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Introduction to the Special Issue on Accounting and Innovation

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Abstract

Purpose: This introductory paper provides the rationale behind the special issue on accounting and innovation, and synthesizes the central findings and implications of the five papers published in the special issue. Furthermore, the introduction provides avenues for further studies on this topic.

Design/methodology/approach: The paper reviews the five articles of the special issue, and derives implications with respect to the existing research on the topic.

Findings: The introductory paper states that the five papers take different, yet meaningful perspectives on the topic and operate at different levels to provide an extensive view on the interfaces of accounting and innovation. The papers hold theoretical and practical implications at different levels, including firm level strategic considerations, decision-making and investment practices, managing and controlling innovation activities, and recognizing and taking advantage of the micro structures within the firm.

Research limitations/implications: Particular limitations and implications are thoroughly discussed in the papers. Overall, the results presented in this special issue suggest that digging deeper into the accounting and control practices is required for extending knowledge about successful innovation processes and activities. Further research should pay attention both to the social processes of sensemaking, and to designing and interactively using new technical structures and concrete accounting and control tools that help the organizations' innovation practices.

Originality/value: Uniquely, the special issue provides a rich set of studies on accounting and innovations, based on detailed accounts on organizations' innovation activities and the dynamics embedded to them.

Keywords: Accounting, Innovation, Innovation processes and activities, Interaction

Introduction

Innovation, understood as “the creation and implementation of new products, services and processes which result in significant improvement in outcomes” (Chenhall and Moers, 2015, p. 2), has been pointed out as a critical source of competitive advantage in the current business environment, which is characterized by fierce and global competition (Davila, 2005; Davila and Oyon, 2009; Davila *et al.*, 2009b). Organizations pressured by increasingly uncertain settings need to develop dynamic and adaptive processes of response, the outcome of which is innovation (Chenhall and Moers, 2015; Davila *et al.*, 2009b).

While accounting has traditionally been regarded as a discipline that hinders innovation, today there is general consensus about the role it plays in helping organizations and managerial actors to achieve innovation (Davila, 2005; Davila *et al.*, 2009b; Moll, 2015; Laine *et al.*, 2016a, 2016b). Recent studies seek to more fully understand how management accounting and management control systems involving both traditional and new practices support the development of mechanisms and processes by which innovation can be achieved (e.g. Chenhall and Moers, 2015; Revellino and Mouritsen, 2009, 2015; Bisbe and Otley, 2004; Davila, 2000, 2005; Davila and Oyon, 2009; Davila *et al.*, 2009a, 2009b; Jørgensen and Messner, 2010).

In many of these studies special (and sometimes almost exclusive) attention has been given to product and service innovation, even though technologies, organizational structures, and enhanced awareness of the business context are also important elements to help achieve innovation (Chenhall and Moers, 2015; Chesbrough, 2006; Hall, 2010). Furthermore, overall there is weak understanding of how management accounting and control are used in services industries, such as banking and health care to drive innovation (*ibid*). Thus, in spite of important advances in the area, there is still the need to undertake further research into how the management accounting and control practice realized by the managerial actors jointly and individually can contribute and relate to innovation. In other words, further research could address management accounting and control as enablers of innovation by addressing not only the business contexts, but also the peculiarities and characteristics of managerial work for innovation, to be supported by accounting and control (see e.g., Hall, 2010).

The purpose of this special issue is therefore to address this gap in the literature by recognizing accounting as a set of calculative practices through which innovation can be achieved (Chenhall and Moers, 2015; Revellino and Mouritsen, 2015). It brings together a collection of papers that investigate the role of accounting as enabler of innovation. The papers of this special issue address, how traditional and new management accounting and control, cost, and performance management practices can successfully co-exist and be used together to drive the process of innovation. It therefore gathers several insights into how accounting, cost management, and performance measurement systems support innovation in the current competitive business environment.

Reflections on the articles of the special issue

More particularly, the special issue provides insights into accounting supporting innovation at multiple levels. The units of analysis chosen in the articles of the special

issue range from analyses of the impacts of the external and internal business environment on accounting and innovation, to the examination of the actual investment procedures, accounting practices, and even micro structures at the interface of accounting and innovation. The five articles of the special issue are summarized below in terms of these units of analysis, methods, and their contributions to the issue at hand.

First, Christensen, Rikhardsson, Rohde, and Batt address the topic of innovation by studying the impact of the 2008 financial crisis on the development of management controls in Icelandic banks in comparison with Danish banks. The collapse of the banking system in Iceland, triggered by the bankruptcy of the three banks in the country, led to an increase in regulatory activity and scrutiny of the sector, not to mention the replacement of the executive boards and boards of directors of the banks. In order to direct employee behaviour and to initiate and embed behavioural changes as a response to the financial crisis, regulatory authorities focused on administrative control systems, described as those that comprise the organizing of individuals (organization design and structure), the monitoring of behaviour and to whom employees are made accountable for their behaviour (governance), and the process of specifying how tasks or behaviours are to be performed or not performed (policies and procedures) (Malmi and Brown, 2008).

Christensen *et al.* analysed the behavioural impact of the administrative control implemented by the Danish and Icelandic financial supervisory authorities in the six banks studied (three banks in Iceland and three in Denmark) through the lens of institutional theory, adopting the Burns and Scapens (2000) theoretical framework with the enhancements and extensions proposed by ter Bogt and Scapens (2014). Their case study was based mostly on the collection of evidence through semi-structured interviews with members of the banks' executive boards and employees with control responsibilities, and heads of internal audit assisting in the identification of respondents. Whereas the Icelandic banks went bankrupt and were re-established, the three Danish banks weathered the financial crisis without specific financial support.

Their case study reveals that the re-establishment of the Icelandic banks was followed by the revolutionary introduction of new values, mainly value statements on homepages and in annual reports, supported by the "tone at the top", together with supporting practices and procedures, resulting in employees' behavioural change. This contrasts with the evolutionary change authors found in Danish banks. Moreover, there were other revolutionary changes in Iceland associated with organizational structure, in particular within the area of risk management. Although identical regulatory requirements govern both countries, they conclude that in Iceland the implementation of large risk management functions meant revolutionary change, while by comparison there were no revolutionary changes in Danish banks. This article contributes to the topic of this special issue by addressing how in some contexts, the emergence of disruptive events (e.g. financial crisis) may force the introduction of revolutionary and innovative changes in control systems of banks.

Second, Saukkonen, Laine, and Suomala, with their interventionist case study, seek to unveil the rather generic limitations of investment decision-making processes, featuring institutionalized decision-making structures and multiple individuals.

Indeed, the authors conclude that an effective management accounting information utilization requires both contextual fit with the business environment and continuous reflections upon the individual managers' roles, responsibilities, and preferences. The article takes the case of an energy technology provider and its customer that seeks to invest in new technologies. In this case, the investments in more radical changes do not easily fit into the conventional decision-making procedures and thus challenges emerge. The new technologies may require perspectives (e.g., sustainability targets) that are traditionally excluded from the decision-making procedures and people that do not traditionally take part in the decision-making (e.g., sustainability managers). Thus, the article seeks to combine the perspectives of analytical and actor-based decision-making (Nielsen *et al.*, 2015, see also Nørreklit *et al.*, 2010), and explores the possibilities to enhance accounting and control in supporting investment decisions regarding new technologies.

The contribution of the article by Saukkonen *et al.* resides in its way of combining the characteristics of analytical and actor-based decision-making and identifying potential avenues for developing accounting and control practices with respect to long-term decision-making and investments. Indeed, Saukkonen *et al.* conclude that the possible limitations in accounting and control supporting decision-making may be linked to the managers' lack of expertise in using accounting tools, managers' insufficient reflections upon the assumptions embedded in the decision-making, mismatch between the demand and supply of accounting information in decision-making, and the restrictions stemming from the relatively rigid decision-making procedure. In all, these limitations may exist separately or at the same time, and overcoming these limitations may require acknowledging both the actor approach and the analytical methods to design and use accounting in a constructive way.

The results presented by Saukkonen *et al.* imply lessons learned for the special issue also regarding the wider interface of accounting and innovation. In the decision-making processes that deal with innovation, there are easily settings where the previously identified perspectives and previously nominated experts do not represent the best fit with the topic being decided upon. Therefore, especially in the innovation context, there is a need for ongoing reflections on the decision-making procedure and the parties involved in it, in order to enable the support from accounting and control to the innovation at hand.

Third, Aaltola examines management control for non-technological innovations, with the focus on managerial work (Hall, 2010) in the strategic development of these innovations. The topic is highly relevant, because these innovation initiatives may be iterative in nature and they embed learning at different levels among the partners involved.

Aaltola employs an interview study with Qualitative Content Analysis (QCA) to identify a framework representing the constituents of a successful management control enactment with respect to non-technological innovation. The framework is built on an extensive analysis of the timely research on management control for innovation and the empirical material gathered on innovation projects. In conclusion, he argues that the innovation under preparation needs to fit with the strategic story of the organization, the innovation projects need to feature experimentation (in contact) with the customers and the innovation projects need to be co-creational across the

traditionally understood organizational boundaries. Aaltola's framework benefits from recognizing the Levers of Control by Simons (1995), especially regarding the dynamics between the beliefs system inspiring innovation and the boundary system ensuring the fit with the strategic context. Also, using the management control interactively is desired in order to proceed with the innovation projects with multiple stakeholders.

Although the focus on non-technological innovations is a rather unique one, there are also implications for the broader topic of the special issue. The initial framework by Aaltola implies that the innovation projects are always executed in context, and their meaning therefore needs to be clarified and elaborated upon as part of the strategic story of the company, as well as continuously reflected upon by the customers and the key internal parties involved. Such reflections may enable management control that actually supports "investing in success", as formulated by Aaltola.

Fourth, Cleary, Healy and Walsh make an interesting contribution to the topic of innovation by analysing the tension between innovativeness, understood as the attitudinal awareness and openness of individuals to new ideas and ways of doing things (Bisbe and Malagueno, 2009, p. 374) and accounting practices. Recognizing two opposing views on the importance of accounting practices to innovation and innovativeness, with researchers on one side claiming that accounting stiffens innovation (the traditional perspective), and researchers on the other arguing that accounting enables and promotes organizational innovation (the progressive perspective), the authors contribute to the debate on the topic. Furthermore, Cleary *et al.* observe that tensions between innovativeness and accounting have been mainly analysed from the perspective of senior management and that little evidence comes from actors in lower levels of organizations.

In this same article, the Levers of Control model (Simons, 1995) is also used to frame analysis, but from a different perspective from Aaltola's study. Indeed, the authors focus on the tensions between interactive control systems (aligned with belief systems) and diagnostic control systems (aligned with boundary systems) to analyse how operational managers balance monitoring and controlling activities with creativity. Despite the considerable amount of earlier work in the area, the study offers a different perspective to research on performance measurement in organizations, given the scarce evidence of how this tension is managed, especially in the perspective of management levels below that of senior ranks.

Drawing on structuration theory (Giddens, 1984; Stones, 2005) and combining interviews, documentation, and secondary data sources, the authors looked into the experiences of the individual managers regarding the operation of control systems. They found that the performance measurement system in operation in the firm provides a way to ensure the control of activities while at the same time enabling the necessary innovations for longer-term survival and prosperity. Creative boundaries (predefined "guide rails") within which innovative solutions must be developed are sought so that tensions at the operational level between innovativeness and performance measurement can be managed. These findings contribute in an especially valuable way to this current issue by enhancing our understanding of how performance measurement systems can be used to support innovation in organizations.

Fifth, Feeney and Pierce present an in-depth case study on New Product Development (NPD), to examine the importance of interactions within social and technical structures to enable successful NPD processes. More particularly, they use Strong Structuration Theory (SST) (Stones, 2005) to examine the interactions between the managers, and employ the notion of Minimal Structures to unveil how formal and informal use of accounting information help the managers involved in the NPD process. Altogether, the article seeks to understand the structures behind the successful NPD processes that have a fruitful balance between firmness and flexibility.

The authors argue that many technical structures governing the NPD (and innovation) processes may result in firmness of the process execution. At the same time, social structures are needed to find the possibilities for flexibility that is desired for the best possible outcome. They report their remarkable suggestion that acknowledging and emphasizing the social structures in managing NPD processes may lead into more easily accepting and taking advantage of the technical structures that lead into the desired balance of firmness and flexibility.

The articles by Feeney and Pierce and Saukkonen *et al.*, combined, provide interesting insights about the supply and demand of accounting information for innovation decision-making. Indeed, the traditional supply of the accounting information (“push”, as described by Feeney and Pierce) is typically formal and undertaken by the financial department, whereas the demand for (and the use of) the accounting information takes place amongst the different managers and may be emergent and relatively informal (“pull”, as described by Feeney and Pierce). Sometimes, as Feeney and Pierce described, the managers do not even recognize that they use “accounting information” when making decisions featuring financial reasoning. Thus, not only does balancing the firmness and flexibility in the innovation processes, but also balancing the supply and demand of accounting information in those processes remain a remarkable challenge for accounting and control practices (Feeney and Pierce, see also Saukkonen *et al.*). This requires acknowledging even the minimal structures and individual managers as intentional actors within the innovation processes.

Concluding remarks

In all, the articles of this special issue provide, jointly and individually, interesting insights into accounting and control for innovation. Extensive understanding of the particular innovation and business context is desired for successful innovation, and so is acknowledging and examining the operational level innovation activities featuring multiple stakeholders and individual managerial actors. The results presented in this special issue suggest that digging deeper into the accounting and control practices is required for extending knowledge about successful innovation processes and activities. Social processes of sensemaking are required to identify and overcome ambiguities and uncertainties in the innovation contexts (see e.g., Laine *et al.* 2016b). At the same time, there is a need for designing and interactively using new technical structures and concrete accounting and control tools that help the organizations’ innovation practices.

In order to respond to the need for an in-depth understanding of the mechanisms underlying and embedded in the innovations processes and activities, engaged research processes may be suggested (Van de Ven and Johnson, 2006). As suggested by recent interventionist studies, accounting and control research may be able to find the balance between the three intellectual virtues, i.e., “techne”, “episteme”, and “phronesis”, and the focus on these perspectives may change during the research processes (see Lukka and Suomala, 2014; Lyly-Yrjänäinen *et al.*, 2017). Thus, a research project starting from the technical development related to innovation processes may yield remarkable theoretical and societal implications. Similarly, a research project starting from a theoretical examination of the innovation practices and their structures may result in technical refinements and/or societal level observations on fostering innovations. Implicitly, numerous perspectives regarding these levels of analyses are present in this special issue, with rather strong empirical examinations of accounting and control for innovation.

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