gamblers. Their perception of uncertainty turns budget emphasis into a **threat**. Ways to reduce this threat include decreasing the target tightness, loosening the ties between performance evaluation and budget achievements, or simply lowering the related effects on compensation, decoupling the formal accounting performance evaluation system from the compensation system.

“We don't have any performance-based rewards – I mean neither money nor any other rewards, no variable compensation or bonus... for a relatively simple reason... things are actually not very actionable for us, or for them here, when you look at the whole supply chain, the distribution channel and so forth... So what’s a bonus worth....” (*Beverages*)

“Performance evaluation... Well, my boss, part of his salary is variable, but based on a variety of criteria, not just turnover. The sales force also has incentives, on very specific points. There's no bonus based on sales figures alone. It can be taken into account in your performance evaluation, but along with many other criteria.(...) Performance evaluation relies more on whether you achieve or fail to achieve your personal development objectives. In my case, for instance, we agreed I should develop and be more sales-oriented, less marketing-oriented.” (*Healthcare*)

In high PEU contexts, another possibility emerged from our field data: maintaining RAPM with some “social adjustments”.

3.2 Social adjustments in high PEU contexts

In non-actionable high-uncertainty contexts, marketing and sales managers rely on certain social mechanisms to “compensate for” and avoid the potential dysfunctional effects of budget emphasis. Formal budgets remain, but organizational processes and structures, which the traditional theoretical constructs tend to ignore, alleviate the stress and anxiety carried by budget emphasis in a high non-controllable PEU context. Two categories of social adjustments emerged from the field study. A first category of adjustments consists of an interactive use of budgets: the “rules of the budgeting game” are modified, so that it becomes a collective game rather than the one-to-one relationship between a superior and her/his subordinate, and an ongoing process of exchanges and discussions rather than a one-point in time contract. A second category of adjustments takes the form of decoupling between the formal budgeting system and the informal performance evaluation system. Budgets go on, but informal assessment based on trust and reputation becomes prevalent over the formal performance evaluation system – sometimes even over bonuses. All these mechanisms contribute to “letting the budgeting game go on” while limiting its potential dysfunctional effects.

The rules of the budgeting game: towards a collective, ongoing process

In high PEU contexts, the interviews depicted an interactive use of budgets, with a collective management of objectives. Some managers also described a process of risk- and effort-sharing, which they called “*mutualization*”. Paradoxically, while doing business on a global scale increases complexity and uncertainty, it also makes it easier to diversify and spread the risks, thus compensating for high non-actionable PEU

environments: although the results may remain uncertain for a specific project, on a global basis annual results are more certain. This encourages managers to set collective goals instead of individual goals:

“[We set] collective objectives because [...] we assume that while some contracts will be postponed or cancelled, others will come through this year. So a collective order booking objective is established for the whole marketing and sales team.” (*Transportation equipment*)

For a marketing and sales manager, this *mutualization* operates at two levels, within the team (s)he manages, and at the corporate level.

Mutualization at the corporate level means that divisions can frequently be called upon to compensate for other divisions' unsatisfactory performances. Divisional marketing and sales managers feel the increased pressure placed on top management by the financial markets. Well before any budget-setting process starts, the company's overall objectives have already been communicated to the financial markets and must be achieved.

“Although it's unusual, in some circumstances, the overall objectives may change at the top. When the results come out throughout the year, it becomes clear that some BU have large variances and aren't going to make it. Since the overall objective remains the same and the group is still committed to its promises, there are some adjustments and they'll tell us: “hey, since this business has had lots of difficulties” - sales, operations, whatever - well, you may have to ask the other divisions to make an effort to balance and compensate for this... It's happened before...(...) Our boss thinks of us as one single company. Four divisions do not mean four distinct companies... Every division must show solidarity and contribute as much as it can...”

Just last year, when the North American market wasn't making budget, the rest of the world had to compensate. Generally we don't like when it happens. We say OK but then it's our problem, it's a managerial issue, you have to manage it within your own team...” (*Telecom company*)

The same marketing and sales managers who are frequently called upon to compensate for their peers' poor performance apply similar *mutualization* practices to their own teams:

“10%, that's the overall objective for my team, I mutualize and split it between my subordinates. (...)”

Once the budget has been set, it's frozen and non-negotiable. For instance, I committed to 5 million on product P. It's a new product, a launch. We didn't get approval from the Health and Sanitary Department on time; governmental departments were three months late in issuing the approval. Nobody cares in here. It's my problem. I think I can make 3

million instead. I've changed the 5 into 3 in my head. But they don't care. I need to find two more million elsewhere. I'll do it. Another product.

(...) Yes, it happens that I don't make the bottom line target on specific products. (...) If I don't make it on one product but I know I can make up on another product, I go for that option. I'm not going to let everybody know I won't make it on the first product, because otherwise I'll be spending my whole time arguing, preparing business reviews and bloody power point presentations for the International guys to explain why I'm late, and instead, I'd rather be working on a solution to catch up, you know what I mean..."
(*Pharmaceuticals*)

In practice, a process of risk-and effort-sharing applies both within the marketing and sales department and between business units within the firm. As managers find different ways around non-actionable uncertainty, one possible social arrangement is a more collective management of risk.

"There is kind of an environment, a culture oriented more towards the collective higher interest than individual visibility." (*Healthcare*)

As perceived non-actionable uncertainty increases, the interviewees described Simons (1990)'s interactive budgeting systems: discussions between the different hierarchical levels – above and below marketing and sales managers – become more intense and a closer management relationship develops. Arm's-length management is replaced by ongoing interactions throughout the year with teams and/or superiors; the discussions do not question the targets, but address detailed actions and strategies to achieve the best the managers can.

"It's a top-down demand... when it reaches me, I say to my sales team, "these are my objectives, have a closer look at them, then we'll talk about it", and when they come back to me, I tell them I'll consider any suggestion, any complaint, any critical idea, I discuss with them what they need, how they can achieve their objectives, ..." (*Telecom company*)

"There's been a lot of discussion and talking before we get to this point, I mean, much earlier than budgeting and setting the targets. When we talk about emergent or developing markets, it's an ongoing discussion, we don't wait for the planning exercise to discuss our strategy, what we could do, or to take corrective action. It's an ongoing dialogue. We don't wait until the formal exercise to discuss the issues. Of course, at a certain point, we need to set the targets, of course we sit and discuss things and there might be some disagreements but, I mean, there've never been any huge disagreements or conflicts at this point; [...] you can always argue that somebody's objectives aren't ambitious enough; of course there are arguments, but never a completely different view on things. It's already been debated." (*Tobacco*)

“This year for instance, we had more budget pressure and we knew from the outset that we wouldn't be able to make it, so we didn't wait until R2 to signal and ask what we should do. From the beginning of the year, I told everybody “see what you have left in marketing & sales budgeted investments, then we'll do a trade-off after the new May forecasts”. So everybody had a perspective much earlier and we had worked on different scenarios. At this point, we make choices and say, “well, if we want to achieve this contribution level, we need to cut back on this country or on development”. But there's open communication from the start.” (*Tobacco*)

The “interhierarchical dialogue” described by the managers is different from the budgetary participation construct in the RAPM literature. Budgetary participation has generally been described as a manager's ability to discuss his/her objectives with his/her superior. This ability is unchanged in the situations described, but many adjustments occur, suggesting that the budgetary participation construct is richer than is often presented: budgetary participation needs to be redefined as the possibility, for managers, of extensive discussion of their concerns about how to achieve the objectives throughout the year, which acts as a release and a “safety net”. When PEU increases and a dynamic and unpredictable environment threatens the achievement of the overall objectives, discussions are quantitatively and qualitatively stepped up. Managers feel a need for more information, from their “teams” (subordinates) or from their hierarchy, to help them come up with alternatives for corrective decision-making. This does not mean that their opinions are more valuable or carry more weight than in relatively stable periods. But more active, more detailed and tougher discussions about how to rescue the overall target can release and diffuse the perceived budget pressure and job-tension. Such discussions also offer a “safety net” to the extent that they provide a process through which the managers make sure that their individual performance evaluation is not solely based on budgets achievements.

Trust and reputation

As non-actionable PEU increases, a second category of social adjustments consists of decoupling the formal performance evaluation system from the individual's actual – and largely informal - assessment. Managers take a detached view of formal performance evaluation systems. On one hand, they describe the formal evaluative system in a detailed

manner and appear to accept it with a certain “fatalism”. They acknowledge it as a fact, and take it seriously, as it has a significant impact on compensation.

“Don’t fool around with budgeting, because 40% of people's salaries is performance-based, so it’s based on how well you budgeted... If you set them a non-realistic budget, there's no motivation. And I don't have two figures, one for them, one for my boss... Just one.”(*Pharmaceuticals*)

But at the same time, the managers can also look at the performance evaluation system objectively and see it for what it is: an imperfect measurement and incentive system.

“No, I don't dream about budgets at night, I don't have nightmares. I'm not stressed because of budgeting. No, you have to look at the object of the exercise.” (*Beverages*)

Reputation, although the managers never pronounced the word, seems to count more than short-term performance evaluation. The performance measurement system is only one possible - and imperfect - way to assess managers’ value and create reputation in the longer term:

“At the end of the year my boss said to me: 97%, well you nearly made it”, and I answered, “well, I did much more than was humanly feasible” (...) I don't think anyone's fooled. Well, if people feel that you didn't achieve your targets because there was some under-optimization in the use of resources or knowledge, it’s different... I think it’s easier when they believe the manager is smart, (s)he did his/her best, so if (s)he doesn't make it, they think “well, that’s the way it is...”. And then you have the success stories... Let me give you an example: at the beginning of the year we had a difficult product, plenty of competitors coming in with huge resources and sales networks. A major product for us. No more growth, but big numbers. (...) Well, the product is going -14%, -16%, -18%, my target is -8%, I make +0.8%! They say, “Wow, what a great job he did!”...” (*Pharmaceuticals*)

“Individual emergence wasn't systematically related to results, there were the good guys and the rest, it was stamped all over their faces from the beginning, I mean, very quickly. It was kind of... When the organizational structure was moving, those considered as good guys, they were called first, then those who were considered not-so-good, they were called last... That’s the way it was...” (*Healthcare*)

The managers seem to refuse to reduce their “freedom of judgment” to what is dictated by the performance measurement system, although they accept that bonuses and rewards are linked to the formal system. Appreciation and reputation are prevalent.

“You also need some recognition at some point, I mean, some recognition that you've done a good job. But that wasn't in the results. Something more collective... I mean I

remember how proud we were. Oh yes, it's good to be proud of yourselves!" (*Healthcare*)

In terms of incentives and sanctions, the managers make a clear distinction between the short-term bonus and variable compensation systems, and their long-term reputation, which maybe matters more to them. There is an emphasis on being rewarded for doing "my job" well, and doing "what is humanly feasible".

The field study also showed that the managers experience budgeting as a multiple-year game, not a one-time experience. The failure to take into account that negotiations and goal-setting in a given year are largely influenced by what occurred in previous years may be a serious limitation of previous budgeting studies, with noticeable exceptions (Webb, 2002). The level of trust built, the achievement or non-achievement of targets, and the budget emphasis of previous years impact the process as it repeats.

"So when I hand it in to the big bosses, surprisingly, we get a fair hearing, they listen to us. Because you know why, credibility comes into the process. If you've done well in the past 2 or 3 years... The first slide I show to my boss argues "Look, last year I said I would make that much. I made it, sales and costs". You do what you say and you say what you do. So after a while they really trust you and if they say, "we need 5 million more sales" you answer "OK, but I need this many more resources to make it. Here are the actions we need to take". (...) Product managers have enormous power here." (*Pharmaceuticals*)

So there is a need to actually integrate constructs related to trust and multiple-year settings in budgeting research. The expectations on both sides of budgetary negotiation, based on the previous years' experience, are worth further theoretical and empirical consideration. Trust also needs to be studied in relation to the reputation construct referred to earlier: for managers, building reputation might be closely related to building trust with their hierarchy.

Conclusion

Based on a field study with senior marketing and sales managers, this paper illustrates Simons' interactive MCS theories; it emphasizes that budgeting is an ongoing process over the year, where target-setting, daily monitoring of actions and final performance evaluation are fully embedded in each other; it is also a multiple-year ongoing process that does not stop at the end of year 1, but needs to be considered as a repetitive game

lasting several rounds. The field results showed that the managers' feelings of *actionability*, i.e. the possibility of reducing information gaps and turning effort into results, appears to have some impact on the use of budgets in PEU situations. In high PEU situations, organizations engage in social readjustment mechanisms that enable budgets to go on. The main social adjustments that we observed include (1) an interactive use of budgeting systems, changing the "rules of the budgeting game" into a more collective management of risk and effort, and increased inter-hierarchical discussions, and (2) decoupling individual performance evaluation from the formal budgetary controls, as building long-term trust and reputation become prevalent over short-term compensation. Budgets turn into routines in this case (programmed MCS in Simons' framework) and informal modes of control become prevalent.

Future directions

Although our study carries important results that could be taken up into further empirical budgeting research, it contains certain limitations, especially those inherent to cross-sectional field studies. This qualitative study was designed to enable both the broadening of the scope of the budget-PEU relationship, which needs to be put back in its organizational context, and a fine-tuning of some important constructs. Our findings however can not be generalized from a small number of interviews. Some replication, defined as "looking for significant *sameness* in a series of studies, in order to be able to generalize the results" (Lindsay, 1995)^{iv} will be needed in the future. Differentiated replications could use different research instruments and methods, at different sites, with different researchers. There is room for a variety of methodological stances, from more straightforward theory-driven quantitative studies that clearly operationalize the constructs, to in-depth qualitative studies that improve understanding of the social adjustment mechanisms and "new" constructs such as reputation and trust.

A second limitation of this study, which opens new avenues for future research, is the absence of a cultural analysis of the results. Certainly our findings belong to a French context and many could be re-interpreted as cultural phenomena^v. For instance, the emphasis on long-term performance, which makes trust important in a multiple-year setting, and the prevalence of reputation, may be French cultural features (P.d'Iribarne,

1989); *mutualization* and the collective goal-setting may be related to a less individualist culture than in the UK or the US; the distant look towards formal administrative mechanisms, maintaining the budget and compensation systems, but “playing games around”, may also be French-specific. Thus one issue is whether our findings would repeat and our results hold in different cultural contexts. Again, replication studies in different national settings could help validate and contribute to generalize our findings or at the opposite highlight the French cultural “bias”. Could we find *mutualization* processes in the same way in the UK, in Nordic countries, or in Germany? Is reputation also playing an important role in different countries to “let the budget game go on” in high PEU situations?

Last, the paper also seeks to open the path for reconciliation between research and practice. Academic research cannot afford to ignore managerial issues, innovations and practices, at a time when most companies are engaged in a quest for more balanced, non-accounting, evaluative styles, used in an interactive way to promote strategic discussion (balanced scorecard issues) and are questioning budget and compensation practices, looking forward to more flexible and reactive targets (beyond budgeting issues). The response could well be in Simons’ interactive MCS, in how information is processed and how budgets are used.

Appendix : Projective techniques and visuals

The A series of visuals related to managerial attitudes in goal and target-setting, which could range from anxiety and stress to indifference, boredom, or serenity. The visuals were meant to collect information on the perceived budget pressure and tightness, as well as on the managers' commitment to RAPM.

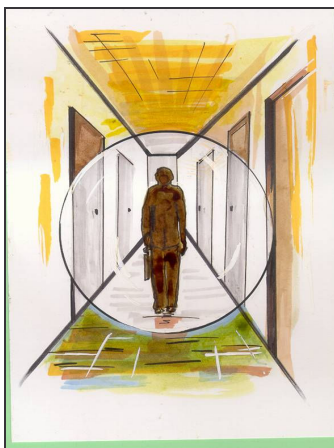
The B series was used to explore the manager's experience of his/her relation to his/her superior and subordinates during the same goal and target-setting phase – for instance more specifically involving such constructs as budget participation, slack creation, budget tightness.

The C series of visuals captured the reactions of our sample managers to questions such as: what happens when major variances occur during the year? How would his/her problem be dealt with? It let the collective processes and “*mutualization*” phenomenon emerge.

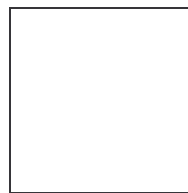
Last, the D series suggested different scenarios for the consequences of unachieved objectives at the end of the year. The interviewees could express how “failure” is perceived and “managed” in their context, and describe what the performance evaluation process actually is – criteria, characteristics, consequences, and “meaning”. Reputation and trust-building especially came out of these visuals.

Examples, B and D series:

Visual B. 1

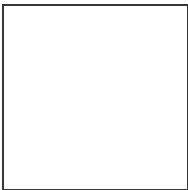
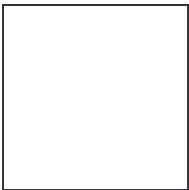
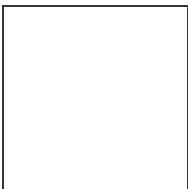
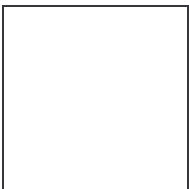


Visual B. 2



Visual B. 3



<p>Visual D.1</p> 	<p>Visual D.3</p> 
<p>Visual D.2</p> 	<p>Visual D.4</p> 

ⁱ : Note that we would not insist or be intrusive when the respondent did not “see” anything in the picture; it would simply mean that the picture would not refer to anything to this person in his/her professional budgeting context.

ⁱⁱ : Most empirical RAPM studies have chosen for level of analysis production centers or profit centers (SBU managers). Some conflicting results – for instance Hopwood (1972) vs. Otley (1978) have tentatively been explained by the difference in the nature of responsibility centers, as their PEU would considerably vary. The nature of the responsibility center and departmental function has even been taken as a proxy of environmental uncertainty by some studies (Brownell, 1985).

ⁱⁱⁱ : As already mentioned, Brownell (1985) considered marketing departments as low uncertainty departments as compared to R&D. Goals ambiguity is certainly more limited for marketing and sales managers than R1D managers – although marketing and sales managers undergo increasing conflicting objectives in the long and short-term.

^{iv} : Lindsay (1995) considers replication as the “successful bedrock of scientific knowledge” and prefers replications to Tests of Significance, which look for significant differences in a single experiment.

^v : in a different perspective, Hartmann (1998) has emphasized that “the appropriateness of APM not only depends on external and work-related uncertainty but also on managers’ personal tolerance for ambiguity and uncertainty” (1998:573), which has been a long-standing cultural dimension since Hofstede’s studies.

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Table 1
PEU and effects on RAPM:
Field results summary and comparative analysis with the RAPM literature

Constructs	RAPM literature	Field results in high PEU environments
PEU (perceived environmental uncertainty)	<p>High PEU contexts generate a lower RAPM because RAPM becomes more difficult to implement and encourages dysfunctional behaviors</p> <p>Based on accounting incompleteness theories</p> <p>The “uncertainty paradox”: conflict between the <i>desirability</i> and the <i>possibility</i> of control</p>	<p><u>There is more than one kind of PEU:</u></p> <p>- RAPM can go on and even have positive effects in high PEU <i>actionable</i> situations: when the managers can increase their efforts and reduce the information deficit – improving the predictability of change, or increasing the ability to react quickly to change (responsiveness)</p> <p>- In high PEU <i>non-actionable</i> situations RAPM will need some social adjustments to go on and avoid dysfunctional effects</p>
Social adjustments in high non-actionable PEU environments: changing the “rules of the budgeting game”		
RAPM, budget pressure	Goal-setting and performance evaluation take place in a one-to-one, individual relationship	<p>Risk and effort are shared in a team</p> <p>There is a collective management of objectives</p> <p>“<i>Mutualization</i>” emerges, both at the corporate level and in the marketing & sales team</p>
Budget participation	<p>Is defined as a manager’s ability to discuss and influence his/her objectives at target-setting time</p> <p>Based on arm-length management</p>	<p>Budgetary participation is the possibility for a manager, all year round, to discuss thoroughly HOW to achieve his/her objectives or rescue an overall target</p> <p>Based on close management relationships and on-going discussions related to detailed actions and strategies</p>
Social adjustments in high non-actionable PEU environments: decoupling individual appreciation from RAPM		

Budget-based incentives, motivation, and compensation systems	<p>The managers motivation is based on short-term compensation systems</p> <p>The bonus is tied into meeting the budget</p>	<p>Bonuses and compensation systems are accepted, but informal “actual” appreciation is prevalent over the formal performance evaluation system</p> <p>Managers primarily try and build reputation and trust from their hierarchy</p>
RAPM time span	<p>Budgeting is a one-year game with two prevalent times:</p> <ul style="list-style-type: none"> - target-setting at the beginning, - performance evaluation at the end 	<p>Budgeting is a multiple year game, over several rounds</p> <p>This is how credibility, reputation and trust come into the process</p>