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# Does industry matter? How industry context shapes management accounting practice<sup>☆</sup>

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### ABSTRACT

The essay raises the question whether industry matters for management accounting practice and, if so, how this type of context can be accounted for in empirical work. To this end, I first explain what I mean by 'industry context' and in which sense organizational practice can be regarded as industry specific. In a second step, I discuss how the extant management accounting literature has incorporated industry effects. In particular, I highlight variation within these studies with respect to (1) the kind of industry specifics they have focused on; (2) the effects on management accounting they have identified; and (3) the empirical approach they have taken. In each case, I suggest opportunities for further research.

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### Preface

The motivation for this essay originates from a panel presentation that I was invited to give in March 2015 on the occasion of the 25th anniversary event of the journal *Management Accounting Research*. I chose to focus my talk on the question of whether industry mattered in management accounting research. My conclusion was that it mattered only to a limited extent and that there would be quite some scope for improving our understanding of how different industry contexts shape management accounting practice. In this essay, I consolidate and further develop these thoughts. I provide examples for how industry effects have been discussed in the literature and I theorize on different ways in which industry context may matter for management accounting practice. I also provide some avenues for future research.

### 1. Introduction

A key development in accounting research in the last couple of decades has been the acknowledgement that accounting practice is closely related to the broader organizational and institutional environment in which it is situated (e.g., Hopwood, 1983; Hopwood & Miller, 1994; Chapman et al., 2009). Why accounting is practiced in a particular way, and how it influences behavior, cannot be

understood by focusing only on the technical characteristics of the practice. Rather, such understanding requires seeing accounting as part of a bigger context in which it attains a specific meaning and significance. Accordingly, many scholars from the 1970s onwards started to "study accounting in the contexts in which it operates" (Hopwood, 1983) and, over time, created a rich body of literature that considerably influenced our understanding of how accounting is shaped by its context (and, in turn, shapes that context).

In the management accounting literature, this concern with a context-sensitive understanding of accounting has been pursued along different theoretical paths. For instance, in research drawing upon *contingency theory*, context is conceptualized as a set of factors that determine whether a particular accounting or control system is more or less appropriate for an organization (e.g., Otley, 1978; Hirst, 1981; Ezzamel, 1990; Gerdin and Greve, 2008). The context factors that have been examined in this line of research include characteristics of the external environment, such as environmental uncertainty or competition intensity, the type of strategy pursued by the organization, the culture of the organization, or certain characteristics of the firm's technology, such as its task complexity (cf. Chenhall, 2003). A different understanding of context emanates from studies drawing upon *institutional theory* (e.g., Brignall and Modell, 2000; Modell, 2003; Ezzamel et al., 2012). They associate context with the set of beliefs and norms that prevail in the particular institutional field to which the organization belongs. Within this field, it is 'rational' for an organization to adopt particular accounting and control systems, not least because of a concern to maintain its legitimacy within the field (Meyer and Rowan, 1977). A somewhat related way to conceptualize context is offered by *governmentality studies*. Here, context is operationalized in terms of (economy-wide or society-wide) programs and discourses that translate into particular technologies of governance, such as accounting systems (e.g., Miller and

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O’Leary, 1987; Miller, 1992; Kurunmäki and Miller, 2011). *Practice theories* conceptualize context as a nexus of practices and material arrangements, of which accounting practices and technologies form one part (Schatzki, 1996, 2002; Ahrens and Chapman, 2007). Accounting studies drawing upon practice theories have mostly focused on the immediate organizational context of accounting, but practice theory can potentially inform also analyses of practice homogeneity or variation across organizations (Lounsbury, 2008). *Actor-network theory* conceptualizes context in a nominalist way, in terms of all the entities that are connected to the particular entity in question (Latour, 1987, 1993, 2005). The context of an accounting object is therefore the network of actants to which the accounting object is connected and through which it attains its significance and strength (e.g., Briers and Chua, 2001; Andon et al., 2007; Justesen and Mouritsen, 2011).

Extant literature has hence adopted different ways to theorize the context of management accounting.<sup>1</sup> But what sort of *empirical* contexts have featured in the management accounting literature, i.e., ‘where’ has management accounting been studied? Clearly, there is an infinite number of context characteristics that could be identified in any study of accounting. Consider the case in which management accounting practice is examined in a single organization. The context here would be composed of factors such as the size of the organization (small vs. large), its purpose (profit vs. non-profit), its ownership type (private vs. public), its geographical location, the industry to which the organization belongs, or the time period in which the study is carried out. Studies would routinely mention many of these context factors when explaining the empirical setting, not only to help the reader better imagine the organization(s) under study, but also, and importantly, because such context factors may matter for interpreting the findings of the study. Indeed, we can find studies that explicitly focus on particular empirical contexts and the accounting practices that are common to these contexts. There is, for instance, research that considers the specifics of management accounting in small firms and start-ups (e.g., Davila and Foster, 2005, 2007). Other studies focus on ethnic or cultural context factors and their relevance for accounting practice (e.g., Efferin and Hopper, 2007). There is a large body of studies that looks at accounting in the public sector, in governmental and non-profit organizations (e.g., Lapsley and Wright, 2004; Samuel et al., 2009). Finally, there is research that explores forms of accounting at particular historical periods (e.g., Quattrone, 2004; Ezzamel, 2009; Walker, 2014).

Interestingly, one type of empirical context that has received comparatively little attention is that of the industry (or sector) to which an organization belongs. While studies would routinely mention the industries which the organizations under study are operating in, they would usually engage in little explicit discussion of whether and how industry affiliation matters for management accounting practice. Even though all of the above outlined theoretical approaches allow for consideration of industry context, the majority of studies does not seem to regard industry as a particularly relevant type of context and hence does not elaborate on how industry specifics shape management accounting practice.

To be sure, *some* industries or sectors have featured quite prominently in management accounting research and there is thus a sense of ‘accumulated industry understanding’ emanating from these studies. For instance, there is now an important body of research on accounting in the healthcare sector (e.g., Chua and Preston, 1994; Kurunmäki, 2004; Kurunmäki and Miller, 2011), in non-governmental organizations (NGOs) (e.g., Chenhall et al., 2010, 2013) or in the public sector more generally (e.g., Lapsley and

Wright, 2004). While many of these studies are conducted on the organizational (rather than industry) level, they do allow for some insight into the particular sector or industry more generally. For instance, when a study in a hospital demonstrates the functioning of the diagnosis-related group (DRG) system and its consequences for medical practice, this clearly has relevance for more than just the individual hospital under study, given that DRG systems are now prevalent in hospitals all over the world. Similarly, when a study of an NGO relates to the role of volunteers and their involvement in accounting practice, we learn about an important characteristic of such organizations in this sector more generally.

However, studies that explicitly discuss industry contexts are exceptions rather than the rule. Especially for studies conducted in for-profit industries, such as manufacturing firms or retail firms, there is typically little discussion of how industry context shapes management accounting practice. In quantitative studies, ‘industry’ is either translated into a set of other variables (such as environmental uncertainty or competition intensity) or it is controlled for by introducing industry dummy variables in the statistical model (cf. Sharp et al., 2013). This industry effect is hardly ever discussed in any depth, however, as the main goal of such research is usually to identify relationships between phenomena at the organizational or individual level that can be generalized across industries. Similarly, qualitative studies are typically interested in theorizing the relationship between management accounting and other phenomena, such as individual actors’ expertise and interests, organizational politics, stakeholder demands, or broader public discourses. Whether such phenomena manifest differently in some industries than in others is usually of little interest to the studies. And even if one looks at explicit (and most welcome) efforts to synthesize the state of knowledge on management accounting in different sectors or industries, the picture that emerges is somewhat sobering. While the three volumes of the *Handbook of Management Accounting Research* feature several interesting chapters on different ‘management accounting practice contexts’, such as the health care sector, non-profit organizations, or entrepreneurial companies, it is perhaps symptomatic for the state of the field that there is only one chapter that summarizes management accounting in the entire manufacturing sector (Davila and Wouters, 2007).

The objective of this essay is therefore to address the question of whether industry matters for management accounting practice and, if so, how this particular context can be accounted for in empirical work. To this end, I will first explain what I mean by ‘industry context’ and in which sense organizational practice can be regarded as industry specific. In a second step, I will discuss how the management accounting literature has approached industry effects. I then look in more detail at selected studies to show how they have examined industry specifics. In doing so, I identify opportunities for future research.<sup>2</sup>

## 2. Industry specifics

There are different ways of defining what an industry is. Most commonly, it is associated with a group of firms that offer similar products or services (Sharp et al., 2013). Classification schemes such as the Standard Industrial Classification (SIC) rely on this approach to define industries. In some cases, such definition may be contested because ‘similarity’ is obviously a matter of judgment rather than objective fact. An alternative to using externally established categorizations is to follow actors’ own understanding of who is part of

<sup>2</sup> Calls for research on particular industries have been made, for instance, by Van der Stede (2011) and Gooneratne and Hoque (2013) who both focus on the financial sector.

<sup>1</sup> The above list of theoretical approaches is illustrative rather than exhaustive.

an industry and who is not (e.g., Porac and Thomas, 1990). Irrespective of how industries are eventually defined, the idea of a *somehow similar or homogeneous group of organizations* is likely to emerge in all such definitions. For the purpose of this essay, the question of where exactly to draw the boundaries between different industries is less relevant than the general idea that there are certain differences between organizations that are commonly framed in terms of industry affiliation.

The first way to conceptualize industry specifics is then rather straightforward. Industry affiliation matters for organizational practice insofar as we commonly use the existence of particular organizational practices in order to define whether an organization belongs to a certain industry or not. For instance, we refer to an organization as a 'bank' if the organization features practices that fit our definition of a bank, i.e., it engages in lending money, facilitates financial transactions, accepts deposits, etc. Similarly, we consider an organization to be part of the automotive industry if it produces vehicles for road transport, which implies a set of recognizable organizational practices such as particular production processes. Understood in this sense, industry context is nothing else than what transpires as part of a set of (*core*) organizational practices that are commonly associated with the particular industry in question.

Such defining industry characteristics arguably account for the biggest differences between organizations in different industries. The practices that we commonly associate with a bank, for instance, are quite different from those that we expect to find in an automotive firm, which in turn differ rather considerably from those typically found in a hospital. This is simply due to the different types of organizations at hand. At the same time, this conceptualization of industry specifics may not appear very attractive for empirical research, because we deal with *defining* characteristics which are not subject to explanation in the same way as empirical observations are. It makes no sense, for instance, to ask why a bank features different organizational practices as compared to an automotive firm if the very same difference is used to define these industries in the first place. However, as I will show below, an understanding of core organizational practices can be useful for explaining differences in management accounting practice.

A second way of conceptualizing industry context is by associating it with *differences in organizational practices that correlate with industry affiliation*. Organizational practices are industry-specific in this sense if they can be empirically traced to the firms within a particular industry without however being part of the definition of that industry. Consider the example of a new regulation that is introduced in an industry. The absence of this regulation would usually not question our sense of industry affiliation. For example, organizations were already recognizable as banks before the Basel regulations, and these regulations are applied to banks rather than used to define what a bank is. Nevertheless, the regulations certainly shaped organizational practices in banking, such as risk management, and are therefore an important component of industry context and a trigger of industry specifics. In a related vein, organizational practices may be influenced by industry-specific legislation, by consultants or software firms that offer solutions for a particular industry, by industry conferences, think tanks and similar organizations who claim expertise for particular sectors of the economy where they diffuse ideas, technologies, or practices (Levitt, 1983; Phillips, 1994).

Some of the commonalities that are created through these channels are tangible in nature and can rather easily be traced to some industry-level actor or point of origin. For instance, both industry-specific software solutions and organizational practices introduced so as to comply with particular regulations have a tangible form and their origins probably need little explanation apart from identifying the software firm or regulation in question. Other industry

specifics, in contrast, are more difficult to pinpoint and explain. They may appear in the form of beliefs or norms that have developed over time through interaction among industry participants and that shape practices in a rather indirect way (Berger and Luckmann, 1967; DiMaggio and Powell, 1983). To account for such commonalities within industries, researchers in the field of organization studies have suggested concepts such as 'industry recipes' (Spender, 1989), 'industry mindsets' (Phillips, 1994) or 'industry identity' (Dhalla and Oliver, 2013). These do not define the boundaries of an industry, but their existence can be shown to be related to these boundaries.

This second conceptualization of industry specifics differs from the first one insofar as it offers more scope for empirical questions into why certain industries function differently than others. For instance, we may ask why the banking sector is more strongly regulated than other sectors, or why the role of consultants is more important in one industry than in another, or why and how a particular set of norms has developed in an industry as distinct from another. Importantly, these questions can partly be answered by recurring to the core organizational practices that we use to define the industries in question, such as when we explain banking regulation by the types of activities that banks engage in and the risks associated with these. In other words, the first kind of industry specifics (core organizational practices) can serve as an explanation for the second kind of industry specifics. The distinction between these two kinds of industry specifics is therefore helpful when thinking about what it means to 'explain' what is particular for a given industry. In the first case, explaining what is typical for an industry means understanding the core organizational practices that we use to define the industry in question. In the second case, it means identifying particular (non-definitional) factors of influence that operate on the industry level and that shape how core and other (more peripheral) organizational practices are carried out.<sup>3</sup>

Applying the above ideas to management accounting suggests two ways in which management accounting practice can be considered industry specific. On the one hand, differences in management accounting across industries may result from differences in core organizational practices that are used to define industries in the first place. For instance, it is apparent that cost accounting practices will differ between manufacturing firms and service firms insofar as, for example, service firms do not have inventory. Similarly, research and development practices are defining characteristics for some industries (such as pharmaceuticals), while they are naturally absent in others (such as retail firms). We would thus expect to find management accounting practices for research and development activities (such as stage-gate decision models) in one industry but not in the other. When industry specifics in management accounting are inherently related to some defining characteristic of an industry, the explanation for the observed management accounting practice is mainly provided by the existence and form of the core organizational practices in question. Of course, this does not mean that management accounting is necessarily practiced homogeneously within an industry. We may still observe practice variation resulting from different strategies, business models, leadership styles or other context factors that are not determined by industry affiliation. However, within a given industry, *some* level of homogeneity in management accounting can be expected due to the homogeneity in the core organizational practices that characterize that industry.

<sup>3</sup> It is important to acknowledge that the distinction between core practices and other industry-level factors of influence is not always clear-cut. To illustrate, what is considered a 'core' organizational practice may change over time as industries undergo technological change.

Origin of industry specifics	Example in a bank	Exemplary management accounting practice
Core organizational practice	Lending money	Credit assessment practice
Distinct factor of influence	Credit risk regulation	Particular risk measurement

Fig. 1. Illustration of kinds of industry specifics.

On the other hand, differences in management accounting may also originate from the second kind of industry specifics. Legislation, regulation, consulting solutions or ‘best practices’ within an industry do at times translate into distinct management accounting practices. The Basel regulations, for instance, had a significant influence on management accounting and risk management practices in banks. A similar type of influence exists in the hospital sector in many countries, where particular cost reimbursement systems (DRG systems) have been implemented as part of regulatory reforms. Management accounting practice may also be influenced by factors that are less tangible or clear-cut in terms of their origins, such as the oft-cited ‘bonus culture’ in investment banking which goes along with particular performance measurement practices. In all these cases, we would expect to find some homogeneity in management accounting within an industry, not because of how this industry operates *in principle*, but because of some (more or less tangible) context factors that shape organizational practice and, in turn, management accounting practice in that industry.

Fig. 1 illustrates these two kinds of industry specifics in management accounting with the example of the banking industry. While the core organizational practice of ‘lending money’ (and the risks associated with it) will serve as the main explanation for the existence of creditor assessment practices, a particular regulation for credit risk may explain why we find particular risk calculation methodologies in a bank. The core organizational practice in turn can contribute to explain the emergence of the regulation.

The exact way in which management accounting practice will be influenced by these kinds of industry specifics may vary. In some cases, industry specifics rather directly lead to distinct management accounting practices while in other cases they will create certain challenges for management accounting to which organizations can respond in different ways. Sometimes, what is industry specific in management accounting will be found at the level of the individual organization while in other cases it will emerge as a phenomenon between organizations. Before I come back to such variations, I first address the more general question of how the extant management accounting literature has dealt with industry effects.

### 3. Approaches to studying industry effects

In principle, the question of industry specifics could be raised in any empirical management accounting study. In practice, however, only a small number of studies show explicit interest in industry effects. The degree to which studies engage with the specifics of an industry obviously varies, from more peripheral discussions of industry effects to central concerns with such effects (cf. Chiasson and Davidson, 2005). I focus here on studies which at least recognize that industry specifics may exist and I therefore exclude studies that do not mention this possibility at all. For the sake of simplicity, I will use a binary categorization of studies into those which, despite recognizing potential industry particularities, show no real interest in examining such particularities, and a second group which does engage at least in some examination of industry effects. I furthermore distinguish between two study designs, i.e., studies located within one industry and those addressing two or more industries.

		number of industries	
		one	several
interest in industry context	no	Study that produces findings which are not related to the particular industry context studied	Study that controls for industry effects to produce generalizable findings
	yes	Study that produces findings which are tightly linked to the particular industry context studied	Study that finds and discusses differences between industries

Fig. 2. Approaches to studying industry effects.

The first group can be said to follow an ‘idiosyncratic logic’, while the second one follows a ‘comparative logic’ regarding industry effects.

Fig. 2 combines these categories and distinguishes between four kinds of studies and how they deal with industry specifics.

Let’s consider first those studies that follow a comparative logic, i.e., which, due to their study design, consider several industries. A first group of studies of this kind is located in the top right corner of Fig. 2. These are (quantitative or qualitative) cross-sectional studies with data coming from different industries. They acknowledge possible industry effects regarding the management accounting phenomenon of interest, but do not show particular interest in further examining such effects. In quantitative studies, this usually means that industry effects are ‘controlled for’, by introducing either industry dummy variables (e.g., Davila, 2005; Burkert and Lueg, 2013) or other variables that are believed to capture industry effects (e.g., Bisbe and Malagueño, 2012). Studies that use industry control variables usually have little interest in industry effects per se and rather seek to eliminate the possibility that industry affiliation affects the internal validity of the study and thus the theoretical conclusions drawn. In other words, these studies do not substantially discuss differences between industries, even if such differences are acknowledged in the statistical results. The most likely reason for this is that the studies are primarily interested in testing particular theoretical models in which industry affiliation does not feature. For instance, when examining the relationship between management accounting practices and CEO characteristics (Burkert and Lueg, 2013), industry affiliation is of no theoretical interest if it does not moderate or mediate this relationship. Hence, if industry affiliation is controlled for by means of dummy variables, this is usually done to capture some potential effects that cannot be specified and measured in more detail.

In some studies within this cell, industry is indirectly controlled for by using other variables that correlate with industry affiliation. This is typical for contingency studies which examine the appropriateness of management accounting systems in relation to different context variables such as environmental uncertainty, task



complexity, or competition intensity (Chenhall, 2003). Some of the observed differences in the level of these variables may indeed relate to industry affiliation, in the sense that some industries will feature a higher level of, say, competition intensity or task complexity than others. However, contingency studies are usually not interested in such industry specifics, but rather in generating theory that is generalizable across industries. They therefore focus on the contingency variables and hardly feature discussion of how these variables, in turn, relate to industry affiliation.

We may, however, find studies that follow the same comparative logic and that address industry effects in some more detail. These studies are located in the bottom right corner of Fig. 2. They either have an explicit interest in comparing management accounting practice between different industries or at least comment on industry-related differences that inductively emerge in their empirical findings. Generally speaking, such studies are not very widespread, however. The reason behind this is probably again related to the quest for generalization. To the extent that a study tries to generate theoretical insights that are generalizable across industries, a comparison of management accounting practice between industries may appear a-theoretical and thus not sufficiently worthwhile to engage in. If cross-sectional studies nevertheless comment on observed differences between industries, this tends to be an empirically-descriptive ‘by-product’ of a more theoretical point that they make. An example here is the study by Lambert and Sponem (2012) on the roles of management accountants. Arguing from a contingency perspective, the authors distinguish between four ‘styles’ of the management accounting function, i.e., discrete, safeguarding, partner, and omnipotent. They associate each of these styles with the dominance of a particular task, i.e., discrete control of managerial behavior, socialization of managers, facilitation of decision-making, and centralization of power, and they theorize on the benefits and risks of each of the styles. Their data come from twelve firms in different industries and while they are not primarily interested in comparing these industries, they do explain why particular industries may correlate with particular styles of the management accounting function. For instance, they write:

“A discrete management accounting function serves local management and its authority appears limited. It is associated with a dominant marketing logic and its flexible, barely formalised, structures enable the organisation to ‘stick closely’ to market trends. These firms gravitate towards high-potential growth markets such as luxury products, pharmaceuticals and advertising. Their success relies on innovation, differentiation, and also promotion.” (ibid., p. 572)

At the same time, it becomes clear from reading the conclusion that such commentary on industry-specifics is more a by-product than a main finding of the research. Indeed, the authors seem to move towards the top right cell of Fig. 2 when acknowledging that “generalising [the] findings to alternate contexts and organisations, in particular in the service industry, requires more exploration” (ibid., p. 587).

Moving to the left hand side of Fig. 2, a third group of studies are those that are located in one particular industry but choose not to discuss in any significant depth the potential specifics that emerge within that industry with respect to management accounting. The predominant rationale is again likely to be similar to the one for the studies mentioned before. What is of interest is a theoretical relationship and the industry in question is simply one possible context in which this relationship is examined. Studies of this kind include single case studies but also survey or archival work that draws upon data from one particular industry. Consider, for example, the case study by Cobb et al. (1995) on management accounting change in a

bank. While the authors explain the general context of the banking sector in the 1980s and early 1990s, their main interest is not with the particularities of this sector. The purpose of the paper is rather to explain how change in management accounting practice comes about. The authors present an ‘accounting change model’ that takes into consideration factors inside and outside the focal organization. Clearly, this theoretical ambition could have been pursued by looking at other industry contexts and there is nothing industry-specific within the findings of the paper. A similar observation holds for archival or survey studies which are located in a particular industry, without however being particularly interested in that industry (e.g., Gibbs et al., 2004). Where this usually becomes visible is when these studies acknowledge the characteristics of their sample (i.e., coming from one industry only) as a ‘limitation’ to the generalizability of their findings.

Finally, in the bottom left corner of Fig. 2, we find studies that address the specifics of one particular industry in more detail. These studies explicitly focus on a particular industry and contextualize their findings with respect to the characteristics of that industry. They may apply either quantitative or qualitative methods. An example for a quantitative study that is rooted in one industry context is offered by Eldenburg and Kallapur (1997) who examine the effects of a change in healthcare regulation on hospital practice. They find that hospitals react to regulatory changes both by recalibrating their patient-mix and by changing cost allocations. Qualitative studies of this kind typically rely on a detailed description of organizational practices and thereby highlight those dimensions of this practice that are industry specific. The management accounting literature features some fine examples of this type of research. Mikes (2009, 2011), for instance, describes risk management and performance management practices in the banking industry, using a comparative case approach. Nama and Lowe (2014) examine accounting practices in the private equity industry, using a single case study approach. Dambrin and Robson (2011) highlight specifics of performance measurement in the pharmaceutical industry, where regulatory constraints condition the possibilities for monitoring sales performance. And Miller and O’Leary (2007) discuss how the ‘technology roadmap’ that is based upon Moore’s Law serves as a control tool to coordinate the activities of different players within the semiconductor industry.

The studies in this cell do not simply control for industry effects. Neither do they seek to translate industry into other variables that supposedly capture the ‘theoretically relevant’ aspects of industry. Rather, they are interested in the way in which a particular industry context shapes accounting practice. Clearly, the studies in this cell pursue theoretical ambitions. Part of their appeal, however, stems from the fact that they do not only seek to theoretically generalize across industries, but to contribute to our understanding of the particular industry as such. In fact, theory and empirical context are not as much separable (and separated) in these studies as they are in the studies found in the other cells of Fig. 2. Explanation is tightly linked to the acknowledgement of industry context and too strong an abstraction from this context would likely limit the appeal of these studies.

In what follows, I will take a closer look at some of the studies that feature a genuine interest in industry context, in order to illustrate how they have considered industry specifics. In so doing, I shall both acknowledge the insights that these studies have generated and identify some opportunities for future research.

#### 4. Making industry matter: examples and research opportunities

Studies that have taken industry context seriously differ along several dimensions. I want to focus on three such dimensions that I

find particularly relevant. These are (1) the kind of industry specifics that these studies have focused on; (2) the effects on management accounting they have identified; and (3) the empirical approach they have taken.

#### 4.1. Kinds of industry specifics

The literature features both kinds of industry specifics distinguished earlier. That is, while some studies examine how accounting practice is shaped by the core organizational practices that are characteristic for firms within an industry, others focus on the impact of more distinct factors of influence that emerge in a given industry. Consider, for instance, Nama and Lowe (2014) who focus on the private equity (PE) industry. As they write in the introduction of their paper, their objective “is to provide a better understanding of practices within PE firms and to explore the ‘situated functionality’ of accounting (and associated calculative practices in their various forms) in the PE setting” (ibid., p. 285). This is clearly indicative of a concern with the *core organizational practices* that characterize private equity firms. Accordingly, the authors dedicate the main part of their paper to describe the different practices that constitute the typical value chain of a private equity firm, i.e., fund raising, sourcing and making investments, managing investments, realizing capital gains, and client service. In each case, they highlight the calculative practices that are carried out as part of these private equity practices. What thus emerges is a sense of how core practices in a typical private equity firm bring about certain forms of accounting whose functionality is tightly linked to the organizational practices within which they are embedded.

Other studies provide similar insights into the context-dependence of accounting in other industries, such as the restaurant business (Ahrens and Chapman, 2007), bank (Mikes, 2009), or the semiconductor industry (Miller and O’Leary, 2007). In all these studies, we learn something about the way in which firms in a particular industry *typically operate* and about the accounting practices that support such operations. Note that this does not necessarily imply examining the whole value chain of an organization—which, in many cases, would clearly go beyond the scope of a single paper. Studies may well focus on a particular part of a firm’s operations, such as their research and development efforts (e.g., Miller and O’Leary, 2007) or their risk management practices (e.g., Mikes, 2009) and demonstrate how the functioning of this part of operations brings about particular forms of accounting.

A second approach to industry specifics is to focus on identifying *distinct factors of influence* that operate at the industry level and that shape management accounting practice in this industry. Studies of this kind do not explain accounting in terms of the practices that make up the value chain of a firm, but with relation to more distinct determinants such as regulations, industry-level actors, industry standards, consultants, industry-specific software solutions or the like. Dambrin and Robson’s (2011) study of performance measurement in the pharmaceutical industry exemplifies this type of approach to industry specifics. They focus on the work of drug representatives in French pharmaceutical firms and on the problem of measuring drug reps’ sales performance. Regulatory limitations prevent French pharmaceutical firms from having access to the medical prescriptions that would allow them to trace their drug reps’ efforts to sales numbers. The authors discuss how this affects performance measurement practice in the firms and why drug reps accept a reward system that features an opaque link between efforts and compensation. By focusing on the impact of regulation, Dambrin and Robson (2011) identify a particular factor of influence that could, in similar form, also be present in other industries where private and public interests intersect. The study relies of course on some description of the typical sales process in a pharmaceutical firm. But its findings regarding performance

measurement relate mostly to the particular influence of regulation, rather than to a more generic understanding of how pharmaceutical firms operate.

The two approaches to industry specifics are complementary. Research that looks at core organizational practices in an industry provide for a foundational understanding of how industry context shapes management accounting. Theoretical perspectives that would seem particularly fruitful in this respect are those that focus on ‘practices’ as the main building blocks of organizations and that provide a vocabulary to systematically capture the various components of such practices (e.g., Giddens, 1984; Schatzki, 2002; Nicolini, 2009). Studies that approach industry context by looking at specific factors of influence, such as regulations or particular industry-level actors, can complement this foundational understanding of industry specifics. They suggest a more focused empirical analysis that zooms in on how distinct parts of the industry environment shape management accounting practice.

There is scope for further research in both directions. On the one hand, there are plenty of opportunities to further examine how the defining (core) organizational practices in an industry shape management accounting practice. This would seem worthwhile in particular for industries with rather distinctive sets of practices that entail potentially interesting variations in how management accounting is practiced. Such distinctive practices exist, for instance, in insurance firms where, somewhat similar to banking (Mikes, 2009) or private equity (Nama and Lowe, 2014), operational practices are highly calculative in nature and driven by actuarial considerations. This could raise interesting questions regarding the interplay between management accounting knowledge and actuarial knowledge, for instance. How strongly are accounting practices, such as budgeting, cost accounting, or reporting shaped by actuarial considerations and how do the different professional groups interact? Similarly, firms operating in the transportation sector, such as airlines, feature operational practices that differ quite markedly from those found in manufacturing or retail companies. For instance, their overriding concern with capacity utilization implies that such firms often take a very active approach to ‘revenue management’. How is revenue management organized and what importance does it have under different circumstances? Media companies offer another interesting setting, where program decisions have to be made and royalty arrangements established. Accounting practices will likely play an important role in these respects. More generally, there are several new business models within the internet economy which would offer interesting opportunities for accounting research.

On the other hand, there is also space for a more focused examination of distinct factors of influence, such as industry-specific regulations, industry standards, or software services for particular industries. In the pharmaceutical industry, for instance, regulation does not just exist for access to prescription data as explored by Dambrin and Robson (2011), but also in the form of patent protection rules which strongly affect the economics of pharmaceutical firms. How is this regulation reflected in firms’ investment calculations and the relative importance of particular objectives, such as development costs versus time-to-market? In the retail sector, regulation concerning anti-competitive behavior prevents retail firms from exchanging certain types of information (i.e., prices) with manufacturers. This creates interesting tensions between adherence to regulation, on the one hand, and commitment to collaborative forms of planning, on the other (cf. Free, 2007). As far as the impact of software is concerned, one can observe that firms such as SAP offer industry-specific solutions for some industries but not for others. This could motivate examination of the extent of isomorphism among the firms using these systems, but also of the way in which firms that do not fall within these industry categories go through processes of customization.

#### 4.2. Effects on management accounting

The above examples also illustrate that there are different types of effects that industry context can have on management accounting. A first way in which industry specifics may materialize in management accounting is in terms of particular *systems or tools* that are used in an industry. This may range from nuances in the design of accounting systems to more considerable idiosyncrasies that emerge in an industry.

It is quite obvious, for instance, that different types of operations across industries will imply some differences in the types of performance measures that firms use. This is particularly true for operational performance measures. Airlines, for instance, use Available Seat Mile as a measure for their capacity, which obviously has little meaning in other industries where capacity is measured differently. Manufacturing firms will measure the quality of their products at least partly by resorting to objective quality standards, while such standards are often not available for the evaluation of quality in service industries (such as consulting), where more subjective assessments of quality prevail. But even financial measures, which are appealing because of their ability to be used across contexts (Fligstein, 1990), may sometimes carry an index of the particular industry in question. Insurance firms, for instance, use the ‘combined ratio’ to represent actuarial gains or losses. Banks sometimes use risk-adjusted return measures such as risk-adjusted return on capital (RAROC), which are absent in other industries. Such particularities are not per se that interesting, but they do open up questions that may be well worth exploring. For instance, how and why did particular performance measures emerge in an industry? Why have some firms adopted them while others stick to more traditional accounting measures?

An example for a more elaborate tool that emerged within a particular industry is provided by Miller and O’Leary (2007) in their study of ‘technology roadmaps’ used to coordinate investment decisions within the semiconductor industry. The economics of the semiconductor industry have been shaped for the last 50 years by what has become known as ‘Moore’s Law’. Originally formulated by Gordon Moore in 1965 and then revised in 1975, Moore’s Law suggests that the number of electronic components on an integrated circuit would double every two years, while the cost of production would at the same time considerably decline. The law thus envisaged a clear connection between the technological and the economic dimension of semiconductor production, a connection which would only materialize however if different players within the industry developed their products at a similar speed. This is because the firms producing semiconductors relied on developments in raw materials, production systems and manufacturing equipment, without which they could not realize the improvements in the end product. For Moore’s Law to become reality, it was thus crucial to coordinate R&D activities within the industry. Miller and O’Leary show that this was achieved by means of a ‘technology roadmap’, first published in 1992 and subsequently updated. The technology roadmap was the result of a consensus building process among the industry participants. Based on each firm’s individual forecasts for technological progress and cost reduction possibilities, the industry agreed on industry-wide rates of progress and cost reduction which created a vision for the future of the industry and acted as a ‘mediating instrument’ for the investment decisions of the individual industry participants.

Miller and O’Leary’s (2007) study thus provides an example for a management accounting tool that emerges at the level of the industry where it orchestrates the behavior of different industry participants. As the authors themselves say, there is scope for “studies of other industries that use similar or related instruments for linking medium and long-term strategic objectives to shorter-term capital budgeting decisions” (p. 731). How do the particular

scientific and technological foundations of an industry shape the functioning of such instruments? And how do different firms collaborate to develop such tools?

Not always does the focus of a study have to be on industry-specific accounting and control systems, however. Industry context may shape management accounting practice also in less visible ways, for instance, by creating particular *challenges* that firms have to deal with. Dambrin and Robson’s (2011) study of sales performance measurement in the pharmaceutical industry is a case in point. What they find is not that pharmaceutical firms would use different kinds of performance measures for measuring sales performance compared to other firms in industries, but that they face a particular challenge in linking revenues to the employees who are made accountable for them, i.e., drug reps. What kind of challenges do different industry contexts place on management accounting practice, such as planning and budgeting, performance measurement, or cost accounting?

A final question that has been given little attention so far is how industry context matters for staff professionals, i.e., management accountants or financial managers. It is often stated that management accountants should act as ‘business partners’ for operational managers and that this requires them to understand the underlying business processes (e.g., Burns et al. 1996; Siegel et al., 2003; Sorensen and Richtermeyer, 2003). Little is known, however, about the extent to which ‘relevant’ business knowledge really differs across industries. When Denise Ramos took over as CFO of KFC, the fast-food company, one of the things she felt she needed to do was to work at a restaurant (Karaian, 2014, p. 17). To what extent would management accountants in different industries say the same? How well do they need to understand the particularities of an industry in order to do their job well? And what challenges do they face when trying to find out how their industry works?

In this respect, it may also be interesting to examine what happens when management accountants switch industries. On the one hand, this can highlight job-related challenges that management accountants face when they move between industries. On the other hand, it may also help explain barriers to their job mobility. Different operational processes, business cultures, regulations, or technologies can make a difference to the way in which management accounting systems are used in firms and may require management accountants to adapt their practice when they switch jobs. Where these differences are particularly strong, we may observe less job mobility on the part of management accountants—either because they anticipate not being comfortable working in a very different industry context or because firms pay particular attention to industry expertise when hiring management accountants.

#### 4.3. Empirical approaches

I have earlier distinguished between an idiosyncratic and a comparative approach to studying the effects of industry context. Studies following an idiosyncratic approach focus on one industry. This may range from single case studies in one organization to cross-sectional studies within an industry. Studies following a comparative logic feature two or more industries. Among the studies that show a genuine interest in industry specifics (rather than, for instance, just controlling for them), the idiosyncratic approach clearly dominates. The studies of Miller and O’Leary (2007), Mikes (2009), Ahrens and Chapman (2007) or Nama and Lowe (2014) all follow an idiosyncratic approach. This approach seems particularly useful for studying the first kind of industry specifics, i.e., those linked to core organizational practices, since such a study requires in-depth engagement with the characteristics of an industry, which is arguably best achieved by focusing on one industry only. A comparative logic is of less avail in such a case, as this kind of industry



specifics does not easily lend itself to a comparative analysis. For instance, when examining how management accounting supports lending practices in a bank, not much will be gained from comparing this with the role of management accounting in the research department of a pharmaceutical firm. Only if the same type of core practices are in focus (e.g., research activities in different industries) would a comparative approach seem fruitful.

Both types of empirical approaches however can be helpful when the interest is with the second kind of industry specifics, i.e., those related to distinct factors of influence such as regulations, standards, consulting services, or software solutions. An idiosyncratic approach would again allow for an in-depth examination of the factors that influence the particular industry in question and how they translate into management accounting practice (e.g., Dambrin and Robson, 2011). A comparative approach, in contrast, can shed light on how one and the same type of factor operates in different industries. One could, for instance, compare the relative impact of regulation on management accounting across different industries, so as to get a sense of how strongly management accounting practice is regulated in different sectors. Similarly, it could be worthwhile to examine how software vendors customize (or not) their products for different industries.

## 5. Conclusion

The essay has raised the question whether industry matters for management accounting practice and, if so, how this particular context can be accounted for in empirical work. I have highlighted that existing studies vary in terms of how strongly they take industry context into consideration. Moreover, those studies that take industry context seriously differ with respect to the kind of industry specifics they focus on; the effects on management accounting they identify; and the empirical approach they take. For each of these dimensions, I have suggested some research opportunities that future studies could exploit.

It is of course important to emphasize that not every empirical study needs to comment on industry specifics. There are good reasons for aiming to produce findings that hold across industries and for examining how accounting is shaped by other components of the empirical context in which it is practiced, such as societal discourses (e.g., Miller, 1991), national culture (e.g., Jansen et al. 2009; Merchant et al. 2011) or corporate strategy (e.g., Roberts, 1990). Yet, a more explicit consideration of industry specifics would appear to be worthwhile, not only from an empirical point of view, i.e., so as to highlight how different industries work, but also in theoretical terms, i.e., to offer better explanations for why accounting is practiced in the way it is. Tracing the scientific, technological, material and social dimensions of industry-specific practices can improve our understanding of commonalities and differences in management accounting practice across organizations.

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