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Performance-measurement system design and functional strategic decision influence: The role of performance-measure properties

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A B S T R A C T

Although conceptual research in the accounting literature suggests that the use of performance-measurement systems affects the influence of organizational actors, empirical evidence for this suggestion is largely limited to anecdotal evidence and a few qualitative case studies. Drawing on institutional theory, we develop predictions that link the use of performance measures to the influence of functional subunits in strategic decision making. Our research model tests the effects of two types of performance-measure use on functional strategic decision influence: (1) decision-facilitating use and (2) use for accountability. Moreover, we propose that the effects of using performance measures for these two purposes depend on the reliability and functional specificity of the measures the functional subunits use. We empirically test our hypotheses and a research question with survey data from 192 marketing directors of German firms. We find that the effect of performance-measure use on functional strategic decision influence depends on the two properties of the performance measures. We find no significant effects when these properties are not considered. However, decision-facilitating use of performance measures has a positive effect on functional strategic decision influence when the measures are specific to the functional subunit. With respect to the use of performance measures for accountability we find countervailing effects, as the effect on functional strategic decision influence is positive when the measures are more reliable but negative when they are more specific to the functional subunit. We discuss these findings in light of existing evidence and theory.

Introduction

Research in managerial accounting suggests that important links exist between the use and design of accounting systems and strategic decision making within organizations (Abernethy & Vagnoni, 2004; Chenhall & Langfield-Smith, 1998; Lillis & van Veen-Dirks, 2008; Luft & Shields, 2003). In particular, one major research stream explores how the use of accounting information relates to organizational actors' influence on the strategic priorities of organizations. Conceptual work has studied this research issue intensively, stating, for example, that influence in strategic decision making derives from using accounting information that allows adaptation to uncontrollable events (Bariff & Galbraith, 1978; Saunders, 1981). Other studies assert that power structures depend on accounting information to confer legitimacy on decisions and actions and to shape attitudes and beliefs about their rationality (Ansari & Euske, 1987; Markus & Pfeffer, 1983). Surprisingly, however, only limited empirical research has followed up the rich body of conceptual spadework, and extant investigations rely primarily on anecdotal evidence and a few qualitative case studies (Abernethy & Chua, 1996; Markus & Pfeffer, 1983; Wickramasinghe, 2006).

In particular, prior research does not address two important issues. First, ambiguity remains as to what association, if any, exists between the use of accounting

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systems and the distribution of strategic decision influence within organizations (Abernethy & Vagnoni, 2004). Second, both conceptual and empirical investigations widely neglect the role of information characteristics for the associations in question. As information characteristics affect both decision-making quality (Ittner & Larcker, 2001) and evaluators' judgments of performance information (Lipe & Salterio, 2000), an important question is whether the use of accounting information affects influence structures per se or whether its impact depends on specific information properties.

We study these research issues in the context of the distribution of power among functional subunits in profit-oriented organizations, such as the marketing, operations, or research and development functions. These functions represent central organizational actors and they often pursue countervailing interests in important strategic decision areas (Bariff & Galbraith, 1978; Ortega, 2003), with the primary arena of functional competition for strategic influence being the top management team, which includes the company's most senior decision makers (Fligstein, 1987; Jensen & Zajac, 2004). The most widely observed top management team structure entails a functionally differentiated assignment of responsibilities among the most senior executives representing each function as, for instance, the Vice President (VP) Marketing, the VP Operations, or the VP Finance (Carpenter, 2011; Henri, 2006). In the struggle for strategic influence, the heads of each function strive to gather support for their strategic initiatives from their functional peers and from the Chief Executive Officer (CEO), who presides over the management board (Hambrick & Mason, 1984).

The focal construct of our study is functional strategic decision influence, which refers to the extent to which a functional subunit, represented at the top executive level by the functional VP, has influence over the organization's strategic priorities and the use of strategic resources (Abernethy & Vagnoni, 2004, p. 216). Functional subunits represent important organizational actors that often pursue opposing interests in important strategic decision areas (Ortega, 2003), and the question of how much a particular function can influence strategic decision making has major implications for the organization's strategic trajectory and approach to market challenges. For instance, the R&D function might lobby for a strategic emphasis on product sophistication and quality, whereas the operations function might advocate focusing on production costs and efficiency.

Drawing on institutional theory as a theoretical foundation, we propose that the use of performance measures for various purposes and with different properties in a given function may affect the functional VP's influence over strategic decision making at the top executive level. In particular, we consider two types of performance-measure use. First, prior literature has identified a *decision-facilitating demand* for managerial accounting information (Demski, 2008; Demski & Feltham, 1976), which refers to the need for accounting information for planning and decision making. Second, investigators have found both analytical and experimental evidence for an *accountability demand*, which refers to the need for accounting information to document performance and contribution to organizational value (Birnberg, Hoffman, & Yuen, 2008; Evans, Heiman-Hoffman, & Rau, 1994). Our study investigates how the use of performance measures for decision facilitation and accountability within a particular functional subunit affects the functional subunit's strategic decision influence. Moreover, we investigate whether and how performance-measure properties affect the associations between performance-measure use and functional strategic decision influence. We analyze two properties that seem particularly relevant in a functional context: performance-measure reliability and functional specificity.

We empirically test our predictions using a cross-industry sample of 192 marketing directors of German firms. Results support our expectation that the purported effects depend on the properties of the performance measures the functions employ. While model estimations show no significant effects without taking interaction effects into account, we find evidence that the effect of decision-facilitating use of performance measures on functional strategic decision influence is positive and significant for high levels of performance-measures' functional specificity. With respect to the use of performance measures for accountability, we find that the effect is significantly positive for high levels of reliability and negative for high levels of functional specificity.

Our investigation extends the scant body of extant empirical research on the relationship between performance-measurement system design and power structures within organizations. We find that performance-measure properties play an important role that prior studies have overlooked. Further, in light of analytical and experimental support for the accountability demand for accounting information (Birnberg & Zhang, 2010; Birnberg et al., 2008; Evans et al., 1994), our study provides evidence for the importance of the accountability demand for functional power structures, thus extending this nascent stream of empirical research to an examination in an organizational context. Finally, our study substantially broadens the empirical basis of prior research in this area of inquiry by relying on a large sample of business companies across several industries.

Theoretical background and hypotheses

Our research model, presented in Fig. 1, hypothesizes that functions relying more strongly on the use of performance measures will attain greater influence in strategic decision making because they conform to institutionalized expectations within the organization (DiMaggio & Powell, 1983; Meyer & Rowan, 1977) and favorably shape the image perceptions of other top executives (Ansari & Euske, 1987; Markus & Pfeffer, 1983). We predict that the use of performance measures for decision facilitation and accountability positively affects functional strategic decision influence.[1] Additionally, we hypothesize that the

[1] Prior research has also identified a *decision-influencing demand*, which relates to the role of accounting information to incentivize and control employees. As we describe below, decision-influencing use is more relevant to solving control problems on the local level within the function. Therefore, our model treats decision-influencing use of performance measures as a control variable without testing specific hypotheses.