

# Management control and public sector performance management

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## Abstract

**Purpose** – The purpose of this paper is to investigate whether and how evolving ideas about management control (MC) emerge in research about public sector performance management (PSPM).

**Design/methodology/approach** – This is a literature review on PSPM research through using a set of key terms derived from a review of recent developments in MC.

**Findings** – MC research, originating in the management accounting discipline, is largely disconnected from PSPM research as part of public administration and public management disciplines. Overlaps between MC and PSPM research are visible in a cybernetic control approach, control variety and contingency-based reasoning. Both academic communities share an understanding of certain issues, although under diverging labels, especially enabling controls or, in a more general sense, usable performance controls, horizontal controls and control packaging. Specific MC concepts are valuable for future PSPM research, i.e. trust as a complement of performance-based controls in complex settings, and strategy as a variable in contingency-based studies.

**Research limitations/implications** – Breaking the boundaries between two currently remote research disciplines, on the one hand, might dismantle “would-be” innovations in one of these disciplines, and, on the other hand, may provide a fertile soil for mutual transfer of knowledge. A limitation of the authors’ review of PSPM research is that it may insufficiently cover research published in the public sector accounting journals, which could be an outlet for MC-inspired PSPM research.

**Originality/value** – The paper unravels the “apparent” and “real” differences between MC and PSPM research, and, in doing so, takes the detected “real” differences as a starting point for discussing in what ways PSPM research can benefit from MC achievements.

**Keywords** Public sector, Performance management, Management control

**Paper type** Literature review

## 1. Introduction

Management control (MC) is a ubiquitous issue of business and public management. However, as a more specific concept, MC evolved during the last couple of decades in the accounting discipline. Originally, it emerged as an approach focusing on downward steering and control of financials (Anthony, 1965). Recent expansions and enrichments in MC concepts include, on the one hand, a broadening of the set of control variables, such as human resource elements and culture (Merchant and Van der Stede, 2007). On the other hand, a re-orientation of its focus can be observed, e.g. from downward steering to bottom-up support (enabling controls) or for including elements of trust in addition to controls (Emmanuel *et al.*, 1990; Simons, 1995; Ahrens and Chapman, 2004; Kamminga and Van der Meer-Kooistra, 2007). There is also a long-lasting tradition of contingency thinking in MC, which hints at diverging control forms being appropriate depending on the context (see e.g. Ouchi, 1979; Hofstede, 1981; Birnberg *et al.*, 1983; Speklé, 2001).

The goal of our paper is to investigate whether and in what way evolving ideas about MC emerge in research about public sector performance management (PSPM). At first

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glance, important MC concepts appear to have become influential in PSPM alongside the public sector reforms labeled as new public management (NPM). Under NPM performance, information for internal purposes and result-based controls (Hood, 1995, pp. 95-98) is seen as crucial for making the public sector more businesslike, although performance information for external purposes related to accountability is also opportune (see e.g. Bouckaert and Halligan, 2008; Behn, 2003). Whether more recent MC concepts, such as links with strategic and operational management as well as with human resource management, also emerge in PSPM research is the subject of our investigations.

Our paper contributes to an underexplored research area: MC is a predominantly private sector theme. Two review papers, one dealing with contingency-based research on MC systems (Chenhall, 2003) and the other with contingency-based management accounting research (Otley, 2016), reveal that the public and non-profit sector is largely absent in this research. A key word search in a number of public financial management journals confirms that MC is not widely studied. These observations underline the relevance of confronting PSPM research with concepts of MC, as this paper aims to do. Because the research community in MC is originating mainly in private sector management accounting research, whereas PSPM is the domain of partly diverging research communities in public management and public administration, similarities among these discourse circles may be hidden by terminological differences. Our paper wants to unravel the “apparent” and “real” differences between MC and PSPM, and, in doing so, to take the detected “real” differences as a starting point for discussing in what ways PSPM research can benefit from MC achievements.

Our research goal gives rise to the following three research questions:

- RQ1.* How have traditional ideas about MC, as a top-down, financially focused and cybernetic concept, been expanded and enriched over time?
- RQ2.* In what sense do these evolving ideas about MC also emerge in the research about PSPM?
- RQ3.* What can be learned from MC literature for the further development of PSPM research, so which aspects of the former can be inspiring for debates about the latter?

This paper proceeds as follows: Sections 2, 3 and 4 attempt to answer *RQ1*, *RQ2* and *RQ3*, respectively. Section 5 concludes our findings and suggests routes for challenging research in the future.

## 2. A reflection on evolving ideas about MC

This section first discusses traditional concepts of MC, and subsequently addresses more recent insights in this field. Because we take evolving ideas on MC as a framework for our literature review on PSPM in the next section, an extensive review of MC ideas seems appropriate. Our discussion of traditional MC concepts is mainly based on two widely used textbooks on this subject (Anthony and Govindarajan, 2001; Merchant and Van der Stede, 2007), as well as some recently published review papers (Chenhall, 2003; Malmi and Brown, 2008; Strauß and Zechner, 2013; Otley, 2016). Our discussion of emerging issues in MC is particularly inspired by the reflections in the papers by Strauß and Zechner (2013) and Malmi and Brown (2008).

### 2.1 Traditional concepts of MC

In their widely used textbook, Merchant and Van der Stede (2007) define a management control system (MCS) as “everything managers do to help ensure that their organization’s strategies and plans are carried out, or if conditions warrant, that they are modified” (p. XIII). Control is seen as the back end of the management process, after strategies and goals have been formulated. MC intends to ensure that employees act in accordance with these strategies and goals (Merchant and Van der Stede, 2007, pp. 6-7).

Anthony (1965), who is seen as a seminal author in this field, clarifies that MC is the intermediate link between strategic control and task (or operational) control. According to Anthony, MC is a regular, systematic process with steps repeated in a predictive way, which is primarily oriented toward achieving financial objectives, and as such rooted in economics. But there is also a behavioral component because MC is about how top managers interact with lower-level managers in the organization and how these managers interact with their employees (Anthony and Young, 1994, p. 5). Anthony and Govindarajan (2001) further argue that MC is characterized by feedback- and/or feedforward-controls, which rely on a cybernetic approach. Feedback control starts with formulating targets, which are the result of a planning process; subsequently, these targets are compared with actuals through monitoring; finally, corrective actions can be considered when actuals are falling behind targets. Feedforward control means that, whenever a negative gap is observed, an *ex ante* correction of the existing planning and targeting is considered (see also Emmanuel *et al.*, 1990, p. 13).

Traditional understandings of MC also include the concepts of controllability and control tightness. Controllability refers to the extent to which managers can influence the domains for which they are held accountable, and it relates to various types of responsibility centers, such as cost centers, investment centers and discretionary expenses centers (Anthony and Young, 1994, pp. 13-17). Control tightness concerns the extent to which consequences in the form of rewards or punishments are connected to differences between actual and targeted levels of performance (see e.g. Merchant and Van der Stede, 2007, pp. 118-124). Opportunities for tight control are, for example, expected to be larger when activities are more standardized, the underlying goals more unambiguous and the environment more stable.

So, in a nutshell, traditional concepts of MC can be characterized as follows:

- MC aims to stimulate lower-level managers and employees to act in accordance with the strategies and goals of the organization.
- MC is the link between strategic management and operational management, but it is clearly separated from these both domains.
- MC is structured as a regular and repeating process of feedback and feedforward control, i.e. by targeting, monitoring of actuals and corrective action when actual (or planned) accomplishments are lagging behind goals.
- MC is predominantly financially oriented, e.g. on budgets and budgetary control.

According to Malmi and Brown (2008, p. 290), the start of any MCS is the managerial challenge of directing employees' behavior. There are equivalents of MC that are not always clearly demarcated: Ouchi (1979), for instance, uses the label organizational control. Strauß and Zechner's (2013) review of MC literature concludes that, originally, the decision making or information approach was dominant, while later the focus of research and the underlying MCS approaches have been shifted to the control approach, which was accompanied by an expansion of the control aspects that are subsumed under the label MCS. The increasing diversity of MCS understandings also resulted in an increasing variety of MCS types.

## 2.2 MC variety

Although MC is traditionally focused on financials as in budgetary control, expanding control beyond financials has become widespread. This especially holds for the public sector, where the effectiveness of policies and quality of delivered services are symptoms of non-financial control domains.

A well-known concept of MC variety has been developed by Merchant and Van der Stede (2007, pp. XIII-XIV, chapters 2-3) in their object-of-control framework. These authors make a distinction between four objects of control: results, action, personnel and cultural

controls. Results controls regard the effects of the employees' actions, such as produced outputs or serviced clients. These controls give discretion to the employees in taking actions for accomplishing these results, which makes them appropriate for employee empowerment and decentralization. However, when desirable results are difficult to identify, and the organization has sufficient knowledge about the procedures leading to the desired results, action controls are more suitable. These controls vary between behavioral constraints and behavioral guidelines, such as protocols. Additionally, organizations often need personnel control approaches such as job design, recruitment procedures and training facilities, which aim to ensure that employees are capable and motivated to do their job. Finally, cultural controls, which are meant to stimulate employees in sharing certain beliefs and values, can be relevant.

Other concepts on control variety share some control objects of the above framework, although sometimes, under different labels, they also introduce additional objects of control. In his seminal paper about organizational controls, Ouchi (1979), for example, distinguishes between markets, bureaucracies and clans. Markets deal with the control problem through their ability to precisely measure and reward individual contributions of employees to the organization's goals. According to Ouchi, bureaucracies rely instead upon a mixture of strict evaluation with a socialized acceptance of common objectives. Both control forms are similar to respectively results controls and action controls as distinguished by Merchant and Van der Stede. Ouchi's third variant "clan control" builds on a socialization process among employees which creates common values and eliminates goal incongruence between individuals. This seems to be similar to cultural control (and elements of personnel controls) in Merchant and Van der Stede's framework. However, Ouchi (1979, pp. 836-840) claims that clan control can be dominant when desirable results or actions are difficult to define (e.g. in professional organizations), while in the object-of-control framework, culture control is merely a complementary control type.

As indicated in Section 2.1, MC is often separated from strategic management, but there are also frameworks which aim to connect MC with strategic management. Simons' (1995) levers of control framework is exemplary in this respect; it distinguishes between diagnostic, belief, boundary and interactive systems. Diagnostic systems help to keep course in a management process, and they rely on the usual budgeting and performance management systems (PMS). However, they face the risk of manipulation by managers whose rewards are dependent on increasingly demanding targets and therefore other levers are needed. Belief systems rely on common values and norms that may inspire managers and their employees to do the right things in the light of the organizational goals. The boundary systems define a space within which managers and employees can operate autonomously. Finally, the interactive systems emphasize regular discussions among various hierarchical levels and groups of employees within the firm, sometimes including outsiders, about how to cope with strategic uncertainties. Simons' overarching idea about levers of control is that companies need diverging control systems to balance creativity and control of high-educated, empowered employees (see also Tessier and Otley, 2012, pp. 174-175), in order to keep on track (diagnostic systems) and to avoid intolerable activities (boundary systems), while, at the same time, reassuring the core values of the company (belief systems) and stimulating employees to communicate about strategic threats and new opportunities (interactive systems); see Berry *et al.* (2009, pp. 6-7) for a review of studies inspired by Simons' framework. We can easily see that diagnostic systems are similar to results controls in the Merchant and Van der Stede framework, while belief systems are analogous to cultural controls. However, boundary systems in Simon's framework are more outspoken controls stimulating empowered employees than action boundaries as part of action controls in the Merchant and Van der Stede framework. Simons' interactive systems, finally, are a particular lever for finding new strategic opportunities, and as such do not have their counterpart in the object-of-control framework (see also Strauß and Zechner, 2013, p. 262).

### 2.3 *Inter-organizational controls*

One of the characteristics of MC is that it aims to stimulate lower-level managers and employees to act in accordance with the strategies and goals of the organization (see Section 2.1). This means that MC is hierarchical, i.e. it operates vertically within the organization. However, in practice, organizations also work together with other organizations, as partners or as “parents” of a joint venture, and then they need to control their “joint” activities or organization. This refers to an inter-organizational or horizontal control mode. Horizontal controls are increasingly important in the public sector, especially when organizations collaborate with each other in conducting certain tasks, such as in public transport or waste processing, which relates to so-called joined-up government (Kurunmäki and Miller, 2006). In addition, outsourcing of non-core activities, such as maintenance and administrative activities has become widespread in the public sector. Outsourcing also requires horizontal control, for example, when the core governmental organization makes appointments with its outsourcing partner about quality standards and pay rates (for control issues in outsourcing, see e.g. Ditillo *et al.*, 2015).

Vertical and horizontal control share many characteristics, such as the domains of control, as discussed in Section 2.2, but there are also differences. Partnerships between organizations may be more versatile than intra-firm relationships. According to van der Meer-Kooistra and Vosselman (2000, p. 54), horizontal control evolves around three phases: the contact phase, in which control supports the search for a suitable partner; the contract phase, in which the authorities and responsibilities of the partners are established; and, finally, the execution phase, in which the parties monitor whether appointments about activities or results have been fulfilled. These authors also argue that the inter-organizational control types will be different according to the degree to which partners are mutually dependent (related to the idiosyncrasy of the underlying activities), as well the measurability of outputs and the length of the transaction period (van der Meer-Kooistra and Vosselman, 2000, pp. 58-62; see Berry *et al.*, 2009, p. 9 for a review of studies on horizontal controls). Bureaucratic or market control types can be opportune, but also trust-based relationships can form a substitute for control, especially when parties are largely dependent upon each other (see further Section 2.5).

### 2.4 *Enabling vs coercive controls*

Basically, MC is coercive, i.e. it is related to a command relationship between top management and lower-level managers or between these managers and their employees. In contrast, there can be an enabling form of control which seeks to put employees in a position to deal more autonomously with the inevitable contingencies in their work. An enabling control form is especially important when employees are intrinsically motivated to do their job in an autonomous manner, which also increasingly applies to the public sector with its large share of highly educated employees.

The distinction between coercive and enabling control relies on the work by Adler and Borys (1996) about formalization, which regards the rules and procedures that guide employees’ activities. Enabling formalization is supporting employees in doing their tasks by disclosing how these tasks are executed, and by stimulating them in taking measures for an effective operation of these tasks. Enabling procedures may help committed employees to do their job and to reinforce their commitment (Adler and Borys, 1996, p. 83). Ahrens and Chapman (2004) translated Adler and Borys’ ideas about coercive and enabling formalization to the MC domain. Their research not only shows that coercive and enabling controls are both needed, but also how coercive controls can be mobilized to support lower-level management, and thus become enabling controls. In this respect, communication about what controls want to achieve and how to use them, is core. This study also indicates that MCs can be interwoven with operational controls (see also Wouters and Wilderom, 2008).

### 2.5 Trust and control

Trust is often seen as a substitute for or a complement to control. If control is seen as a relationship between a top manager and a lower-level manager or between this manager and his/her employees, this relationship in principle is assumed to be laid down in a contract, for example, a budget or a performance standard, as for instance the NPM philosophy in the public sector assumes. When activities are relatively standardized and conditions are stable, this is feasible. However, in cases of higher uncertainty, the specification of complete contracts is impossible or at least difficult (for insights of contract theory, see Hart, 2017). Trust, therefore, serves as a complement, or, under extreme complexities, as a substitute for control (see, for instance, Johansson and Siverbo, 2011; Ahmad *et al.*, 2018). Trust implies that parties in a contractual relationship do not need to check the actions or results performed by other parties, expecting that these other parties will not act against the agreed objectives or values. Trust can focus on various aspects, such as competences or job motivation (see, e.g. Kamminga and Van der Meer-Kooistra, 2007). It is a necessary precondition for any division of labor and delegation of responsibilities in an organization.

### 2.6 Control packaging

As explained in Section 2.2 on control variety, MC can have diverging components. Control packaging means that these components should be mutually aligned rather than operating in isolation (Malmi and Brown, 2008, p. 288; Otley, 2016, p. 55). Control packaging is inherently complex because it covers a broad spectrum of controls and it implies a holistic view on MC, which includes interrelationships between various control components and their embeddedness in changing contexts. As argued in Section 2.2, control variety is already widely used in the public sector for a long period, which makes control packing also important in this sector.

One of the attempts in conceptualizing control packaging comes from van der Kolk *et al.* (2017). These authors point out that traditionally a distinction is made between complementary or substitutive relations between components. However, their study suggests that there can be another opposing pole to complementarity, i.e. a competitive relation, which means that the combination of two components is less effective than the separate effectiveness of both. An interesting expansion of control packaging has been developed by Löfstal and Jontoft (2017, pp. 61-62), who are suggesting various MC dimensions that can be subject of balancing, particularly control types (e.g., financial or non-financial), control purposes (trust building or safeguarding) and control uses (e.g. coercive or enabling).

Soft and informal controls could also be part of control packages, in addition to formal controls like those originating in the management accounting repertoire. Soft or informal controls regard measures that enhance the motivation and commitment of employees in aligning their own goals to organizational goals (see e.g. Flaherty and Pappas, 2012). Soft controls are, for example, a communicative and participatory leadership style and the empowering of employees. Informal controls are not laid down in documents, such as budgets, performance reports or instructions, and can include talks at the coffee machine, contacts during lunch breaks, internal sports or cultural events which enhance the commitment of employees to their colleagues and the organization (see illustrations in van der Kolk *et al.*, 2017).

### 2.7 Contingency-based thinking about MC

Contingency theories conceptualize the fit between certain contextual factors and dependent variables like organizational structures, leadership styles or accounting systems (see Lawrence and Lorsch, 1967, about the contingency theory in general; Fiedler, 1967, about contingency theory in leadership research, and Otley, 2016, about contingencies of management accounting practices). Basically, contingency-based MC assumes that rather than a “universal” MC concept irrespective of its context, the content of MC has to match with a varying context as operationalized by one or more contingency variables. Contingency variables in MC research

include the external environment, technology, organizational structure, strategy and culture (Chenhall, 2003; Otley, 2016). These contingency variables can be linked to several MC issues, varying from more or less traditional MC issues, such as budgets and PMSs to contemporary MC issues like the balanced scorecard and value-based management. Contingency variables can also have a more specific focus, such as budget participation or performance information for rewarding, and, additionally, MC issues beyond the domain of management accounting can be addressed, such as personal and cultural controls (see Chenhall, 2003, pp. 129-132). The remainder of this subsection focuses on some frameworks dealing with contingency-based MC.

An influential framework on control contingencies was developed by Ouchi (1979), who distinguishes two contingency variables: the measurability of outputs and the knowledge of the transformation process. When outputs are measurable but knowledge of the transformation process is low, output or market control is appropriate, while behavior or bureaucratic control is suitable in case of difficult to measure outputs but much insight into the transformation process. When the measurability of outputs and the knowledge of the transformation process are high, both these control types can be used. However, in case of low measurability of outputs and poor knowledge of the transformation process clan control is appropriate. The clan requires recruitment of the right people and/or training to become operational, but there is no need for extensive monitoring; self-control is seen as effective.

Speklé (2001) develops a neo-institutional economic framework for MC variety. The contingency variables regard the characteristics of transactions as developed by Oliver Williamson (1975) in his transaction-cost-economics theory: uncertainty, asset specificity and information asymmetry. In addition to control types which are similar to Ouchi's market and bureaucratic control, Speklé introduces two new control types: first, exploratory control which is opportune under high uncertainty, moderate or high asset specificity and low information asymmetry. The parties involved in the control process develop joint insights about the elements on which they wish to exercise control. And second is the boundary control (see also Simons, 1995), which is appropriate under high uncertainty, moderate or high asset specificity and high information asymmetry. The parties involved in the control process are then unable to jointly develop insights into the elements which they want to control, and agree on avoiding certain types of unwanted behavior.

Given the theme of our paper, Hofstede's framework on MC-contingencies in public sector and non-profit activities is relevant. Hofstede (1981) introduces four contingencies for various control types: ambiguity of objectives, measurability of outputs, knowledge about effects of interventions and repetitiveness of activities. Depending on where activities stand with regard to these contingencies, the appropriate control mode corresponds to one of six different types: routine, expert, trial and error, intuitive, judgmental or political control. The first three types are cybernetic models, as discussed in Section 2.1. However, the other three types ask for more complex and less deterministic ways of control. Here objectives are ambiguous and outputs difficult to measure. Key elements in these types are the values and the culture of the actors. Whereas keeping on a clear route to goal achievement is core to a cybernetic control approach, in a non-cybernetic control mode, a dialogue among actors with diverging interests as well as sense making of their actions is what matters (see also Burchell *et al.*, 1980).

Otley's (2016) review of contingency-based management accounting and control over the past 35 years shows that survey-based studies are by far dominant, while in-depth qualitative studies form a small minority. Otley (2016, p. 55) is supportive of more qualitative studies about contingencies of management accounting and control that give in-depth insights into specific empirical settings. In a similar vein, Chapman (1997, p. 203), in a more reflective contribution to this type of research, propagates field study research instead of all too simplistic questionnaire-based research. Moreover, rather than the existence of management accounting information, it is the exploration of the diverging roles of accounting, for example, a rational or ammunition role, which deserves further interest.

2.8 Reflections

Our review shows that MC originally was a quite simple but straightforward concept focusing on a cybernetic approach to financials, as in budgetary control. At a later stage, MC became more pluralistic by including components beyond financials such as guidelines for actions or elements of organizational culture (see also Strauß and Zechner, 2013). In addition, while, originally, MC was separated from strategic and operational management, these management domains increasingly became intertwined. Moreover, the limits of MC as a top-down approach were emphasized, leading to the introduction of enabling controls, self-control and also of trust as an alternative device for MC in complex situations. Finally, there is a long research tradition in identifying context-specific MCSs, although the various frameworks do not always seem to be based on empirically firmly established theories.

Generally, MC has evolved into a broader set of concepts, but this comes at a cost: MC might have become less unambiguous. Figure 1 summarizes our review. Our review also shows that the MC literature introduced many labels for diverging types of control. Because some of these are similar or at least refer to comparable understandings, Figure 2 shows their links.

3. Which MC issues are emerging in PSPM research?

3.1 Design of the literature review

The basis of our review is a selection of articles on PSPM which have been reviewed by the authors in a study of commonalities and differences of performance management (PM) practices in the private and in the public sector (van Helden and Reichard, 2016). From the total set of reviewed papers on PM in the public and the private sector covering the period of 1995–2014, we selected 40 articles concentrating on public sector organizations (PSOs)[1]. These articles were identified by using Google Scholars and Web of Science as databases (for more details, see van Helden and Reichard, 2016). The 40 articles were evaluated to detect the extent to which they deal with issues of MC and if and to which extent they apply

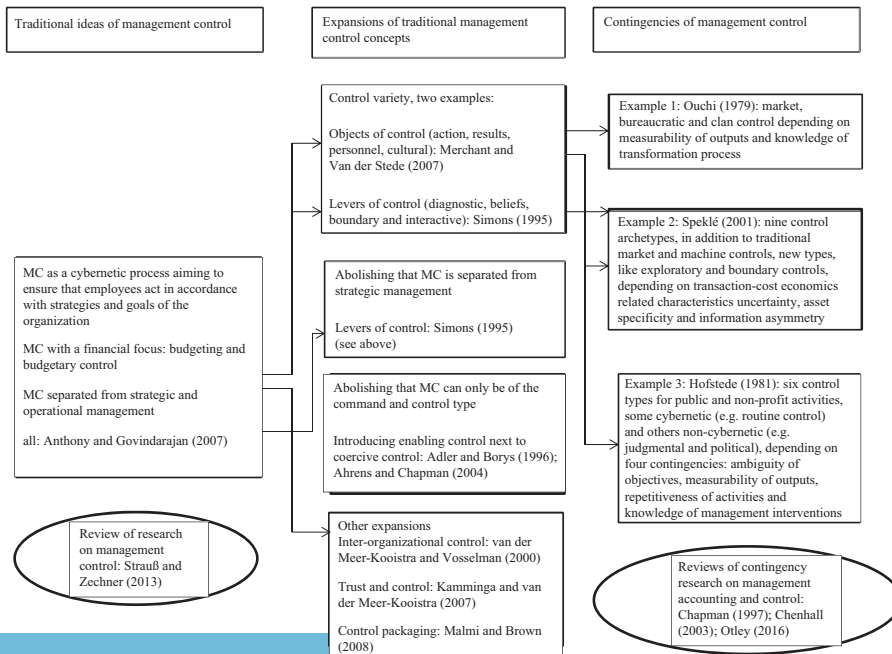
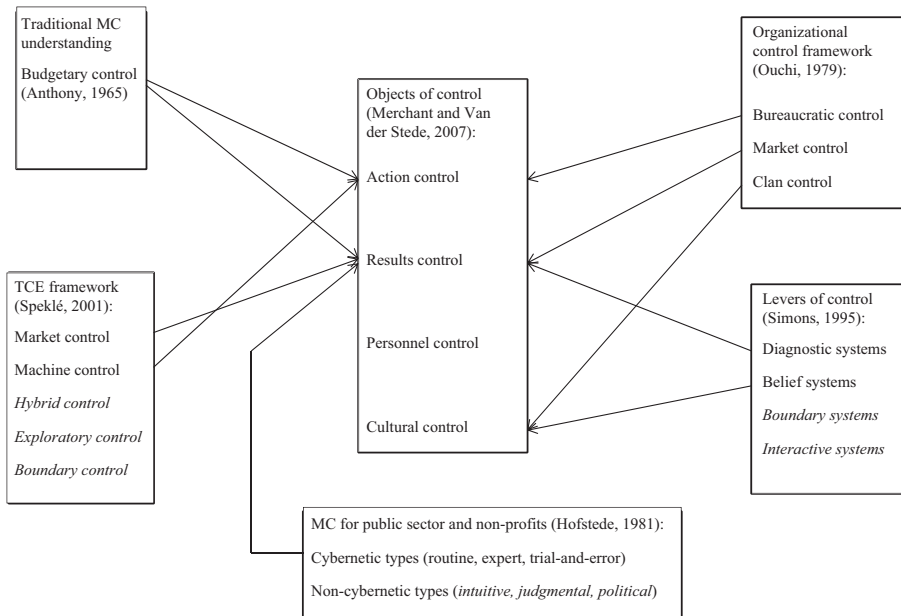


Figure 1. Evolution of management control concepts





**Figure 2.**  
Management control  
objects and similar  
understandings

**Notes:** An arrow indicates a somewhat similar term; Merchant and Van der Stede’s framework serves as a benchmark; more or less unique labels are in italics

an “MC-terminology,” i.e. if specific terms and arguments of the MC-debates have been used. Additionally, the articles were analyzed with regard to the special focus they put on the PM issues, such as design, implementation, use and impact, as well as on relevant purposes, such as control and accountability.

As our selection of PSPM literature covers only the period between 1995 and 2014, we screened in a kind of cross-check a set of more recent articles on PSPM, published in 2015–2017. Based on a search in Web of Science, which resulted in 30 articles on general PSPM-issues, we selected 10 articles with some focus at control issues for a more in-depth investigation[2]. At the end of next section, we present the results of this cross-check.

We deliberately did not integrate these 10 articles published in the years 2015–2017 in our primary selection of 40 articles as published over the years 1995–2014. The latter selection focuses more generally on issues of public and private sector PM and is based on the number of quotes (in Google Scholar and Web of Sciences), where the most quoted articles were selected. However, the 2015–2017 articles were selected on their topicality (MC and PSPM) because for recently published articles the number of quotations is not an appropriate selection criterion. We prefer using the recent selection as a cross-check of the primary selection rather than integrating both groups of articles because the underlying criteria for selecting articles are substantially different.

The review of the articles covers the following aspects of MC as search criteria:

- control objects (results, action, personnel and cultural controls);
- control levers (diagnostic, belief, boundary and interactive control levers);
- types of control (e.g. coercive or enabling controls);
- integration of MC in a cybernetic control and/or learning cycle;

- 
- measurement dimensions in the context of MC (e.g. financial or non-financial data); MC and PSPM
  - control packages;
  - links of MC to other control layers, e.g. strategic or operational control;
  - inter-organizational control (horizontal control relations between several organizations); and
  - role of contingency factors in MC variety.

### *3.2 MC issues in PSPM research*

With one exception (Verbeeten, 2008), none of the reviewed articles is explicitly dealing with MC issues through the adoption of MC terminology and as such contributing to the special discourses in the MC community. Most of the authors are affiliated with Public Administration, Public Management or even Political Sciences, and seem not to be familiar with the specific terms, issues and research aims of the MC community. Consequently, these authors are not involved in the state-of-debate in MC research, even if they study similar problems of steering and control and even if they present results of their research that are partly comparable to studies in the MC field.

Almost 60 percent of the reviewed articles concentrate on the use of performance data, while about 15 percent are studying the effects of PM on organizational performance and a few other papers are focusing on the implementation of a performance management system (PMS) (see van Helden and Reichard, 2013 for an analytical framework of PM). While several articles do not explicitly specify a certain purpose of PM when analyzing the PM issues under review, about one-third of all articles concentrate particularly on performance-based funding. A few other articles deal instead with other purposes of PM, e.g. with service improvements or accountability issues.

As the reviewed articles deal with PM, it is not surprising that almost all articles take a dominant view on results controls as object of controlling activities. Only two articles mention quite marginally also action controls. Specific control levers as for instance diagnostic or beliefs controls are usually not subject of explicit analysis. Implicitly, however, diagnostic controls are in the center of analysis which again is not surprising, given the strong role of performance information in management processes, e.g. for budget composition, service improvement or reporting. Other dimensions of MC are not in the center of the reviewed PSPM-articles. Enabling controls, for example, did not play an explicit role in the literature, while coercive controls are – at least implicitly – the most often used type of control in PSOs. Trust as a control-compensating factor is again not an explicit issue of the reviewed articles.

In line with the concern of PSPM, the PMSs studied by the authors of the reviewed articles usually cover many dimensions of “performance,” i.e. financial and non-financial figures, including inputs, activities, outputs and outcomes (van Helden and Reichard, 2016, pp. 318-319). “Packaging” of different control objects is not an explicit issue of the reviewed articles; only implicitly very few papers indicate such combinations of control objects (e.g. if combinations of different control dimensions, including diverging performance domains, as in Balanced Scorecards, are packed together; see Kloot and Martin, 2000). Also, the integration of control measures into a cybernetic cycle for feedback and/or learning purposes could only be exceptionally identified within the reviewed papers. The picture of possible links of a PMS to strategic control is diffuse. On the one hand, quite some articles deal with several perspectives on strategy issues, often in relation to policy making (e.g. concerning the impact of PM on the success of certain government policies; see van Helden and Reichard, 2016, pp. 321-322). On the other hand, only a few papers explicitly discuss links of managerial control with strategic control. And, finally, no explicit connection of a PMS to operational controls could be identified.

More than half of the reviewed articles deal with intra-organizational controls as they are typical for MC: higher level managers exercise performance-based control toward lower-level units of their organization, usually along traditional patterns of hierarchy. A few other papers address issues of political control within a PSO (e.g. control of a municipality by councilors). Interestingly, about 40 percent of the reviewed articles shed light on a control issue which is quite typical for the public sector, i.e. the control of PSOs by superordinate authorities (e.g. supervision of agencies by line ministries or of municipalities by superior funding authorities). These control patterns are discussed as “horizontal control” in the MC literature and represent a more indirect mode of control which can rely on traditional bureaucratic “action control” or on “results control” – where the latter is narrowly connected with performance measures. And, finally, a few papers focus on citizens as a specific group of stakeholders holding PSOs accountable for their performance.

Lastly, we also examined the articles with regard to the role of contingency factors that may explain variety in MC issues. About one-third of all articles deal quite explicitly with contingencies, e.g. with the role of different policies or tasks, the size of PSOs, legal requirements, cultural patterns or traditions. We conclude that contingency-related analyses are relevant in the two fields of MC and PSPM research.

The cross-check of more recent PSPM literature confirmed our general picture, but also showed some deviations: With one exception (Verbeeten and Speklé, 2015), the reviewed articles do not deal explicitly with MC issues and do not apply the specific MC terminology. Again, the majority of papers address the use of performance data, but quite a number of them shed light on the design of a PMS. In line with our main review, almost all articles focus on results controls, follow a diagnostic control lever and deal with financials and non-financials. Interestingly, two of the ten articles explicitly discuss scorecard approaches and thus combine several control dimensions (packaging). Strategic issues are, to some extent, on the agenda, although usually in a quite diffuse manner. In contrast to our main review, all ten papers focus on intra-organizational controls while horizontal controls between several organizations are not an issue. Finally, half of the cross-checked articles deal explicitly with contingencies. Despite some differences among the two literature reviews, we conclude that PSPM literature does not take much notice of the scientific debate about MC, although it touches some of the objects and issues of MC research.

### 3.3 MCS and PSPM research – “two ships passing in the night”?

As we have shown in Section 2, the MC concept originates from private sector (management) accounting, but it has expanded its analytical dimensions and perspectives remarkably over time. As current textbooks and literature reviews show, MC is nowadays a rather broad concept which deals with various issues of “management.” The concept also employs ideas and tools of human resource management (e.g. motivation and leadership) and of PM. MC is, however, so far genuinely an issue of private sector management. It has not been extensively applied to the public sector[3]. As our literature review has shown, PSPM-related scientific articles often deal with the same or at least with similar issues as they are on the agenda of MC research. MC and PSPM research can thus be considered as two partly overlapping circles. PSPM research can therefore learn from MC research in some specific respects, as will be shown in Section 4. However, as far as they address similar issues under different labels, the perspective for learning is limited. To put differently, it would lead to “the same wines in different bottles.”

Obviously, controlling issues are relevant in all organizations and performance information plays an important role in such controlling processes. Frameworks developed by Otley (1999) and Ferreira and Otley (2009) are exemplary of the links between MC and PM. The academic communities of MC and of PM could therefore be quite narrow relatives because both are aiming to provide support to steering and controlling of organizations. While “Management Control” in general has a quite broad perspective on control (although concentrating on the management circle and fading-out e.g. issues of external accountability),

“Performance Management” has a focus on the different stages of measuring the performance of an organization, and provides performance information for various purposes (e.g. for accountability). In the private sector, the relatedness of both communities has grown over time which results in various fruitful cross-benefits.

However, our literature review clearly shows that the MC and the PSPM-communities are two separated discourse circles which do not take much notice from each other. In this view, they can be perceived as being “ships passing in the night” (for a similar observation, see Andrews and Esteve, 2015). To some extent, this can be explained by the origin of the two concepts: MC was born and grew up in the private sector management accounting field, many of its proponents still belong to this field and most of their publications are published in accounting journals specializing in finance or business management[4]. On the other side, the study of PM emerged in both the public and the private sector some decades ago and – particularly in the public sector – PSPM became a domain of scholars belonging to a wide range from Political Sciences, Public Administration, Public Management to Organization Theories. This quite mixed interdisciplinary group of scholars is publishing their results in journals belonging to their home-disciplines – and these disciplines are quite at a distance to accounting. Thus, cross-fertilization so far did not or only marginally take place.

#### 4. Enrichment of PSPM research by MC ideas

This section discusses possible consequences of evolving MC issues for PSPM research, which were not found in the reviewed PSPM literature. Each of the following sub-sections will end with promising suggestions for future research.

Traditional views on MC and MC variety will not be addressed further because these are either implicitly or explicitly observable in our review. As an exception, we refer to performance-based budgeting as an interesting case of a linkage of MC and PSPM. This is a budgeting tool that largely follows the stereotypical cybernetic approach but rather than purely focusing on financials, it includes performance targets and indicators on, for example, the number of services provided, efficiency and quality. The link between financials and performance information differs from informative to allocative variants of such budgets (i.e. from giving background information to supporting the allocation of resources by means of e.g. outputs per unit of input; OECD, 2007; see the review of performance-based budgeting studies by Mauro *et al.*, 2017).

##### 4.1 Usable performance management systems, including enabling controls

The distinction between coercive and enabling MC-modes, as introduced in Section 2.4, may be too simplistic for unraveling “usable” PMSs. An enabling MC, according to Adler and Borys (1996), specifically relates to repair, internal and external disclosure of processes and to flexibility. In a more general sense, an enabling PMS is meant to be supportive to decision making by managers and their employees. This broader understanding of enabling MC also includes attempts to involve potential users in the design of a PMS, similar to budget participation (Brownell, 1982). In addition, it covers multi-layered PMSs which recognize that lower-layer PMSs need to balance the requirements about performance information by the top layer in the organization and the context-specific needs of the lower organizational layer (Broadbent and Laughlin, 2008). This may lead to partial decoupling between both layers, which potentially enhances the usability of PMSs at the lower layer (Johnsen, 1999; Brignall and Modell, 2000). Cuganesan *et al.* (2015, p. 293) argue that this broader understanding of enabling PMSs “offers potential for greater engagement with performance measurement by employees in terms of how performance measurement can be useful in local contexts.”

There is some private sector research that could be a further inspiration for studying enabling PMSs in the public sector. Jordan and Messner (2012), for example, investigate how operational managers are reacting toward the incompleteness of performance indicators. They find that, whenever enabling PMSs are replaced by coercive systems, accuracy and reliability of indicators are becoming more important, while, under an enabling use, incumbents are accepting that indicators are giving an incomplete picture of their work.

We envisage various promising routes for future research:

- Under what conditions and how can participation by lower-level managers and employees in the design of PMSs enhance the usability of those systems?
- How and why can a loosely coupling of a lower-layer PMS with a top-layer PMS contribute to the usability of these lower-layer systems?
- Can opportunities for participation in the design and re-design as well as access to the functioning of PMSs by lower-layer managers and their employees contribute to their feeling of “ownership” of these systems?
- Is there evidence that performance indicators in an enabling PMS may be less accurate and reliable than in a coercive PMS, for being acceptable to its potential users, in terms of the managers or employees who are subject to this PMS?

Single case studies and multi-organizational field studies are prone for addressing these questions. These types of methods can provide sufficient context-specific information about how PMSs are designed and used.

#### *4.2 Performance management systems as part of control packaging*

Although our review indicated that control packaging is not overwhelmingly apparent from research on PSPM, our claim is that the underlying ideas are visible in some parts of this research, although not labeled as such. Abernethy and Lillis (2001), for example, found in a study about PMSs in Australian hospitals that the content of these systems is driven by the organization’s strategy and mediated by its organizational structure. More in particular, they show that a strategy of service innovation matches with a decentralized organization structure, which fits with performance indicators about both health quality and cost of services, while a direct link between this strategy and the PMS does not exist. So, we see that the PMS is linked to a package of strategy and structure, which belong to the broader understanding of MC systems. Verbeeten and Speklé (2015) conducted a study about various types of PMS use in Dutch municipalities, including planning and control, accountability and learning. They observe that reliance on rules and procedures positively impacts a results-oriented culture. In terms of the MC terminology, action and results controls are then interconnected, which points to a major aspect of MC packaging. This also applies to another association of this study, i.e. between attention focusing as one of the types of PMS use and a results-oriented culture.

Other more traditional contingency-based studies on the determinants of performance information design and use also suggest variables, such as decision-making authority, leadership style and pay for performance, which can be seen as components of the MC repertoire (Cavalluzzo and Ittner, 2004; Moynihan and Pandey, 2010; see also Cuganesan *et al.*, 2015, p. 293). So, there is PSPM research that recognizes MC packaging, but not always explicitly as an issue for PSPM design. In addition, there may be a need for linking various PMS dimensions, as in the Balanced Scorecard (see attempts to adapt the scorecard to the specific needs of PSPM, e.g. Northcott and Taulapapa, 2012; Moullin, 2017).

From an MC view, the different concepts and tools of a PMS within a PSO can be seen as elements of a control package. To shed more light into such packages, the following issues could be studied:

- What types of interconnections between various MC components, including organizational structure, actions control and PMS, can contribute to the effectiveness of the whole MC repertoire?
- How can new MC components, such as results-oriented PMSs, strengthen or lessen the impact of the existing MC repertoire (e.g. action or cultural controls) on the achievement of organizational goals and on performance?
- For organizations applying a Balanced Scorecard type of PMS: explore in what way the public sector context is operationalized in a specific performance dimension or perspective, and, additionally, under what conditions and how can various PMS dimensions, such as financial, operational or external, be linked to each other for enhancing the effectiveness of these systems?

#### 4.3 Trust and performance-based control

Trust is a relational concept, and, in a control context, it points to a relationship between a manager and his/her employees. As explained in Section 2.5, trust implies that parties do not feel the need to monitor and check the behavior of the other parties due to the expectation of proper behavior of them. Traditionally, trust and control have been seen as either competitive (i.e. more control leads to less trust and vice versa) or complementary (i.e. control and trust are mutually reinforcing devices). However, Vosselman and van der Meer-Kooistra (2009) claim that the relationship between trust and control is dynamic and thus changing over time. Translated to the focus of our paper, this means that, at first, control via gathering performance information may promote trust between parties: by showing good performance employees will enhance their trustworthiness in the eyes of their managers. Subsequently, trust building can be enhanced further through voluntary disclosure of performance information subject to shared values among managers and their employees. However, trust can also be partly destroyed in the absence of shared values and relatively severe performance-based controls.

This dynamic relationship between trust and control can be of utmost importance to PSOs. A growing importance is attached to performance-related controls during the last decades, but this comes at a cost: employees complain about a too high administrative burden regarding the registration of their performance and they feel mistrusted by their managers (see Power, 1997 for similar problems in auditing). So, there is a call for less performance reporting in terms of the amount of performance indicators and the frequency of reporting. This could give rise to a challenging research theme, which as far we know, is under-researched until now, i.e.:

- How can performance information in an MC setting contribute to increasing trust between managers and their employees (or between politicians at the executive and legislative levels)? At what stage trust is negatively affected by too much reliance on performance information? How can performance information devices be simplified in order to maintain trust?
- Are the above dynamics between performance-based controls and trust different for diverging public sector branches or work processes? For example, is trust-based PM more applicable to professionalized branches, such as health care and teaching, and less suitable for processes requiring lower levels of professionalization, such as facility management and secretarial services?

#### 4.4 New directions for contingency-based PMS in the public sector

In addition to budgeting, PM is one of the most important dependent variables in contingency-based management accounting research. In Otley's review, only 7 out of 165 papers are studying public sector management accounting practices, and only 2 of these 7 papers (Budding, 2004; Verbeeten, 2008) deal with contingency-based research on PM practices. While Verbeeten's study is concerned with the impact of goal clarity and incentives on organizational performance in Dutch PSOs, Budding's (2004) article deals with uncertainty as contingency variable in PSOs. In addition, there is public sector research that sees the intensity of the use of performance information as contingent upon various contextual factors, e.g. on task characteristics (ter Bogt, 2004; Askim, 2007).

However, many other contingency variables which are apparent in private sector management accounting research do not seem to play a prominent role in public sector management accounting research. This especially applies to strategy as a contingent variable. In his reflection on public sector strategic management research, Johnsen (2015) points to many schools of thought in this field, ranging from more formal planning-oriented schools to process-oriented and entrepreneurial approaches. In private sector contingency research, strategy is often categorized through strategic positions such as cost leaders and innovators (Otley, 2016, p. 51). In PSOs, however, strategic positions such as defenders, prospectors and reactors may be more applicable (Boyne and Walker, 2004).

The following routes for future research are recommended:

- A replication of research in which goal clarity, uncertainty and task diversity are contingency variables for the design and use of PMSs (with respect to task diversity, there may be a need for unraveling underlying differences in tasks, such as the extent of standardization or external stability).
- Taking private sector contingency-based management accounting research as a starting point for translating contingencies to a public sector context, for example, by investigating how differences in organizational culture (e.g. hierarchical vs egalitarian) are impacting the design and use of a PMS.
- Using various schools of thought for strategic management as an angle for contingency-based PSPM studies, for instance, by combining the planning school (emphasizing formal and transparency aspects of processes) with the learning school (with its emphasis on emerging strategies, as well as collective and bottom-up processes).

## 5. Discussion and conclusions

This paper investigated whether and in what way evolving ideas about MC emerge in research about PSPM. The MC discipline shows a rich set of innovations during the last couple of decades, ranging from an expansion of control objects beyond financials, to configuring the interrelationships between control objects (packaging), and from introducing enabling controls in addition to coercive controls to including trust as a complement for control. These innovations are potentially a fertile soil for other disciplines, which share an intra-organizational focus with MC. One of these disciplines is PSPM, which has witnessed a growing attention both from practitioners and academics.

Our investigations show that recent issues in MC only marginally emerge in PSPM research. This can be explained by the disconnection between both research communities: while MC research originates in the management accounting discipline, PSPM research mainly belongs to the public administration and public management disciplines. These diverging disciplinary backgrounds seem to be a major reason that MC ideas have not been adopted by PSPM researchers. Nevertheless, some overlaps between MC and PSPM research can be observed, particularly with regard to a cybernetic control approach, control variety and

contingency-based reasoning. Both academic communities also share an understanding of certain other issues, although under diverging labels. This regards enabling controls or in a more general sense usable performance controls and control packaging. Our research additionally suggests that certain MC concepts and tools might be valuable for future PSPM research, especially by investigating trust as a complement of performance-based controls in complex settings, and by further deepening our insights into the role of strategy in contingency-based studies. More specific directions for future research were presented in the previous section.

Our paper has attempted to unravel the “apparent” and “real” differences between MC and PSPM research, and, in doing so, to take the detected “real” differences as a starting point for discussing in what ways PSPM research can benefit from MC achievements. An implication of our investigations is a plea for relaxing the boundaries between these two currently remote research disciplines: on the one hand, this might dismantle “would-be” innovations in one of these disciplines and on the other hand, it may provide a fertile soil for mutual transfer of knowledge.

Seeing the management accounting-oriented MC community and the public management-oriented PSPM community as largely disconnected and thus mutually impermeable can partly relate to a limitation of our review design. It cannot be excluded that there exist a few articles linking MC issues and PSPM. Apart from that, there is a research community that potentially connects MC and PSPM research, and that is public sector accounting. Otley’s review of MC studies only includes two papers on PSPM, while only 20 percent of the papers in our selection of PSPM research are coming from public sector accounting journals. This observation gives rise to a challenging direction for future research, particularly by reviewing the extent to which PSPM research as published in public sector accounting journals resonates with emerging ideas on MC.

## Notes

1. The list of the 40 reviewed articles about public sector performance management and the list of the additionally reviewed articles about PSPM in the period 2015–2017 are available from the authors via e-mail request.
2. See previous endnote.
3. According to own searches in scientific databases like Google Scholars or Web of Science, there are only very few articles dealing with MCS issues in the public sector. In a recent literature review, Otley (2016) identified 7 of a total of 165 empirical publications focusing on PSOs.
4. There is also some evidence that the MCS concept did not equally spread out in the accounting communities of various countries. It seems for instance that the MCS debate is less intense in non-Anglophone countries, as e.g. in Germany or France. It may be subject to further reflection, if the basic term of “control” has diverging perceptions in different countries. While in English “control” is quite identical with “steering,” it has a much stronger connotation of scrutinizing, testing or verifying in Continental European countries.

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