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Management and accounting innovations: reflecting on what they are and why they are adopted

Cristiano Busco · Ariela Caglio · Robert W. Scapens

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Abstract Drawing on a brief review of the studies that have explored the reasons underpinning the adoption of management and accounting innovations, this paper aims to highlight the potentials of an interpretation recently offered by the literature. A number of studies have focused on the role of economic and functional variables in explaining the adoption of management and accounting innovations. These variables range, for example, from an increase in efficiency and profitability to the greater aid to decision making with which these innovations provide economic agents. Other perspectives have highlighted the role played by external pressures, fads, and fashions, focusing thus on the role of institutional variables. Our paper contributes to this debate by focusing neither on the adopters nor on contextual variables. Rather, by acknowledging how decisions for adoption are nested within a network of relationships and cannot thus be limited to one set of explanatory variables only, our contribution leverages a recent interpretation that focuses on the features of a key element in this networks, i.e. the management and accounting innovation itself. More specifically, drawing on the insights from two illustrative cases related to the adoption of Six-Sigma within General Electric Oil&Gas, and on the development of an end-to-end budget within Nestlé waters, we rely on the interpretative framework developed by Busco and Quattrone (Contemp Account

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Res, 2014) to illustrate how the adoption of management and accounting innovation is facilitated by its ability to create a space where complex issues are translated into clear visual representations, order and knowledge can be classified and innovated, different interests can be accommodated through a constant process of interrogation and re-invention, and engagement can be sustained through participation in a series of recurrent activities. Finally, we introduce the five papers which comprise this Special Issue, and we briefly illustrate how each of them enhances our understanding of what management and accounting innovations are, and where they came from.

Keywords Innovation · Management accounting · Adoption · Case studies

1 Prologue

It is the summer of 2006 in Siena, Italy, when, during a conversation over lunch during a conference on the role of performance management systems as tools to integrate global organizations, the former CFO of general electric (GE) Oil&Gas praised the role of Six-Sigma as a managerial innovation: “The adoption of Six-Sigma has truly changed GE’s culture; this tool is now part of the company DNA, the way in which GE works to develop and deliver world class products and services, however [...]”. “Well, what do you mean by *however*?”, asked the former CEO of Sanpellegrino—Nestlé Waters. “I mean it is demanding for many, sometimes undermined by and unnecessary for others, but it definitely succeeded in influencing GE’s day-to-day working practices”. “Oh, that rings a bell!”, claimed the former CEO of Sanpellegrino—Nestlé Waters, who then added, “few years ago we developed and introduced an End-to-End budget, a new planning and reporting tool to foster lateral integration across our international brands [...] and despite a number of conflicts and disagreements that we had to face at the time of its introduction, I have heard that this practice is now a milestone within Nestlé Waters reporting systems, *however* [and those at the table involved in the conversation smiled at this stage] arguments and discussions around the End-to-End budget are still there, they did not vanish at all; I guess they have to be considered as part of the deal of achieving a successful integration”. Next, the discussion on managerial and accounting innovations went on and on as [unfortunately for us...] the delicious steak we had on the table was getting cold and the glass of Chianti was losing its chill under the heat of the Tuscan sun...

2 Introduction

Like GE Oil&Gas or Nestlé Waters, the world of business is populated by a vast array of widely adopted management and accounting innovations. Management and accounting practices such as Just in Time, Activity Based Costing, Six-Sigma, Enterprise Resource Planning systems and the Balanced Scorecard, to name a few,

all have had substantive success in terms of adopters and are heavily marketed by consultancy firms which promote their popularization across the globe (see, for example, Jones and Dugdale 2002; Qu and Cooper 2011). Nonetheless, research shows that, as these innovations are so fluid, unstable and heterogeneous, it is very difficult to find the same management and accounting practice implemented in different organizations in the same manner, with the same range of problems and implementation patterns. Frequently, there is also a marked difference between the smooth and effective adoption which is promised by manuals and consulting teams, and the actual implementation which can be full of unexpected consequences. Yet, successful management and accounting innovations are able to fully engage multiple users and to diffuse world-wide (see Birkinshaw and Mol 2006). But how and why this does happens? To start to address these questions some recent studies have broadened and enriched the literature with interpretations that enable the debate to move forward, and in some cases in different directions.

Some of the literature claims that the widespread adoption is due to the value that these practices add to organizations. So for instance, increasing the number of performance measures and linking them to Just-in-Time reporting is seen as having positive effects on firms' profitability (Callen et al. 2005). Activity Based Costing is said to enhance firms' profitability and competitiveness by improving economic decision making (Cooper and Kaplan 1992; Dodd et al. 2002; Plowman 2001). Six-Sigma is portrayed as a tool for reducing operational defects, improving financial returns, and enhancing customer satisfaction (Busco et al. 2006). Enterprise Resource Planning systems supposedly bring integration and closer controls of subsidiaries (see, Newell et al. 2003). The Balanced Scorecard adds to the financial view of performance measurement other perspectives which were previously overshadowed by the reductionism and short-termism of profit seeking (e.g., Kaplan and Norton 1992, 1996a, b). Summarizing this stream of literature, it could be said that managers' adoption of these popular management practices is a rational response to the need to enhance decision making, profitability and, in the end, shareholder value.

However, the correlation between the adoption of management and accounting practices and the benefits they are supposed to bring has been questioned on various grounds. Research has shown that this correlation is often quite weak, if not completely absent, and made more complex due to the limitations of human cognition (Lipe and Salterio 2000, 2002). With regard to Activity Based Costing, for example, some authors have questioned the benefits which new costing systems bring to organizations (see, for example, Chenhall and Langfield-Smith 1998; Bromwich and Bhimani 1989; Gordon and Silvester 1999; Innes and Mitchell 1995; Ittner et al. 2002; Maiga and Jacobs 2008). Similarly, as for Enterprise Resource Planning systems, the implementation and integration of new management controls do not necessarily generate benefits or they do so in unexpected forms (see Dechow and Mouritsen 2005; Quattrone and Hopper 2005). In general, the relationship between adoption and benefits is non-linear and rather complex, and the rationales for adoption often differ from the roles that management accounting practices ultimately play within organizations once in use (see, for instance, Davila et al. 2009). However, a review of this literature leaves open an interesting research

question: in view of the uncertain relationship between adoption and benefits, and the problems that their implementation often causes, why are these innovations still so widely adopted?

Some have answered this question by arguing that adoption is a matter of fads and fashions (see, Abrahamson 1991) or a combination of fads and fashions and the rational choice approaches mentioned above (see, for instance, Malmi 1999a, b, c). Some others have claimed that adoption is a ceremonial response to external pressures in order to show external stakeholders the “expected” form of rationality in running the firm (see, for instance, Covaleski and Dirsmith 1991; Meyer and Rowan 1977). A façade of rationality can help to secure the financial resources and/or hides (or in some cases promotes) the other roles that management accounting practices can play in organizations (Davila et al. 2009). From such a perspective, adoption is explained, not as a result of the adopter’s economically rational decision making, but as the result of external pressures from the institutional environment.

The literature has also begun to explore other rationales for adoption and has looked at it as a process that involves managers at various organizational levels. Some authors, for instance, have focussed on how managers’ attitude towards innovation (see Abernethy and Bouwens 2005) can explain successful adoption. Cavalluzzo and Ittner (2004) have highlighted that top management commitment to the use of performance information, their authority and their training in performance measurement techniques can have a positive correlation with the development and effective use of performance measurement systems. Similarly, drawing on Adler and Borys’ distinction (1996) between coercive and enabling types of bureaucracies, a growing number of studies (see Ahrens and Chapman 2004; Wouters and Wilderom 2008) have shown that management and accounting practices can have a greater chance of successful adoption when they are utilized to enable rather than simply constrain management at various organizational levels. Drawing on the notion of a prototype as a boundary object (see Carlile 2002, 2004), Wouters and Roijmans (2011) have highlighted how performance measurement systems can enable knowledge integration (see also Ditillo 2004) thereby focussing on features of system, rather than on contextual or agent variables to explain the successful adoption of management and accounting practices.

More recently, Busco and Quattrone (2014) have built on studies that use Actor-Network Theory (Latour 2005; in accounting see Briers and Chua 2001; Jones and Dugdale 2002) and combined them with work on rhetoric (Green 2004) to investigate some of the reasons underpinning the adoption of a specific management control practice—the Balanced Scorecard. Their study focuses on attributes of the control practices as “objects”, and identifies four major features that characterize the process of adoption. Specifically, Busco and Quattrone (2014) argue that the adoption of the balanced scorecard is facilitated by its ability to create a space where (1) complex issues are translated into clear visual representations (2) order and knowledge can be classified and innovated (3) different interests can be accommodated through a constant process of interrogation and re-invention, and (4) engagement can be sustained through participation in a series of recurrent activities.

Drawing on insights from two illustrative cases, the first related to the adoption of Six-Sigma within GE Oil&Gas, and the second on the development of an end-to-end (ETE) budget in Nestlé Waters, and using the interpretative framework developed by Busco and Quattrone (2014) we illustrate and discuss the distinguishing features of management and accounting innovations, and reflect on the reasons underpinning, and the process of, their adoption. All of this, together with a brief review of the existing literature, provides the background for introducing the five papers which comprise this Special Issue. We will briefly illustrate how each of them enhances our understanding of what management and accounting innovations are, and where they came from.

The rest of the paper is organized as follows. Next, the paper offers a brief review of the concepts of management and accounting innovation, and of the reasons underpinning the adoption of these practices. Then, insights from studies of GE Oil&Gas and Nestlé Waters are leveraged to illustrate how two management and accounting innovations, namely Six-Sigma and the End-to-End budget, have been adopted and used. Next, the five papers included in this Special Issue are introduced and linked to this debate. Finally, the conclusions summarize the findings and discuss the implications for future research.

3 Interpreting the contents and the adoption of management and accounting innovations

3.1 What is management and accounting innovation?

The concept of innovation has been widely explored by a large number of scholars from multiple disciplines and streams of research (see, among others, Burns and Stalker 1961; Drucker 1994; O'Reilly and Tushman 1997; Davila 2000, 2005; Akrich et al. 2002a, b; Benner and Tushman 2003; Bisbe and Otley 2004). Viewed as a product, as a process or as both, the concept of innovation has generally been portrayed by the existing organization and management literature as characterised by two fundamental criteria: the first relates to its novelty and usefulness in addressing specific needs, while the second relates to its ability to add value in comparison to existing solutions (see Amabile et al. 1996; Benner and Tushman 2003). While a comprehensive review of the studies on this concept is beyond the scope of the present work, since innovation has traditionally been portrayed as depending upon the generation of creative ideas within an organisation (see Amabile et al. 1996; Bharadwaj and Menon 2000; Mumford 2000; Shalley, Zhou and Oldham 2004), it seems helpful to clarify the link between the terms innovation and creativity.

Creativity refers to the generation of novel and useful ideas (Amabile 1998). Sternberg and Lubart (1999, p. 3) define creativity as “the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)”. According to Amabile (1997), an organization is innovative if it favours creativity by motivating employees, providing resources and managing the work environment accordingly. The novel and useful ideas that define

the concept of creativity, both at the individual and organizational level,¹ play a critical role in society. Whether the organization is a business that brings creativity to life through new ideas in the form of products and services that customers desire, thereby fulfilling customers' needs, creating jobs, and contributing to the economy, or whether the organization is a local government, non-governmental or a non-profit entity that uses novel ideas to meet the needs of a specific community or society as a whole, thereby contributing to the quality of life, creativity plays an essential role in tackling business or/and social needs.

Benner and Tushman (2003) suggest that the generation of new and useful ideas through creative processes corresponds to the first stage of innovation—labelled as exploratory innovation. Through exploratory innovation, companies try to develop new capabilities and rely on creativity to explore new opportunities and new technologies to serve emergent customers or markets. However, creativity is a necessary but not sufficient condition for innovation, which also encompasses (at a second stage) the actual execution of the new ideas as they hopefully move towards the implementation stage and add value in the fulfilment of specific needs—exploitative innovation. Within this phase of innovation the outcomes of creative thinking are structured and channelled through the repetition of efficient and effective activities to ensure that novel and useful ideas are transformed into value (see Amabile et al. 1996; Benner and Tushman 2003). In this sense, when creative ideas are captured by innovations they generate economies of differentiation and appropriate monopolistic rents (Revellino and Mouritsen 2009).

While the vast majority of studies within this literature focus on technological innovation (see, among others, Henderson and Clark 1990; Utterback 1994), a number of recent contributions have explored management and accounting innovation (see, for example, Damanpour et al. 2009; Birkinshaw et al. 2008; Damanpour and Schneider 2006; Birkinshaw and Mol 2006; Lapsley and Wright 2004; Cooper and Kaplan 1992; Kaplan 1998; Hamel 1998). Among others, Birkinshaw et al. (2008) offer an interesting perspective which leads to the definition of management innovation as “the generation and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals” (p. 829). In doing so, and complementing the existing literature, Birkinshaw et al. (2008) adopt an intra-organizational evolutionary perspective that focuses on the roles of key change agents inside and outside the organization in driving and shaping four processes—motivation, invention, implementation, and theorization and labeling—that collectively define a framework for interpreting how management innovation comes about. The framework developed by Birkinshaw et al. (2008), as well as a number of different perspectives—rational, institutional, and fashion—that characterize the

¹ The majority of the literature on creativity views it as an individualized phenomenon (Sternberg and Lubart 1999), so that “the major focus in creativity research has been on the individual creator and his or her personality, traits, abilities, experiences, and thought processes” (Williams and Yang 1999, p. 378). However, since “the social environment can influence both the level and frequency of creative behavior” (Amabile et al. 1996, p. 1155), recent studies have attempted to explore creativity in the wider context in which the individual creator functions (Bharadwaj and Menon, 2000). For a review see Çokpekin and Knudsen, 2012.

existing literature on the adoption of management and accounting innovation are discussed in the sub-section below.

3.2 Interpreting the adoption of management and accounting innovations

Interpreting the adoption of management and accounting innovations has been on the agenda of a number of scholars for some time. Drawing on rational and functionalist arguments, some have argued that these practices are adopted because they bring value to organizations (see, for example, Cooper and Kaplan 1992; Katz and Shapiro 1987; Manz and Stewart 1997). These studies focus on how management innovations—and the individuals who drive them inside or outside the organization—deliver improvements in organizational effectiveness and provide more valuable ways of working (e.g., Chandler 1962; Kaplan 1998). However, it has been noted that the relationship between diffusion and the presumed benefits to organizations of adopting management and accounting innovation is not always linear or direct, and sometimes the statistical significance is weak (see, for example, Chenhall and Langfield-Smith 1998; Ittner et al. 2002; with regard to Activity Based Costing). Furthermore, approaches based on a rational actor model ascribe too much explanatory power to human agents and their ability to assess the benefits derived from the adoption of management and accounting innovation (e.g., Strang and Macy 2001) and too little to other contextual factors which are thus left at the margins of our theoretical understanding.

In contrast to such a functionalist standpoint, a substantial body of work has studied adoption as a ceremonial response to external pressures in order to demonstrate that the firm is run rationally (e.g., Covalleski and Dirmsmith 1991; Meyer and Rowan 1977; Powell and DiMaggio 1983). Such a display of rationality helps in securing financial resources (Pfeffer and Salancick 1978) and hides or, in some cases, promotes the other uses and roles that innovative management and accounting practices can play within organizations (Davila et al. 2009). Therefore, these studies focus mainly on the institutional conditions and attitudes of major groups of influences that give rise to the emergence and diffusion of management and accounting innovations (Birkinshaw et al. 2008).

In a similar vein, the adoption of management and accounting innovations can also be seen as the result of the cycles of fads and fashions (Abrahamson 1991; Abrahamson and Fairchild 1999) which are followed by actors in organizational fields. This perspective recognizes the force of external pressures to adhere and respond to the institutional context, and focuses on the dynamic interplay between users and providers of management ideas (e.g., Abrahamson 1996). Significantly, studies using this perspective focus on suppliers of new ideas and the legitimacy of their proposals, as well as on how aspects of the supply of and demand for new management ideas affect their diffusion (Birkinshaw et al. 2008).

Several studies have attempted to integrate the different of explanations provided by these approaches by examining simultaneously the processes of adoption and diffusion of management and accounting innovations. Barley and Tolbert (1997), for example, looked at the micro processes of structuration (Giddens 1984) whereby individual agencies and social structures contribute to shaping the processes of

adoption and diffusion. Tolbert and Zucker (1983) integrated rational and social perspectives into a two-stage model in which actors adopt a practice (or innovation) initially based on technical and functional criteria and, subsequently, respond to ‘institutional’ processes by conforming to normative conventions and rules (see also Westphal et al. 1997). More recently, Kennedy and Fiss (2009) have argued that “both early and later adopters are affected by logics of efficiency and legitimacy, because they complement rather than conflict with each other” (p. 898, emphasis in original).

A new stream of work builds on ideas of rhetoric to study diffusion and adoption (e.g., Green 2004; Sillince 2005; Suddaby and Greenwood 2005, for a review, see: Hartelious and Browning 2008; Sillince and Suddaby 2008). This stream combines early empirical studies (e.g., Zbaracki 1998; Zajac and Fiss 2004) with the renewed interest in discourse (Czarniawska and Sevón 2005; Hardy et al. 1998) to study how the legitimacy of discourses strategies play a role in institutional change (Suddaby and Greenwood 2005), industrial restructuring (Vaara et al. 2006), organisational change (Heracleous and Barrett 2001) and in mediating amongst multiple strategic goals (Jarzabkowski and Sillince 2007). Green (2004) proposes a rhetorical theory of diffusion which seeks to bring human agency back into the process by showing how “managers championing the adoption of new practices provide discursive justifications that rationalize and legitimize the new practice’s adoption” (p. 655). This stream combines issues of efficiency and rationality with those of legitimation and conformity to social rules, and brings the micro foundations of institutions back into theoretical explanations.

Recently, Busco and Quattrone (2014) have built on studies that use Actor-Network Theory (Latour 2005; in accounting see Briers and Chua 2001; Jones and Dugdale 2002) and combined them with work on rhetoric (Green 2004) to investigate some of the reasons underpinning the adoption of a specific management control practice—the Balanced Scorecard. Going beyond the studies which conceptualise diffusion as a series of steps (e.g., Tolbert and Zucker 1983) and work that blurs the distinction between adoption and implementation (see, for instance, Orlikowski 2000), Busco and Quattrone (2014) conceptualise institutional environments as fragmented and populated by contrasting and competing rationalities which are at work at the same time (Friedland and Alford 1991). As noted by Lounsbury (2007), any such reconceptualization has to accommodate such broad concepts as the translation of rationales and belief systems (Bartel and Garud 2009; Latour 1987; Czarniawska and Sevón 2005) and how the emergence of practices and their diffusion takes place due to the heterogeneity of actors, although it is hidden behind an apparent veil of homogeneity.

Busco and Quattrone (2014) engage with issues related to the complexities of the adoption of managerial and accounting innovations by drawing on rhetoric (Green 2004). However, rather than emphasizing agency, discourse, persuasion and the persuasive skills of managers in the diffusion process (see also Abrahamson 1996; Sillince 2005; Zbaracki 1998), they focus on the ordering and organising abilities of rhetorical techniques. In doing so, they theorise management practices as “rhetorical machines” (Bolzoni 1995; Carruthers 1990), i.e. visual inscriptions (see Latour 1991, 2005) which utilize rhetorical methods to facilitate the continuous

work of knowledge ordering and innovation, communication and translation, and organizing. “Rhetorical machines”—such as the Balanced Scorecard—are platforms which offer a space wherein order and knowledge can be continuously classified and questioned, different interests can be accommodated through regular processes of interrogation and re-invention, and engagement can be sustained through participation in a series of recurrent activities (Busco and Quattrone 2014).

Building on Busco and Quattrone (2014) we suggest that for us to understand the conditions which enable management and accounting innovations to be developed, adopted and used successfully requires us to interpret what these practices actually are—i.e., their features as “objects”. To illustrate this we will draw on two cases: the adoption of Six-Sigma in GE Oil&Gas, and the development of an ETE budget in Nestlé Waters.

4 The adoption and use of management and accounting innovations within GE and Nestlé

Busco and Quattrone (2014) developed their analytical theoretical framework to illustrate how the Balanced Scorecard—which is arguably one of most popular management and accounting innovations of the last 20 years—engages, unfolds, and is successfully practiced. They define the Balanced Scorecard as a rhetorical machine composed of four distinctive features: (1) a *visual performable space*; (2) a *method of ordering and innovation*; (3) a *means of interrogation and mediation*; and (4) a *motivating ritual*. Viewed as a visual performable space the Balanced Scorecard offers users a space where they can compose strategy and construct logical narratives amongst strategic imperatives, objectives, and KPIs. However, they suggest that these visualizations are not primarily concerned with representation, but are instead important in the process of strategy composition which they themselves prompt. For this reason, rather than leading to complete, shared understandings of strategic imperatives, objectives, and KPIs, this process enables the Balanced Scorecard to evolve according to the contingent strategic concerns that it helps to pragmatically address.

This led Busco and Quattrone (2014) to further conceptualize the Balanced Scorecard as a method of ordering and innovation, i.e., a visualization that provides users with guidelines for establishing new logical paths amongst abstract strategic concepts, by giving them methods with which to establish these links without identifying a priori what the links should be. The ability of the Balanced Scorecard to accommodate different users’ interests within a unitary working practice enables it to be a means of interrogation and mediation; i.e., an instrument that constructs knowledge by allowing users to continuously question strategic imperatives, objectives, and KPIs. Significantly, according to Busco and Quattrone (2014), this process of interrogation opens up the possibility of further knowledge construction and mediation between different interests, and allows the continuous unfolding of the functionalities of this practice. Finally, in order to explain how the Balanced Scorecard is performed over time, and is thus recursively practiced, Busco and Quattrone (2014) discuss how this tool is constituted as a *motivating ritual*. In other

words, the Balanced Scorecard provides a recurrent path of actions that both constructs and sustains beliefs, as well as offering the possibility of figuring out the 'right' performance measurement system without ever fulfilling this promise.

In the remainder of this section we build on Busco and Quattrone (2014) to illustrate the features which characterize the development and adoption of management and accounting innovations. In particular, we draw on the framework to discuss the adoption of Six-Sigma within GE Oil&Gas and the development of an ETE budget with Nestlé Waters.

Our discussions of the GE Oil&Gas case are based on a longitudinal study during which one of the authors of this paper had the opportunity to spend considerable amounts of time in the company (see Busco et al. 2006). From 1995 to 2004 he had the opportunity to explore the evolutionary process through which a former Italian state-owned company (Nuovo Pignone) became the European headquarters of GE Oil&Gas. The research focused on the role of management accounting and performance measurement systems in the processes of organizational change. More specifically, the case study explored the adoption of Six-Sigma, a quality improvement initiative. Significantly, the researchers were able to play an active role in both discussing the changes with employees, and contributing to their re-training. The researchers were asked to build on their interviews, observations, participations in meetings, workshops and focus groups, to develop and present internal training courses on topics such as 'finance for non financial managers', 'understanding financial fundamentals', 'the financial benefits of six-sigma' and 'controllership'. This dual role as researchers and helper-clinicians (Schein 1992) provided wide access to the organizational setting. Overall, more than 90 interviews were conducted up to the end of 2004.

The second illustrative case concerns the development of an ETE budget in Nestlé Waters (see Busco et al. 2008). The empirical material for this case was collected through a series of interviews mainly conducted over a period of 3 years (2002–2004) and then again in 2007 in Nestlé Waters units located in Italy, the UK and the US. Interviews were initially conducted at the Nestlé Waters unit in Italy, which had been built around the Italian company Sanpellegrino (acquired by Nestlé during the 1990s), and subsequently in Nestlé waters UK (NWUK) and Nestlé Waters North America (NNA). Using semi-structured interviews, the researchers explored the way in which performance management systems were introduced as part of the process of organizational restructuring that the company had been undertaking in recent years. Documentary material, including company history, brochures, newsletters and other published material, were collected and triangulated with the interviews, most of which were recorded and subsequently transcribed.

4.1 The adoption of six-sigma in GE Oil&Gas

During the second part of the 1990s GE Oil&Gas adopted Six-Sigma, a highly disciplined quality improvement methodology, which has had a major impact on a number of large businesses over recent decades. Following its development by Motorola (in 1987), several companies in a number of different industries (including Asea Brown Boveri, AlliedSignal, and more recently 3M and Starwood Hotels)

have implemented Six-sigma initiatives. Although designed as a quality improvement program (sigma is a measurement of the mistakes per one million discreet operations²), Six-Sigma has developed into a methodology for making financial improvements and securing competitive advantage through cost savings and greater customer satisfaction.

Six-Sigma builds on “the voice of the customer” to undertake a careful reassessment of specific organizational processes that are linked to *critical-to-quality* issues. “The multiple voices of customers enabled the Company to understand how it was possible to add value through processes of innovation and re-engineering”, claimed a senior manager in GE. For this reason, within Six-Sigma, once *critical-to-quality* issues (shown as a big Y—see Fig. 1) have been identified, they are broken-down into multiple critical processes. These processes are then carefully assessed in order to reduce defects and increase profitability. “Learn what the big Ys are, and then find a way to add your contribution through the processes and activities that you own”, explained a Six-Sigma project leader during an internal meeting.

Six-Sigma comprises a toolkit, which provides a range of instruments and techniques, for achieving very tight quality improvement targets within both administrative and manufacturing processes. In particular, Six-Sigma projects are built around five separate steps referred to with the acronym DMAIC: *Define, Measure, Analyze, Improve and Control* (see Fig. 1). According to a Six-Sigma project leader, DMAIC “is a simple closed-loop process that offers direction and guidance to improve the organization’s critical processes without limiting the existing creative thinking abilities”. The DMAIC steps can be summarized as follows:

- *Define* the preliminary phase in which the key characteristics of the project are identified in terms of customers, *critical-to-quality* issues, and the core business processes involved;
- *Measure* where data are collected and *critical-to-quality* issues are assessed in terms of sigma;
- *Analyze* here the fundamental causes of defects are analyzed using a wide variety of tools, ranging from brainstorming to statistical techniques;
- *Improve* where the processes are re-engineered to bring the number of defects within the targeted limits;
- *Control* finally the process improvements achieved are monitored through statistical process control to ensure that the new quality standards are maintained.

Six-Sigma builds on intense training and communication sessions. Nearly all GE Oil&Gas employees were trained (although in different ways and to different extents) through multiple waves of Six-Sigma awareness sessions. Courses varied from ‘Quality Overview Seminars’ (offering basic Six-Sigma awareness) to ‘Team Training’ (providing an introduction to the basic tools to enable employees to participate in Six-Sigma teams), from ‘Master Black Belt, Black Belt and Green Belt

² Sigma is a statistical measure of errors, or defects, occurring in a process. Operating at two sigma means that 308,357 defects per million operations occur, at three sigma 66,807, at four 6,210, at five 233 and, finally, at six sigma only 3.4 occur. This means that at three and a half sigma, which is the average quality achieved by most companies, there are 35,000 defects per million operations.

Fig. 1 Comapany material

Training' (in-depth quality training that includes sophisticated statistical and quality control tools) to 'Design for Six-Sigma' (which prepares Six-Sigma teams to use the statistical tools to *design it right the first time*). "Quality is the responsibility of every GE employee", emphasized a Six-Sigma project leader, who continued "Every employee must be involved, motivated and knowledgeable if we are to succeed, and we have to communicate this message strongly throughout the organization". The adoption of Six-Sigma as a day-to-day work practice in GE Oil&Gas was reinforced through an internal magazine which was used to communicate across the organization the logic, pillars and success stories of Six-Sigma projects.

One of the particularly innovative and distinctive features of Six-Sigma is its ability to integrate within the quality improvement program an understanding of their financial impact. Importantly, as suggested by a Six-Sigma project leader: "Although quality has always been about improving processes, products and services by removing defects and the root causes of these defects, through Six Sigma quality management has moved us forward by strengthening the ties among process improvements and their consequences in financial terms". Before a project is initiated, the potential financial benefits and cost savings of the proposed process improvement are quantified, and they are then used to select and prioritize projects. Benefits and savings are re-evaluated during the analysis phase to ensure that the cost of the proposed improvements will be justified by the savings and the benefits that are expected. The actual financial benefits and cost savings are verified once the project enters the control phase. "Six-sigma projects have to impact our bottom line... it does

not matter which item of the income statement you are going to hit, but you have to demonstrate the value you are able to add to your projects of process reengineering, and you shall do it in financial terms”, explained a quality leader (see Fig. 2). In this context, accounting concepts such as revenues, variable and fixed costs, direct and indirect costs, contribution and operating margin are an integral part of any Six-sigma project. These concepts, as well as the functioning of the income statement, inform the discussions within the Six-Sigma projects teams, as well as communicating the financial achievements of Six-sigma projects across the organization.

“By combining operational, statistical and financial measures, Six-Sigma is now embedded in the GE Way of running the business”, explain a quality manager. As summarized above, Six-Sigma was adopted by GE to increase efficiency, customer satisfaction and financial returns. Next, we briefly illustrate the way in which a new management and accounting practice was developed and used within Nestlé Waters, specifically the ETE budget which was introduced to support Nestlé’s strategy of integration and to improve its performance measurement system.

4.2 The development of the end-to-end budget at Nestlé waters

During the 1990s, Nestlé’s organizational structure, which focused on distinct, autonomous geographic areas, was identified as a potential problem. As market turbulence and competition increased, the need for greater integration to obtain the benefits of global learning, synergies and cost reduction was increasingly recognized

Fig. 2 Training material developed by one of the authors at GE

within the company. Furthermore, acquisitions of new businesses increased the heterogeneity and complexity of Nestlé's product range and geographical diversity. As a result, a decision was taken to modify the previous strategy of autonomous businesses, and a certain amount of restructuring took place. Nestlé waters (NW) was one of the first businesses to be redesigned around business units (BUs) related to product categories, as well as geography. This initiative involved a major change in NW's performance management systems, centred on the introduction of a new concept, called an ETE budget and profit & loss (P&L) account.

Prior to the organizational restructuring that introduced BUs any exchange of information between different NW subsidiaries was rare. As pointed out by a NW finance manager: "no attempt was made to integrate the international brands' strategy and to calculate international brands' profitability worldwide". However, after the introduction of the BUs and the implementation of the ETE Budget and P&L, both producers and distributors started thinking strategically—as equal partners belonging to the same global organization. The logics, mechanisms and practices, which comprised NW's organizational restructuring, enabled the concept of joint profitability to become visualised: i.e., "to become a brand new fundamental concern" emphasised the NW finance manager.

When NW's organizational structure was redefined in 2000, strategic BUs were created to centralize the management (i.e. production and distribution) of specific product categories across the globe. To achieve this, the various NW brands were subdivided into three major categories (see Fig. 3):

Fig. 3 Authors' own representation based on material collected

Nestlé global brands (these are globally marketed brands which are produced at a variety of sites in different countries—point 1 in Fig. 3);

International brands (point 2 in Fig. 3), and in particular:

- *Italian* international brands, bottled only in Italy and sold internationally, as well as locally (the most well known is San Pellegrino);
- *French* international brands, bottled only in France and sold internationally, as well as locally (the most well known is Perrier);

Local brands (locally bottled and locally sold—point 3 in Fig. 3).

To manage these activities NW has subsidiaries in Italy (NW Italy), France (NW France), North America (NWN), United Kingdom (NWUK), as well as many other countries throughout the world. Significantly, aiming to implement centralised marketing strategies around the international brands, two new BUs were created:

- the *Perrier-Vittel* BU (headed by NW France), which coordinates all activities from production to distribution of the French international brands—i.e., brands bottled in France by NW France and sold in international markets as well as in France;
- the *Sanpellegrino* BU (headed by NW Italy), which coordinates all activities from production to distribution of the Italian international brands—i.e., brands bottled in Italy by NW Italy and sold in international markets as well as in Italy.

With the introduction of the two BUs, NW needed a redefined performance management systems in order to meet the information and control requirements of the new global structure and to support lateral relationships between the producers and the various local distributors of the international brands. A new set of practices were developed, including an innovative (at least within NW) ETE Budget and P&L account. Using a transfer pricing system based on the ‘resale-less’ method, the ETE Budget and P&L account consolidates information from both the producer and the distributors, and determines the profitability of the individual international brands. This end-to-end profitability is a product of the joint profitability of the producer and the distributors of the international brands.

The need to obtain an overall improvement in the ETE profitability encouraged the development of new practices through which “ETE performance” became an important indicator for the various parties. However, the convergence towards shared goals (ETE profitability), common structures (the BUs) and processes (measurement practices and information flows) is limited to the international brands. The management of local brands is still autonomous and decisions concerning local brands remain with the local subsidiaries. For this reason, the individual subsidiaries needed additional systems to consolidate their part of the profits from the international brands with the profits from their local brands (see Fig. 4). Therefore, within each local subsidiary two different sets of measurement practices coexist: (1) the ETE P&L that measures the performance of international brands by consolidating data obtained from the producers and the distributors; and (2) a set of practices for measuring the performance of local brands within the local market.

Whereas the ETE P&L concerns only international brands and has been standardized within BUs, it also engages with practices related to the local brands,

Fig. 4 Authors' own representation based on material collected

which can vary across the subsidiaries. This differentiation maintains the traditional local diversity and the autonomy of each subsidiary. In this way, the needs of the diverse local markets can continue to be accommodated by the different business cultures and by local practices that have been found to be relevant in the past. However, since a distributor is accountable for its overall performance in the local market, and the BU is responsible for the profitability of international brands, there can be conflicts between the objectives of the local and the international brands which can affect construction and the use of the ETE Budget (see Fig. 4).

The combination of centralized international brand strategies (the responsibility of the BUs) and the decentralized management of local brands (for which subsidiaries such as NWNA are responsible) create a potential for conflict, as these multiple centres of control and interest compete within NW. According to the Director of Finance and Planning at NWNA, "since local US brands often provide higher margins for NWNA than the transfer price set by the end-to-end budget, there may be less incentive for NWNA to promote and develop international brands compared to our own waters". Importantly, the competition between local and international brands creates potential 'goal conflict' within the various subsidiaries. Although these subsidiaries are expected to respond to the pressures coming from the BUs, they are primarily responsible for their overall performance in the local markets.

Nestlé waters (NW's) strategy to improve coordination around its international brands, and the consequent introduction of the two BUs, has brought both formal and informal lateral relations to the fore and, interestingly, the new performance

management system is now playing a key role in managing a re-defined set of both vertical relations between NWHQ and the BUs and lateral relations between the geographically diverse parts of the individual BUs. This was recognised by a finance manager from the Sanpellegrino BU, who pointed out that “the preparation of the ETE P&L entails new patterns of vertical and lateral relations that enables NW to integrate globally the international brands business”. Importantly, since the diverse entities participating to the new lateral arrangements are expected to both co-operate and compete at the same time, the implementation of the new ETE Budget and P&L has stimulated a series of conversations between the diverse parties in order to monitor the potential conflicts that characterise the new intra- and inter-BU relationships.

Next, we will draw on the theoretical framework developed by Busco and Quattrone (2014) to discuss the features of Six-Sigma in GE Oil&Gas and the development of the ETE budget and P&L account in Nestlé Waters. In so doing we will focus on what these management and accounting innovations actually are, as well as on the network of relationships within which they are practiced.

4.3 Looking “inside” management and accounting innovation

As indicated above, Busco and Quattrone (2014) propose a framework which can be used to understand how and why management and accounting innovations engage, unfold, and are successfully practiced. The framework is built around four distinctive features that management and accounting innovations leverage as they are used. These features are: *visual performable space*; *method of ordering and innovation*; *means of interrogation and mediation*; and *motivating ritual*. We can now illustrate each of these four features by drawing on the above examples from GE and Nestlé Waters.

First, management and accounting innovations offer to their users a *visual performable space*. To function, organizations rely extensively upon a myriad of images and pictorial representations, such as budgets, schedules, reports, graphs, and organizational charts to name just a few. In this respect, management and accounting innovations are devices which allow the user to generate visions of their organizational world and their actions within it. In particular, they rely on the visual, not only for its persuasive power, but also for its performative capacity as an ordering instrument: through ‘imagin-action’, the act of making images (either in our mind or on a piece of paper), these practices become a space where ideas, visions, images are created for the pursuit of practical ends. In other words, organizations are made, surrounded, and constantly re-made by a variety of practices which constantly produce images in order to make sense of what the organizations are and the activities in which they engage (Busco and Quattrone 2014).

Within GE Oil&Gas the introduction of Six-Sigma offered an opportunity to visualize the way of achieving better levels of customer satisfaction. In particular, Six-Sigma enabled different employees to link “the voice of the customer” to the specific organizational processes which required careful investigation because they were critical-to-quality for the customers. “Listening to” the multiple voices of the customers enabled GE employees “to see” how they could add value through

processes of business improvement. Similarly, within Nestlé Waters the ETE Budget and P&L supported the process of organizational restructuring by enabling the joint profitability of the producers and distributors to become visible and to be brought to the fore. The new organizational structure, as well as the new performance management system, allowed both producers and distributors to start thinking strategically as partners in the same global organization where they all contribute to the end-to-end profitability of the global brands.

Second, management and accounting innovations are not neutral techniques which store and represent facts. Rather, they provide a *method of ordering and innovation* that produces knowledge which engages, affects and generates organizational effects. As such, they provide instructions on how to discover, order, and make sense of opaque and uncertain knowledge, such as visions, strategies, processes of integration and the causal links to key performance measurement indicators. However, they do not define what this knowledge should be, instead they leave its definition to the interplay between the practice and the users, and by offering opportunities for users' engagement they increase the chances of successful adoption. As they remain at the level of abstract principles and linear visual forms, management and accounting innovations can be adopted by multiple users. In this way they enable interplay between sameness and diversity, and they can become appropriated by different participants through the performative acts from which they are made (Busco and Quattrone 2014).

Six-Sigma, for example, helped GE Oil&Gas employees as they were searching for better levels of customer satisfaction. The closed-loop process of *Define, Measure, Analyze, Improve and Control* (DMAIC) offered guidance and direction, without limiting the necessary innovative thinking required to reengineer the organization's critical processes. In a similar manner, the ETE Budget and P&L in NW relied on a simple transfer pricing system (based on the 'resale-less' method) to consolidate information from the different parties involved, and to fabricate the international brand profitability in terms of the joint profitability of the producer and distributors. It is a simple method and, importantly, it is open to adjustment were necessary.

Third, management and accounting innovations rely on *means of interrogation and mediation*. Through these means the contents and goals of the innovation are constantly shifted, mediated, renegotiated and re-invented in practice following a pattern which is non-linear (Ahrens and Chapman 2007). This means we need to rethink the notion of adoption, as these innovations are not packages of 'fixed' knowledge that can be implemented without modification. They not only vary as they are diffused across space and time (i.e., across organizations), but they can also vary within the same organization as they interact, for instance, with diverse networks of professional relationships, divisional units, and information technologies.

Management and accounting innovations generate practices that can become the medium through which targets, and the ways to achieve them, are communicated to organizational members. However, they can do more than this. The word 'medium' is interesting as it emphasizes not only the forms of communication that innovations such as Six-Sigma or the ETE Budget and P&L can generate, but also the

possibilities of mediation that they offer. Often ‘to transfer’ is ‘to transform’. This can occur as communication “happens” via diverse media, such as pieces of paper, internal workshops, modern information technology and so on, where meanings are not pre-given, but can be discussed and modified. It is through these media that innovations come to life, not only due to those who design and implement them, but also due to those who participate in these processes of mediation (Busco and Quattrone 2014).

Training sessions, internal workshops, organizational magazines and newsletters, as well as meetings informed by both operational data and accounting concepts are just some of the media that enable Six-Sigma to be practiced in GE Oil&Gas. Without showing their impact on the Income Statement, Six-Sigma projects cannot be approved—that is, they cannot happen. It is through these media that meaning and functionalities are communicated, negotiated and, eventually, shared. In NW the introduction of the two BUs and the development of the ETE Budget and P&L relied on both formal and informal media to work in practice. Significantly, since the diverse entities participating to the new lateral arrangements are expected to both co-operate and compete at the same time, the tensions of integration need to be constantly monitored through informal media that, by enabling intra-organizational dialogue and interaction, facilitate the functioning of the formal budgeting and control systems (the ETE Budget and P&L).

Finally, management and accounting innovations are sustained over time by a motivating ritual. This ritual maintains participation in the practices that the innovations generate and provide opportunities for questioning contents as well as strengthening the process of adoption (Busco and Quattrone 2014). The recurrent path of actions in the ritual constructs and sustains beliefs about the possibility of figuring out, among others things, the ‘right’ performance measurement system, the ‘proper’ way to achieve customer satisfaction or the ‘most appropriate’ ways to accomplish organizational objectives. They provide the working spaces and times where contents and meanings are continuously constructed, negotiated and, eventually, institutionalized. As such management and accounting innovations are appropriated through practicing them. In the past such innovations have often been seen as neutral and passive objects which convey a given message. In other words, they were normally seen as orthodoxies, or as systems which contain a ‘certain truth’. However, moving away from this perspective allows us to view ‘successful’ innovations as orthopraxis,³ whose validity is given not by the inner meaning that they supposedly convey, but by how they stimulate performance and are recursively practiced.

Within GE Oil&Gas, Six-Sigma offered a space where multiple communities of practitioners (ranging from operations to IT, from accounting to marketing) engaged recursively in practices aimed at improving customer satisfaction through process reengineering. Besides stories of successful project implementation and real bottom-line improvements, performing Six-Sigma projects through the DMAIC steps also entailed discussions and disagreements as multiple perspectives, backgrounds and

³ Orthopraxy is a term derived from Modern Greek *orthopraxia* meaning “correct action/activity” or an emphasis on conduct as opposed to faith.

interests coexisted in the practice. Similarly, within NW the ETE Budget and P&L enabled competition and co-operation to coexist in practice as multiple and diverse entities were encouraged to collaborate (via lateral relationships), while at the same time competing for limited resources, corporate support, market expansion and global position. As such, the ETE Budget and P&L entails ambiguity and conflicts, but it also offers a space where vertical versus lateral relations, convergence versus differentiation of practices and centralization versus decentralization can be performed.

In this section we have drawn on Busco and Quattrone (2014) to illustrate the features that have helped Six-Sigma in GE Oil&Gas and ETE Budget and P&L in Nestlé Waters to become ‘successful’ innovations. In particular, we have focused on management and accounting innovations as an ‘object’, and in so doing we have looked ‘inside’ these innovations to explore what they are and the network of relationships that support them. The shift in focus offered by the framework developed by Busco and Quattrone (2014) helps us to contribute to the literature on management and accounting innovations in two ways.

Firstly, we bring back an important element in order to understand both what these innovations are and their processes of adoption; that is, the innovative practice itself. Therefore, rather than assuming the existence of some functional quality of the innovative practice being adopted, we explore management and accounting innovations as the centre of a diffused network where actors interplay with other managerial techniques and technologies. Secondly, this perspective enables us to argue that management and accounting innovations are adopted because of their ability to provide both different solutions to managerial problems and heterogeneous rationales to justify and legitimise decisions made. Significantly, this ability permits management and accounting innovations to intersect different organizational communities and to promote diversity as they are used in practice. As illustrated above, in GE and Nestlé Waters, a number of different elements of the organizational networks—which include not only actors, but also other managerial techniques and technologies—played a role in the adoption of Six-Sigma and the development of the ETE budget and P&L respectively, and helped to define the nature and multiple roles of these innovations in their heterogeneous organizational settings.

Next, we introduce the five papers in this Special Issue. We will briefly illustrate their contents, and highlight how they contribute to the debate on the innovation of management and accounting practices.

5 Innovating management and accounting practices: evidence from the papers in this special issue

There are a number of interesting questions/issues that can be addressed on the topic of management and accounting innovations, and the papers in this Special Issue deals with several of them, albeit from different angles and with different conceptualizations of innovation.

An initial question is: *where does innovation comes from?* After highlighting how previous studies have concentrated mainly on socioeconomic conditions and organizational factors (e.g., firm size, organization culture and power relations) as the antecedents of management innovations, Kunz and Linder focus on the importance of individuals in creating and implementing innovations. Specifically, they develop a set of hypotheses on the role of individuals' needs for achievement, needs for power, attitudes to change and attitudes to risk in determining their intention to innovate. Since employees have been largely neglected in existing discussions on management innovation, Kunz and Linder try to provide a more balanced view of managers and employees as innovative agents. In effect, they argue that the treatment of individual-level factors in the extant management innovation literature has been dominated by a "black-and-white characterization" of the managers as rational, active agents and of their subordinate employees as passive, and potentially even resistant to managers' innovations. On the contrary, the authors underline the fundamental role of employees in introducing innovative management control or performance management practices, in line with some management accounting change contributions (Bougen 1989; Burns and Vaivio 2001; Chenhall and Langfield-Smith 2003; Ezzamel et al. 2004). Interestingly, Kunz and Linder emphasize that the words 'managerial' and 'management' in the expression 'management/managerial innovation', "do not indicate a particular agent group as locus of innovative action, but rather the object that undergoes innovative change: management practices". Kunz and Linder's findings suggest that recruiting individuals with high achievement needs could increase the likelihood of management innovation in the firm and also that individual's attitudes to change can be an important factor which moderates the relation between achievement needs and intentions to engage in management innovation. In more general terms, this study suggests that research in management innovation may benefit from a systematic consideration of individual-level factors. This paper is one of the first to focus on the role of employees as active, rather than passive, agents in management innovation and it is likely to trigger further research treating employees as active agents in management innovation.

The other four papers focus, in different ways, on another crucial question: *what is (management and accounting) innovation?* Two of these papers (Cinquini et al. and Pucci et al.) treat management accounting innovation in the 'traditional' sense; i.e., *the adoption and diffusion of novel management accounting techniques and tools*. Cinquini et al. study changes in cost accounting practices by comparing the results of two surveys conducted almost 10 years apart (1996 and 2005). This contribution is positioned in a well-developed stream of research dealing with the diffusion of management accounting innovation as the adoption and use of new costing systems. Some survey studies have aimed at understanding the relationship between the adoption (or diffusion) of activity-based costing (ABC), its success or usefulness, and such firm characteristics and contextual factors as product variety, business complexity and strategy, from a contingent perspective (e.g., Malmi 1999a, b, c; Schoute 2011). Others have used the concept of "cost system sophistication" to capture innovation in costing practices (e.g., Abernethy et al. 2001; Abdel-Kader and Luther 2008). Using a contingent approach, Cinquini et al. provide insights into

the phenomenon of non-linearity in processes of change. In so doing, they confirm the ABC paradox according to which, despite favorable contexts for the adoption and implementation of ABC, and even though ABC has existed for almost 20 years, surveys have shown that the diffusion process of ABC has not been as intense as might have been expected (Gosselin 2007). Specifically, Cinquini et al.'s findings highlight the forward and backward moves involved in the process of implementing ABC and target costing (TC). These findings imply that costing innovations can have consequences beyond those studied in the functional cost accounting literature. Cinquini et al. confirm the view that management accounting change is a nonlinear and unsystematic process (cf. Burns and Vaivio 2001), and management accounting is not simply discrete knowledge that is mastered by a handful of specialists, but is an organizationally grounded phenomenon.

The paper by Pucci et al. also deals with the adoption and diffusion of novel management accounting techniques and tools. The authors illustrate how entrepreneurs with a production background and a learning-by-experience approach, at a certain point in their firms' life cycle, begin to recognize the need to abandon the intuitive and non-formalized management models. As a consequence, they may introduce new tools for marketing planning and marketing performance measurement systems (MPMS) to assess the effects of marketing decisions on their firms' performance. Following this line of reasoning, Pucci et al. focus on the knowledge capital scorecard method proposed by Lev (Gu and Lev 2001; Seetharaman et al. 2002) to measure the contribution of marketing assets to intellectual capital. They test their framework in the children's wear industry, where a marketing orientation is fundamental and where traditional accounting techniques are often ineffective in representing the impact of marketing activities and resources on the firm's value. Based on their findings, Pucci et al. propose the use of intellectual capital as a synthetic indicator to explicitly connect marketing policies to firm value. Such an approach could help to overcome the rigid functional approach by implementing a performance measurement system that takes into account the firm's marketing strategies and resources, which are poorly captured by financial data. Therefore, they suggest an innovation in which management accounting practices, especially in small and medium enterprises (SMEs), use an intellectual capital index to summarize and make sense of the business data which are currently considered useless by most entrepreneurs, due to the use of fragmented working methods and tools.

An alternative answer to the 'traditional' one given by Cinquini et al. and Pucci et al. to the question of *what (management and accounting) innovation is*, is provided by the remaining two papers by Windeck et al. and Mahlendorf. Windeck et al. view management accounting innovation as *novel roles and relationships for the people working within the management accounting function*. Adopting such an interpretation, the contribution of Windeck et al. adds to prior research on the changing roles of management accountants (e.g., Granlund and Lukka 1998a, b; Caglio 2003; Scapens and Jazayeri 2003) by presenting a new and complementary perspective which studies the interactions between managers and management accountants from the point of view of the managers who are affected by, and can influence, the development of management accountants in their new roles as

business partners. Drawing on actor network theory (ANT) and the concept of boundary objects, Windeck et al. illustrate how the business partner's role emerged in an innovation-driven firm. The study explores how the top management team, especially the CFO, was confronted and dealt with managers' reactions to the changing role of management accountants and how they managed to gain managers' consensus on management accountants' new roles. New business processes, the formal corporate strategy, an integrated IT system and new organizational structures for the management accounting and sales functions acted as boundary objects. They facilitated management accounting change and innovation by relating the "management world" and the "management accountant world". Managers, after their initial resistance, were supportive of the management accountants in their new role as business partners, despite the change in intra-organizational power relations. This was because the new role served the needs of managers, by enabling them to better accomplish their own roles. In effect, managers acted as allies of the CFO (who had initiated management accountants' role change), and they contributed to the diffusion of the business partner's role across the organization. Interestingly, Windeck et al. observe that a management accounting innovation, such as the new role for management accountants, rather than being merely *adopted*, needed to be *adapted* to accommodate multiple interests. As such, management accounting change and innovation are produced, modified and accepted through translation.

Finally (management and accounting) innovation is depicted as a *different attitude or a different perspective when dealing with decision making*. This is what Mahlendorf implies in his paper. He questions some of the conventional ideas about managers' accountability, and introduces the concept of an 'allowance for failure': "the style in which the decision maker's environment—such as capital market, corporate governance, and management control system (MCS)—deals with potential failures (e.g., project or investment failures)". Specifically, the allowance for failure is high if the environment considers failure to be an acceptable outcome. If such an allowance for failure were to become part of management and accounting practices, it would mean being prepared to change policy if minimum target levels are not achieved, evaluating decision makers based on their decision processes rather than outcomes, and making negative outcomes less threatening for managers. The need to de-emphasize accountability in certain situations can be necessary as the increasing pressures, which managers have to face, can have potentially dysfunctional consequences on their decision-making. Mahlendorf's study focuses on project escalation, which he defines as the decision to continue to invest in a failing project. If this occurs, and projects are terminated too late, higher than necessary costs are incurred, resource-allocation becomes inefficient, and there is considerable organizational disruption. The findings of Mahlendorf's study indicates that a capital market orientation can cause a decision maker to perceive high level of threat in the case of project failure, thus leading her/him to continue to invest in a failing project; i.e., to increase project escalation. Mahlendorf argues that such project escalation can mean that a capital market orientation may not always lead to better performance. In this sense, an allowance for failure could improve decision-making by decreasing managers' fears that they will be negatively affected by a decision to terminate a failing project. To conclude, Mahlendorf emphasizes

that an allowance for failure, as a new approach to management decision-making, deserves serious consideration in today's challenging business environment.

Interestingly, the variety of issues addressed by the papers in this Special Issue is combined with a number of different research approaches. While Kunz and Linder use vignettes in their experiment (on a sample of business school students in a Nordic country) to study the individual-level antecedents of innovation, the papers by Cinquini et al. and by Pucci et al. use a survey approach to investigate the diffusion of innovative management accounting practices. Mahlendorf also adopts a quantitative approach to test his hypotheses concerning an allowance for failure, whereas Windeck et al. draw on ANT together with the idea of boundary object to study the changing roles of management accountants.

6 Conclusions

The reasons underpinning the adoption of management and accounting innovations have been addressed by a number of studies that have recently animated the debate in the literature. Some studies have stressed the role of economic and functional variables in explaining this adoption. Others have pointed to the role of institutional variables and have highlighted the influence of external pressures, fads, and fashions. Yet others have focused on the role of specific individuals in leading innovative processes. While we acknowledge the significance of all the efforts which characterized the current literature, we have argued that adoption decisions are nested within a network of relationships and explanations cannot be limited to one set of explanatory variables.

Building on Busco and Quattrone (2014) we have illustrated the features that helped Six-Sigma in GE Oil&Gas and the ETE budget and P&L in Nestlé Waters to become 'successful' innovations. This contributes to the literature on management and accounting innovations in two ways. By focusing on the innovative practice itself, we bring back an important element to understand both what the innovations are, and their process of adoption. We therefore put management and accounting innovations at the centre of a diffused network, where human agency interplays with other managerial techniques and technologies. This approach offers an opportunity to understand the ability of management and accounting innovations to provide both different solutions to managerial problems and heterogeneous rationales to justify and legitimise decisions made within organizational networks.

As outlined in the previous section, the papers included in this special issue of the Journal of Management and Governance offer a number of interesting insights which add to the current debate in the literature. Building on these studies, as well as the reflections offered in this paper, there is a great deal of further research to be done if we are to understand the reasons behind the adoption of management and accounting innovations. In particular, since management and accounting innovations require the ability to see things differently, future studies can take a deeper look "inside" innovative management and accounting practices; i.e., exploring *What* these practices actually are, *How* and *Why* they come to be performed and "happen" in the organizational context, as well as *Whether* they stimulate (or

hinder) opportunities for wider business and/or social innovation. This research agenda could complement the more traditional studies that feature in the current literature on management and accounting innovation. By looking at innovations as “objects” characterized by distinctive features, future research will be able to focus on the enabling nature of innovations as they develop and unfold in practice, and possibly even address new questions which have not yet been recognized in the current debate.

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