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RESEARCH NOTES AND COMMENTARIES

CHIEF STRATEGY OFFICERS: CONTINGENCY ANALYSIS OF THEIR PRESENCE IN TOP MANAGEMENT TEAMS

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Drawing upon contingency theory, we analyze the antecedents and performance consequences of chief strategy officer (CSO) presence in top management teams (TMTs). We argue that strategic and structural complexity affects the decision to have a CSO in the TMT and its effect on firm performance. The results of a sample of S&P 500 firms over a five-year period reveal that diversification, acquisition activity, and TMT role interdependence are positively associated with CSO presence. However, we also find that the structural choice to have a CSO in the TMT does not significantly affect a firm's financial performance. This first systematic analysis of CSO presence informs research on CSOs and contributes to the emerging literature on TMT structure.

INTRODUCTION

Over the past few years, the number of firms with a chief strategy officer (CSO) in their top management team (TMT) has increased considerably. Recent research indicates that there is a "growing prevalence in this role in many industries, and CSOs are already serving large multinational companies around the world" (Breene, Nunes, and Shill, 2007: 86). Signaling the considerable attention devoted to strategy in contemporary firms, and reflecting the TMT's extraordinary task demands, CSOs are senior executives in the TMT who are explicitly responsible for a firm's strategy. Typically, CSOs' core role comprises the management of the firm's strategy process, as well as strategy execution activities, such as business and corporate development (Angwin, Paroutis, and Mitson, 2009; Breene *et al.*, 2007; Dye, 2008).

In light of the CSO position's prevalence and apparent importance, the lack of research on this TMT role and its implications for the TMT is surprising. The few existing studies on CSOs are based on qualitative fieldwork, offering rich descriptions of the CSO's role, characteristics, and capabilities (Angwin *et al.*, 2009; Breene *et al.*, 2007; Dye, 2008). To date, however, there is no empirical study on CSO presence and, in general, little systematic research on the structural choices in the TMT (Hambrick, 2007; Hambrick and Mason, 1984). Addressing these gaps, we draw upon contingency theory and argue that firms facing strategic and structural complexity choose to have a CSO in their TMT. The reasoning supporting the inclusion of the study's antecedents builds on the TMT's additional task demands and the increased information-processing

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requirements. Furthermore, we suggest that CSO presence in the TMT improves the financial performance of firms facing the above conditions.

The study complements qualitative research on CSOs with the first large-scale analysis of the antecedents and performance implications of CSO presence. We systematically identify those contextual factors that affect CSO presence, some of which have already been suggested in prior research (e.g., Angwin *et al.*, 2009; Breene *et al.*, 2007). In addition, the study's findings inform the emerging research on TMT structure (Beckman and Burton, 2011; Finkelstein, Hambrick, and Cannella, 2009; Hambrick, 2007; Menz, 2012). A comparison between our study's results and those on chief operating officers (COOs) (Hambrick and Cannella, 2004; Marcel, 2009; Zhang, 2006) and chief marketing officers (CMOs) (Nath and Mahajan, 2008) shows that function-specific factors affect the decision to have a functional TMT member. The study also reveals that the structural choice for a CSO depends on the existing roles in the TMT and their interdependence, suggesting that the overall TMT structure is decisive.

BACKGROUND AND HYPOTHESES

Following Breene *et al.* (2007), the term *chief strategy officer* describes those senior executives in the TMT who are explicitly responsible for a firm's strategy. While these executives are known by multiple titles, increasingly often CSO, our study's initial exploratory interviews with CSOs, an analysis of executive titles and role descriptions in S&P 500 firms, and the existing literature (Angwin *et al.*, 2009; Breene *et al.*, 2007; Dye, 2008; Menz, 2012) reveal that they share a common core role, as specified below.

The first part of the core role includes activities generally related to a firm's strategy process. Indeed, CSOs deal with firms' complexity by professionally managing the strategy processes and leading various strategy activities, such as competitive and market analyses, strategy development, long-range planning, and monitoring the strategy implementation (Angwin *et al.*, 2009; Breene *et al.*, 2007; Dye, 2008). For example, Abbott Laboratories' executive vice president, corporate development is responsible for "various aspects of corporate strategic planning and business development" (Abbott Laboratories, 2013). In large multibusiness firms, this part of the role may also encompass consolidating the units' strategic plans on the corporate level, as well as supporting the unit heads in clarifying and implementing the firm's corporate strategy (Angwin *et al.*, 2009; Dye, 2008). The second part of the core role highlights strategy execution, as it more specifically relates to business and corporate development activities, such as managing strategic initiatives, mergers and acquisitions (M&A), and alliances (Breene *et al.*, 2007). Symantec's CSO, for example, "directs Symantec's overall corporate strategy, Symantec's mergers and acquisitions, corporate venture investing and strategic partnerships" (Symantec, 2013).

When firms choose to have a CSO in their TMT, they make an important structural choice that affects how their strategy and TMT are organized. First, delegating strategy activities to a specialized TMT member ensures that these tasks receive sufficient attention and resources, and have clear responsibilities. CSOs typically report directly to the CEO, who remains ultimately responsible for a firm's strategic decisions (Dye, 2008). The complexity and extraordinary task demands of leading a contemporary firm, particularly for a CEO who is also the chairman of the firm's board of directors, may require an executive in the TMT who focuses on the numerous strategy-related tasks. Indeed, "greater complexity on all fronts may explain why … top management spends less than three hours a month, on average, discussing strategy issues (including M&A) or making strategic decisions" (Breene *et al.*, 2007: 91) and, thus, why firms may opt for a CSO.

Second, CSOs coordinate their TMT's strategy-related activities and contribute new perspectives to their TMT. While in firms without such a structural arrangement strategy formulation and implementation are often split between the CEO and/or other executives, the CSO manages the entire strategy process and selectively involves other executives when necessary (Angwin *et al.*, 2009; Breene *et al.*, 2007; Dye, 2008). This also distinguishes the CSO from other functional TMT members, such as the COO. While COOs may be in charge of strategy implementation (Hambrick and Cannella, 2004; Marcel, 2009), they are typically less involved in coordinating the formal strategic planning process than CSOs. Accordingly, COOs' activities tend to be more short term and internally oriented than those

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of CSOs, who are responsible for long-range planning and the identification of future business opportunities in the firm's external environment. In addition, CSOs provide a firm-wide corporate strategy perspective, which divisional heads in the TMT may lack. Specifically, CSOs focus on value creation on the corporate level by coordinating strategies across organizational levels and units (Angwin *et al.*, 2009), which includes, for example, supporting cross-business or cross-functional collaboration.

The preceding inevitably leads to the questions of why firms choose to have a CSO in their TMT, and to what extent they benefit from a CSO. To systematically analyze these questions for the first time, we draw upon contingency theory (Burns and Stalker, 1961; Chandler, 1962; Galbraith, 1973; Lorsch and Allen, 1973), which posits that an organization's structure depends on conditions, such as the environment (Burns and Stalker, 1961), firm size (Child, 1975), and strategy (Chandler, 1962). TMT research has applied contingency theory to explain other structural TMT forms, particularly the addition of a functional TMT member, such as a COO or CMO (Hambrick and Cannella, 2004; Marcel, 2009; Nath and Mahajan, 2008).

Antecedents of CSO presence

While there may be many reasons for firms to appoint a CSO to their TMT, such as "complex organizational structures, rapid globalization, new regulations, the struggle to innovate" (Breene *et al.*, 2007: 86), we focus on five specific antecedents that represent an organization's strategic and structural complexity. Their selection involved a thorough analysis of the literature on functional TMT members, specifically on CSOs, and exploratory research as described above. This ensured the inclusion of the most important function-specific antecedents as recommended by prior research (Menz, 2012).

First, the extent of a firm's business portfolio *diversification* increases the complexity of strategy tasks (Geringer, Tallman, and Olsen, 2000; Henderson and Fredrickson, 1996). The CSO's role encompasses corporate strategy activities, such as the configuration of the business portfolio, the coordination of the business units to realize synergy, and the management of firm-wide programs to transform the organization. Moreover, prior research has shown that large diversified firms create dedicated units, often with dozens or even more strategy specialists (Grant, 2003), to cope with the complexity (e.g., Kaplan and Norton, 2005; Markides, 1995). While we acknowledge that there may be differences in the foci of the CSO's role across organizations with differing diversification strategies (related versus unrelated diversification), we expect that diversified firms are more likely to have a CSO in their TMT than single-business firms.

Second, a firm's *acquisition activity* creates additional task demands and complexity for a firm's senior management (Hambrick and Cannella, 2004). In firms that frequently engage in acquisitions, the TMT has a greater need to delegate these additional tasks, such as the management of the transaction process or the postmerger integration, to a specialist executive. This is supported by the CSO role description in many firms, which indicates that activities related to M&A are often part of the core role (Angwin *et al.*, 2009; Breene *et al.*, 2007). During an important acquisition, the CSO may even exclusively deal with such tasks. Particularly firms engaging in multiple acquisitions, often referred to as acquisition programs, need to develop appropriate structures and processes, which will increase the strategy-related task demands and which require a long-term perspective (Laamanen and Keil, 2008). Hence, we expect that firms with high acquisition activity are more likely to have a CSO in their TMT than other firms.

Third, similar to the preceding antecedent, a firm's *alliance activity* requires a high level of management attention, particularly when firms maintain an alliance portfolio.[1] Alliances, joint ventures, and other strategic partnerships between two or multiple firms are formed to develop new businesses, enter new markets, or acquire knowledge. To cope with the corresponding complexity, firms create dedicated alliance functions (Kale, Dyer, and Singh, 2002), for which the CSO is typically responsible. Therefore, and since alliances are "... another management challenge for stressed-out executives, as big companies enter into literally thousands of relationships spanning the globe" (Breene *et al.*, 2007: 91), we expect that

[1] We thank an anonymous reviewer for suggesting the inclusion of this antecedent.

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firms with high alliance activity are more likely to have a CSO in their TMT than other firms.

Fourth, *firm size* is among the most common determinants of organizational task demands and of strategic complexity (e.g., Henderson and Fredrickson, 1996; Sanders and Carpenter, 1998; Williamson, 1975). According to prior research, there is a positive relationship between a firm's size and its complexity, which may require task division and specialization from the TMT (Donaldson, 2001; Hambrick and Cannella, 2004). In particular, as an organization grows, additional challenges and tasks arise, such as strategizing on multiple levels or competing in different markets and regions, thereby increasing the complexity. Therefore, and in line with qualitative fieldwork on CSOs (Angwin *et al.*, 2009; Delmar, 2003; Dye, 2008), we suggest that larger firms are more likely to have a CSO in their TMT than smaller firms.

Fifth, a firm's *TMT role interdependence*, which refers to the extent of information and resource-sharing between TMT members as well as to the coordination within the TMT (Finkelstein *et al.*, 2009: 124), affects the strategic complexity. In firms with less interdependent TMTs, for instance, consisting of a CEO, a CFO, and largely autonomous divisional heads, much of the strategizing happens on the divisional level. In contrast, firms with more interdependent TMTs, for example, consisting of the CEO and several functional executives, require the coordination of diverse functions to develop and execute the firm strategy (Guadalupe, Li, and Wulf, 2012) and, thus, are faced with a higher complexity on the corporate level. To deal with this complexity, the latter firms are more likely to complement their TMT with a CSO. In sum,

> *Hypothesis 1: Strategic and structural complexity—represented by (a) diversification, (b) acquisition activity, (c) alliance activity, (d) firm size, and (e) TMT role interdependence—is positively associated with the likelihood of CSO presence in the TMT*.

Performance consequences of CSO presence

In line with the notion that key organizational actors enhance firm performance (Castanias and Helfat, 1991; Finkelstein *et al.*, 2009), existing fieldwork indicates that CSO presence may indeed be advantageous (Angwin *et al.*, 2009; Breene *et al.*, 2007). Breene *et al.* (2007), for instance, observe that there are "clear short-, medium-, and long-term benefits for companies that name strategy chiefs—advantages that justify the added expense and complexity at the top of the organization" (p. 92). Specifically, they find that CSOs focus and accelerate decision making, improve strategy development and execution, and foster building strategy capabilities by, for example, creating dedicated strategy departments. Following the logic of contingency theory, we argue that CSO presence is not beneficial per se, but that the benefits depend on a firm's particular conditions. Therefore,

> *Hypothesis 2: To the extent that firms are characterized by strategic and structural complexity—represented by (a) diversification, (b) acquisition activity, (c) alliance activity, (d) firm size, and (e) TMT role interdependence—CSO presence in the TMT will be beneficial for firm performance*.

METHOD

Sample and data

The study's sample consists of 200 firms randomly selected from the S&P 500 index at the end of 2008 (excluding financial services firms). We collected data for a five-year period ranging from 2004 to 2008. Similar to Marcel (2009), we obtained data on TMT members from Form 10-Ks, firm proxy statements, annual reports, and S&P's Register of Directors and Executives. We collected other firm information from the Thomson Financial, Worldscope, and SDC databases. Excluding missing data and firms from two-digit SIC groups with fewer than three firms resulted in a final sample of 147 firms (735 firm-years).

Measures

Dependent variable: CSO presence

The variable *CSO presence* refers to a firm's decision to have a CSO in its TMT or not. To determine CSO presence, we followed a comprehensive approach. First, we defined the TMT as those executives who were identified by their respective firms as strategically important and who were included in the firm's Form 10-Ks

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and proxy statements (Carpenter, Geletkanycz, and Sanders, 2004; Nath and Mahajan, 2008).[2] Second, we manually searched these documents for CSOs, similar to prior research on other functional TMT members (Nath and Mahajan, 2008; Zorn, 2004). Since the existing literature and exploratory interviews indicated that CSOs typically have the terms "strategy/strategic," "development," or "planning" in their titles, we used these as a starting point to search for CSOs. Third, to ensure completeness, we also analyzed the titles of all TMT members and, where necessary, their role descriptions. However, this revealed only a few additional titles (e.g., chief growth officer; for detailed results, see the Appendix). Finally, we coded firms with a CSO as 1 and those without as 0. Since we were sometimes unable to determine the exact appointment date, we determined CSO presence at the end of each year (Crossland and Hambrick, 2007).

Dependent variable: firm performance

We considered two different measures to analyze the performance consequences of CSO presence (Hambrick and Cannella, 2004; Marcel, 2009). First, we included *return on assets (ROA)*, an accounting-based performance measure extensively used in prior TMT research (Zajac, 1990). Second, we chose the *market-to-book ratio (MTB)* as a market-based measure of firm performance, reflecting the stockholders' premium placed on the firm's equity and indicating the stockholders' expectations regarding the firm's future prospects (Hambrick and Cannella, 2004; Marcel, 2009).

Independent variables

First, we applied Palepu's (1985) entropy measure of diversification, which considers the degrees of *related*, *unrelated*, and *total diversification* of a firm's business portfolio (e.g., Hambrick and Cannella, 2004; Wiersema and Bantel, 1992). Second, we accounted for a firm's *acquisition activity* by the logarithm of the average number of acquisitions over the past three years (Laamanen and Keil, 2008). Third and similarly, we accounted for a firm's *alliance activity* by the logarithm of the average number of new alliances over the past three years. Fourth, we measured *firm size*, computed as the logarithm of the firm's total sales (Hambrick and Cannella, 2004). Fifth, we analyzed a firm's *TMT role interdependence* by calculating Blau's (1977) heterogeneity index based on six functional categories of the TMT members' titles: accounting/finance, production/operations, R&D, marketing, special tasks (e.g., supply chain management), and general management (Keck and Tushman, 1993).

Control variables

Our study's controls follow prior research (Hambrick and Cannella, 2004; Nath and Mahajan, 2008). First, we accounted for the median *industry performance* by distinguishing the firms in our sample according to their two-digit SIC codes. Second, we included *prior firm performance*, as CSO presence may be a response to either superior or poor past performance. For our second analysis, we used firms' performance in 2003, the year prior to the period covered by our study. Third, we considered *CEO duality*, which was coded as 1 if the CEO was also the chairman and as 0 otherwise. CEO duality indicates additional task demands placed on the CEO, which may also increase the likelihood of CSO presence. Fourth, we accounted for *CEO position tenure*, since new CEOs may opt for a CSO who is typically familiar with a firm's strategy. Fifth, we controlled for *COO presence*, because this role may exist for similar reasons other than hypothesized here and to account for a potential role "overlap." Finally, to control for time trends in our first analysis, we included a continuous *year* variable.

ANALYSIS AND RESULTS

Analytical procedures

To analyze the various antecedents' effects on the likelihood of CSO presence, we applied two different procedures. In a first analysis, we pooled the longitudinal data for the five-year period, which led to 735 firm-years. Hence, we assumed that firms implicitly revisit the decision to have a CSO in their TMT or not every year. We used yearly data and lagged

[2] In order to verify our results, we also coded the CSOs and tested the hypotheses using a less inclusive TMT definition (CEO, CFO, COO, and next highest executive level). The results were largely consistent with those of the more inclusive TMT definition reported in the following.

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all the independent variables and controls by one year to rule out reverse causality. Similar to studies on other functional TMT members (Hambrick and Cannella, 2004; Nath and Mahajan, 2008), we applied pooled logistic regression, using generalized estimating equations (Liang and Zeger, 1986).

To verify our first analysis, we conducted a second analysis assuming that some firms are generally more prone to have a CSO in their TMT than others. Indeed, our data revealed that CSO presence in 2004 is positively related to CSO presence in 2008, which further supports this assumption. Hence, we examined the likelihood of CSO presence over the entire period of observation and divided the sample into "CSO firms" that had a CSO for more than half of the study's period, that is, for three or more years, and "non-CSO firms" that did not have a CSO at all (Hambrick and Cannella, 2004; Nath and Mahajan, 2008). Since this procedure excludes firms with a CSO in their TMT for one or two years, N is reduced to 126. To account for this adjustment, we averaged all time-varying variables across the study's five-year period and subsequently applied a logistic regression analysis. We also applied both procedures to examine the performance consequences of CSO presence with MTB and ROA as dependent variables.

Results

Table 1 presents the descriptive statistics and correlations for all variables. The correlations between the variables are below 0.45, indicating that multicollinearity was not a problem in our analysis. This was further verified by the variance inflation factors that are all below two. On average, 42 percent of the firms in our sample had a CSO in their TMT during the period of observation, and the relative number of firms with a CSO gradually increased from 34 percent in 2004 to 49 percent in 2008, as shown in Figure 1.

Table 2 presents the results of the antecedents of CSO presence. Representing the pooled logistic regression, Model 1 only includes the controls, while Model 2 adds the hypothesized variables, significantly improving the model fit ($p < 0.001$). Interestingly, firms with a COO are less likely to have a CSO in their TMT ($p < 0.01$). However, firms with a relatively new CEO ($p < 0.05$) and

Table 1. Descriptive statistics and correlation coefficients

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1 CSO presence	0.42	0.49											
2 Industry performance	0.07	0.03	0.08*										
3 Firm performance	0.07	0.06	0.02	0.43***									
4 CEO duality	0.67	0.47	−0.02	0.00	0.02								
5 CEO position tenure	5.14	4.99	−0.07^{+}	0.16***	0.13***	0.29***							
6 COO presence	0.33	0.47	−0.03	0.03	0.07^{+}	0.04	0.17***						
7 Year	2006	1.41	0.10**	0.24***	0.13***	−0.04	0.04	0.00					
8 Total diversification	0.74	0.52	0.07^{+}	−0.06^{+}	−0.05	0.03	−0.05	−0.15***	0.00				
9 Acquisition activity	0.40	0.90	0.10**	0.12***	0.02	0.01	−0.02	−0.01	0.01	0.32***			
10 Alliance activity	0.02	0.62	0.03	0.11**	0.05	−0.05	−0.04	0.00	0.07^{+}	0.10**	0.10**		
11 Firm size	8.82	1.38	0.06	−0.09*	0.04	0.05	−0.06	−0.10**	0.08*	0.35***	0.33***	0.09*	
12 TMT role interdependence	0.71	0.10	0.31***	0.18***	0.09**	−0.02	0.09*	0.24***	0.03	−0.22***	−0.06	0.13***	−0.14***

Descriptives and correlations are reported for the pooled data. The statistics are similar for the average data. All variables (except CSO presence and year) are lagged by one year.
$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

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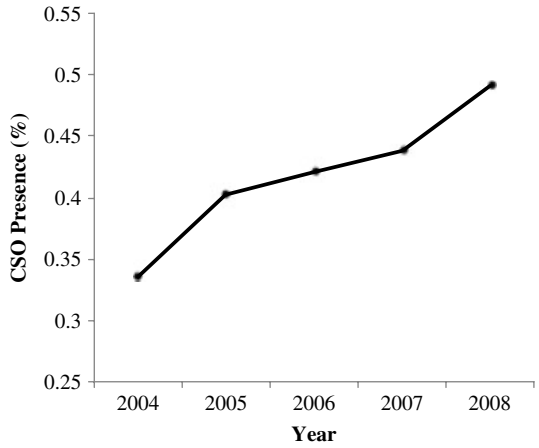

Figure 1. Annual incidence of CSOs, 2004–2008

firms with a CEO who is also chairman ($p < 0.1$) are more likely to have a CSO.

Hypothesis 1, which states that the probability of CSO presence increases with growing strategic and structural complexity, is partially supported. A firm's total diversification ($p < 0.05$), acquisition activity ($p < 0.05$), and TMT role interdependence ($p < 0.001$) have a positive effect on CSO presence, whereas a firm's alliance activity and firm size do not affect CSO presence. We initially also used measures of related and unrelated diversification; however, the effects were either weaker than for total diversification or not significant.

First, the predicted probability of CSO presence is 0.379 ($p < 0.001$) for firms with an average level of total diversification, while it increases to 0.478 ($p < 0.001$) for those with a total diversification of two standard deviations above the mean. Second, the predicted probability of CSO presence for firms with no acquisition activity is 0.336 ($p < 0.001$), whereas the likelihood increases to 0.410 ($p < 0.001$) for firms with an average acquisition activity (about two acquisitions per year) and to 0.511 ($p < 0.001$) for firms with an acquisition activity of two standard deviations above the mean (about seven acquisitions per year). Third, the probability of having a CSO is 0.394 ($p < 0.001$) for firms with an average TMT role interdependence. However, the likelihood of CSO presence increases (decreases) to 0.643 (0.188) for firms with a TMT role interdependence of one standard deviation above (below) the mean ($p < 0.001$).

As described above, we also performed a second analysis comparing CSO firms with non-CSO firms. The results, which are presented in Models 3 and 4 of Table 2, are highly consistent with those of the first analysis with the same hypothesized effects being significant. This indicates that—irrespective of whether it is assumed that CSO presence is an implicit annual decision or that some firms are generally more

Table 2. Results of logistic regression with CSO presence as dependent variable

	Model 1[a]	Model 2[a]	Model 3[b]	Model 4[b]
Constant	−233.400*	−317.700*	0.239	0.375
Industry performance	0.061	−0.014	0.308	−0.055
Firm performance	0.086	−0.008	−0.237	−0.158
CEO duality	0.266	0.323^{+}	−0.010	0.126
CEO position tenure	−0.171^{+}	−0.216*	−0.295	−0.411^{+}
COO presence	−0.180	−0.524**	−0.468	−1.315*
Year	0.116*	0.158*		
Total diversification		0.204*		0.664*
Acquisition activity		0.245*		0.612*
Alliance activity		−0.120		0.046
Firm size		0.095		−0.110
TMT role interdependence		1.105***		1.699***
N	735	735	126	126
Chi^2	13.07*	87.27***	5.48	28.09***

Standardized beta coefficients. All independent variables (except year) are lagged by one year.
$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.
[a] Pooled logistic regression.
[b] Average model with firms that had a CSO for more than half of the period coded as "CSO firm."

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prone to have a CSO—the same antecedents affect the choice to have a CSO in the TMT.[3]

Referring to Hypothesis 2, we analyzed the performance consequences of CSO presence applying both random-effect estimation for the pooled data and ordinary least squares regression for the averaged data. However, neither the general effect of CSO presence on firm performance nor any of the interactions were significant (to conserve space, the analysis is not presented).

DISCUSSION AND CONCLUSION

While our study's results provide some support for a contingency perspective as an explanation of CSO presence, there is, however, no evidence of the performance effects of having a CSO in the TMT. As discussed in the following, our study's findings contribute to our understanding of CSOs and inform research on TMT structure.

We find that diversification and acquisition activity are positively associated with CSO presence, supporting previous studies' suggestions on the CSO's role (Angwin *et al.*, 2009; Breene *et al.*, 2007). This finding also informs the emerging literature on functional TMT members in general (Menz, 2012). While the presence of other functional TMT members, such as COOs and CMOs, does not seem to depend on a firm's diversification strategy (Hambrick and Cannella, 2004; Nath and Mahajan, 2008), we find that the structural choice to have a CSO in the TMT may indeed follow a firm's strategy. This indicates that there are differences between functional executives' roles and that the decision to have a specific functional TMT member may depend on function-specific factors. Nath and Mahajan's (2008) finding that the likelihood of CMO presence is higher for firms pursuing a corporate branding strategy further supports this reasoning. Future research should substantiate our knowledge of these differences and consider antecedents closely related to functional TMT members' role.

In addition, we find that TMT role interdependence is positively associated with CSO presence. While one explanation is that CSOs are chosen to deal with the higher complexity of interdependent TMTs, there may be an alternative explanation. Similar to research on other functional TMT members (Marcel, 2009; Nath and Mahajan, 2008), our study confirms the homophily phenomenon that functional TMT members are selected because "people tend to like those who are similar to them" (Nath and Mahajan, 2008: 69). Hence, interdependent TMTs consisting of functional TMT members are more likely than those consisting of divisional TMT members to choose other functional executives. However, in a related vein, we find that CSO presence is more likely for firms without a COO. While this may indicate a potential role overlap, it also suggests that the presence of one functional TMT member is more likely in the absence of another and, thus, that different constellations of functional TMT members can be observed (Menz, 2012). In sum, our study reveals that existing roles in the TMT are likely to determine which new roles will be added to it. Hence, structural features of the TMT need to be considered in order to improve our understanding of TMTs (Beckman and Burton, 2011; Hambrick, 2007).

We also find that a firm's alliance activity and size do not affect the likelihood of CSO presence in the TMT. This suggests that, even though managing alliances is often a CSO activity, a firm's alliance activity does not significantly contribute to the strategic complexity on the firm level, potentially because alliances are primarily managed by individual business and functional units in a decentralized way. Further, it seems that the decision to have a CSO in the TMT does not depend on a firm's size. Together with prior studies' findings that COO presence depends on firm size (Hambrick and Cannella, 2004), while CMO presence does not (Nath and Mahajan, 2008), this stresses differences in TMT's structural choices due to differences in functional TMT members' roles, such as the type (e.g., output versus throughput functions; Hambrick and Mason, 1984) and the scope of these roles. In addition, as suggested by Hambrick and Cannella (2004), other theories may explain these nonfindings. Particularly following institutional theory (DiMaggio and Powell, 1983), firms may imitate the behavior of others, and therefore decide to have a CSO in their TMT for reasons other than hypothesized here.

The analysis did not provide support that CSOs—both generally and under certain

[3] Similar to Hambrick and Cannella (2004), we also analyzed various environmental antecedents' effects on CSO presence; however, no effect was significant.

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conditions—affect their firms' financial performance. While this finding is consistent with research on other functional TMT members (Hambrick and Cannella, 2004; Nath and Mahajan, 2008), there are several explanations that call for further inquiry. First, the potential benefits of having a CSO may be offset because this position requires additional resources or complicates decision making in the TMT. For example, research reports that there may be tension between CSOs and CFOs (Dye, 2008), which may hamper reaching consensus and reduce the speed of strategic decision making. Second, CSO presence may affect intermediate, function-specific outcomes, such as the quality of strategic decisions (Menz, 2012), rather than the more distant financial performance measures. Third, despite the similarity in the CSOs' core role across firms, their demographic characteristics and capabilities may vary. In a related vein, a recent study of CMOs indicates that there may be differences in power between functional TMT members (Nath and Mahajan, 2011). Future studies should account for these and other differences.

Our study offers at least one other research opportunity. Since governance systems and cultures vary across countries, studies based on alternative samples may not support our hypotheses. Angwin *et al.* (2009) indicate that there are role differences between CSOs, for example, regarding their power and involvement in strategy implementation, across geographic regions. The same may be true for other functional TMT members. Hence, studies of firms located outside of the United States would contribute to research on CSOs and TMT structure.

Overall, our study's findings provide business practitioners and consultants with important insights into the structural choice to have a CSO in the TMT. The study's conceptual background may generally assist them in understanding and designing the CSO's role. In addition, our empirical analysis reveals that firms typically opt for a CSO in their TMT under conditions of extraordinary strategic and structural complexity and, thus, offers several criteria that may guide the decision to have a CSO in the TMT or not. To conclude, understanding the CSO's role is of great interest to both academics and practitioners. We hope that our study will stimulate future research in this area.

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APPENDIX

Table A1. CSO titles and role descriptions

CSO titles								CSO role descriptions	
Hierarchical designation		CSO role designation[a]		Additional role designation[b]		Top 10 actual titles		Role description[c]	
Term in title	Frequency	Term in title	Frequency	Functional area (term) in title	Frequency	Title	Frequency	Term in role description	Frequency
Senior Vice President (SVP)	44.8%	***Strategy/strategic***	***51.9%***	***Administration/legal***	***17.8%***	Corporate Development	12.5%	Mergers & acquisitions (M&A)	57.2%
Executive Vice President (EVP)	33.6%	Strategy	28.2%	(e.g., secretary, legal, corporate		Chief Strategy Officer	6.6%	Manage(ment)	26.1%
Vice President (VP)	15.3%	Strategic planning	10.9%	affairs, counsel, regulation)		Strategy & Corporate		Strategic planning	21.7%
(Group) President	3.8%	Corporate strategy	8.1%	***Marketing/sales***	***9.7%***	Development	6.4%	Develop(ment)	18.9%
Other	2.5%	Strategic development	2.5%	(e.g., marketing, sales, brand)		Strategy & Business		Execution/execute	16.1%
		Strategic initative	1.3%	***Accounting/finance***	***8.9%***	Development	4.6%	Lead(ing)	15.6%
		Global/international strategy	0.8%	(e.g., finance, treasury, investor		Business Development	3.6%	Corporate strategy	15.6%
		Development	***62.6%***	relations)		Business Development &		Business	15.0%
		Corporate development	28.5%	***Research & development***	***7.4%***	Corporate Strategy	2.8%	Position(ing)	14.4%
		Business development	18.6%	(e.g., technology, R&D)		Strategic Planning	2.0%	Market	12.8%
		Development	5.6%	***Operations***	***3.6%***	Corporate Strategy &		Grow(th)	11.7%
		New business development	4.1%	(e.g., operations, supply)		Development	2.0%	Business development	11.7%
		Global/international/world-		***Human resources***	***2.8%***	Planning & Development	1.8%	Divestitures	11.7%
		wide business development	3.3%	(e.g., HR)		Strategic Development	1.5%	Strategy/strategic	10.6%
		Strategic development	2.5%	***Product/geographic division***	***2.0%***			Corporate development	10.6%
		Planning	***19.6%***					Drive	10.0%
		Strategic planning	10.9%					Identification/identify	9.4%
		Planning	6.4%					Coordination/coordinate	8.9%
		Corporate planning	1.8%					Initiatives	7.8%
		Integrated planning	0.5%					Business opportunities	7.8%
		Other related terms	***4.1%***					Closing/close	7.2%
		Mergers & acquisitions (M&A)	1.8%					Plan(ning)	6.7%
		Corporate initiative	1.3%					Corporate	6.7%
		Growth	1.0%					Opportunities	6.7%
								Growth opportunities	6.7%
								Investment	6.1%
								Growth strategy	6.1%
								Alliances	5.6%
								Business strategy	5.0%
								Projects	5.0%

Random sample of 200 S&P 500 firms from 2004 to 2008.

[a] Often, there are combinations of the various terms (e.g., see top 10 actual titles).

[b] 35% of the CSOs have an additional role designation, frequently including multiple additional roles.

[c] Role descriptions were available for 46% of the CSOs and were obtained from the respective firm's Form 10-Ks, proxy statements, press releases, and websites. Terms with a frequency of 5% or higher are included.