Essays on Strategic Leadership Constellations

D I S S E R T A T I O N
of the University of St. Gallen,
School of Management,
Economics, Law, Social Sciences
and International Affairs
to obtain the title of
Doctor of Philosophy in Management

submitted by

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from

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Dissertation no. 4753

Difo-Druck GmbH, Bamberg 2018

The University of St. Gallen, School of Management, Economics, Law, Social Sciences and International Affairs hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St. Gallen, May 22, 2018

The President:

Prof. Dr. Thomas Bieger

Acknowledgements

Looking back at the past three years, working on this dissertation has been an exciting yet challenging rollercoaster ride with many emotional ups and downs. Thanks to the kind support of people close to me, I did not get lost on this endeavor and was able to keep the rollercoaster on its tracks.

First and foremost, I am grateful to my Ph.D. supervisor and co-author, Prof. Markus Menz, without whom this dissertation would not exist. He sparked my interest in strategic leadership and ultimately encouraged me to embark on this research journey with him. Most of the ideas that shaped this dissertation originated in conversations with Markus, and his input, feedback, and experience guided me steadfastly through the research and peer-review process. After all, the completion of my Ph.D. feels like the conclusion of a longer arc that began when I met Markus as a freshman in 2010 and continued throughout my studies while I supported him in many of his research projects.

Second, I would like to thank my co-supervisor, Prof. Winfried Ruigrok, for his invaluable inputs and advice, especially in the field of CEO and top management team (TMT) research, which were crucial to my investigation of TMT power contests. Furthermore, I wish to express my gratitude to Prof. David Collis for inviting me to spend my final Ph.D. semester at Harvard Business School. His feedback from a corporate strategy perspective was very insightful and helped me to conceptualize the relationship between CEOs and divisional heads.

Third, I thank Dr. Carsten B. Henkel, who offered me flexible employment at Skyadvisory and granted me the independence to pursue my Ph.D. studies in parallel to my duties as a consultant. In addition, I am grateful to my colleagues Michael Nagel and Joffrey Biard, who always supported me in coping with the challenges of my studies while working on demanding client assignments.

Fourth, special thanks are due to my friends in Switzerland, the United States, and Germany, with whom I shared many recreational moments that provided a welcome diversion from my research. Without Martin Bodenwinkler, Alexander Feser, Jonas

Philippi, and Dr. Jan-Frederic Schulz, my time in St. Gallen would not have been the same. Thank you for the countless memorable nights that we spent together in adhoc, Galleria, or US-Mex. Furthermore, I am thankful to my high school friend Wolf Müller-Christmann, who was always there for me when I found my way back to Heidelberg.

Fifth, I owe a debt of gratitude to Saray Turan. Her love, motivation, and emotional support kept me going in adverse circumstances and were crucial for the completion of my research. Thank you very much for your patience with my unconventional working rhythm and your tolerance of many late "night shifts" at my desk.

Finally, I am deeply grateful to my family, in particular to my parents, Iris and Christoph Barnbeck, to whom I dedicate this dissertation. Their encouragement and parental care shaped me as a person, and their sustained support allowed me to pursue my academic career. Without them, I could not have realized this academic achievement.

Zürich, July 2018 Fabian Barnbeck

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List of Abbreviations

2SLS	Two-stage least squares regression
AOM	Academy of Management
BCG	Boston Consulting Group
CDO	Chief Digital Officer
CDSF	Corporate development and strategy function
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHQ	Corporate Headquarters
CIO	Chief Information Officer
COO	Chief Operating Officer
CSO	Chief Strategy Officer
CTO	Chief Technology Officer
DACH	Germany, Austria, Switzerland
e.g.	*exempli gratia* (for example)
EIASM	European Institute for Advanced Studies in Management
et al.	*et alii* (and others)
EVP	Executive Vice President
FTE	Full time equivalent
GDP	Gross domestic product
GE	General Electric
HR	Human resources
i.e.	*id est* (that is)

IBM	International Business Machines
LRP	Long Range Planning
M-form	Multidivisional
M&A	Mergers and acquisitions
MBA	Master of Business Administration
MTB	Market-to-book ratio
OLS	Ordinary least squares
R&D	Research and development
ROA	Return on assets
SD	Standard deviation
S&P 500	Standard & Poor's 500
SEC	United States Securities and Exchange Commission
SIC	Standard Industrial Classification
SMS	Strategic Management Society
SWOT	Strengths, Weaknesses, Opportunities, Threats
TMT	Top management team
UK	United Kingdom
US	United States of America
USD	US Dollar

Summary

Research in the upper echelons perspective builds on the notion that the personal characteristics of senior executives affect strategic decision-making and, thereby, are ultimately reflected in organizational outcomes. However, although previous research in this stream yielded ample findings about the effects of boards of directors, Chief Executive Officers (CEO), and top management teams (TMT), we still know very little about the influence of less prominent actors who interact with the CEO in strategic leadership constellations. By addressing this shortcoming, this dissertation increases the understanding of (1) CEO advisers, (2) information-processing in the TMT periphery, and (3) power contests between individual TMT members.

Article I analyzes corporate strategists who are involved in the majority of strategic decisions and, thus, stand out among other groups of CEO advisers. The article, which reviews the mostly disconnected, earlier literature about this executive role, traces how corporate strategists evolved over time and identifies knowledge gaps as opportunities for future research.

Article II increases the understanding of information-processing in the TMT periphery by examining the antecedents and performance consequences of the corporate development and strategy function (CDSF) size. Based on a survey of 105 European Chief Strategy Officers, this article identifies environmental, strategic, and structural factors that explain CDSF size. Furthermore, the results indicate that the benefits of CDSF size are contingent upon strategic complexity factors.

Article III contributes to the power perspective by studying the effects of power contests in the TMT. Its analysis of S&P 500 firms between 2004 and 2013 indicates that political conflicts between the CEO and powerful divisional heads negatively affect a firm's financial performance. Since this adverse effect is contingent upon the strategic importance of the CEO rival's operating division, the results suggest that the contextual power sources of the contestant are a boundary condition for the power contest to unfold.

In sum, the three articles substantiate the concept of strategic leadership constellations by studying the effects of influential executives who were, thus far, overlooked, because they stood in the shadow of the CEO. Besides this contribution to the upper echelons perspective, this dissertation also has numerous practical implications for boards of directors, CEOs, and strategy professionals.

Zusammenfassung

Die «Upper Echelons» Perspektive nimmt an, dass persönliche Charakteristika von Führungskräften die strategische Entscheidungsfindung beeinflussen und sich dadurch in Unternehmensergebnissen widerspiegeln. Obwohl die bisherige Forschung in diesem Bereich zahlreiche Erkenntnisse zu Verwaltungsräten, Vorstandsvorsitzenden (CEO) und Top Management Teams (TMT) erbracht hat, wissen wir immer noch sehr wenig über den Einfluss von weniger prominenten Akteuren, die mit dem CEO in «Strategic Leadership» Konstellationen interagieren. Um dieses Defizit zu adressieren, befasst sich diese Dissertation mit (1) CEO-Beratern, (2) Informationsverarbeitung in der TMT-Peripherie sowie (3) Machtkämpfen zwischen Mitgliedern des TMT.

Artikel I beleuchtet Unternehmensstrategen, welche sich von anderen CEO-Beratern abheben, da sie bei den meisten strategischen Entscheidungen involviert sind. Der Artikel untersucht die bisherige, meist unzusammenhängende Literatur zu dieser Managementfunktion und zeigt auf, wie sich Unternehmensstrategen im Laufe der Zeit entwickelt haben. Darüber hinaus werden basierend auf dem Review Lücken im Verständnis von Unternehmensstrategen als Ansätze für künftige Studien skizziert.

Artikel II untersucht Antezedenzfaktoren und Performance-Effekte der Grösse von Strategiefunktionen (CDSF) und erhöht dadurch unser Verständnis von Informationsverarbeitung in der TMT-Peripherie. Basierend auf einer Umfrage von 105 europäischen Chefstrategen identifiziert die Studie Umwelt-, Strategie- und Struktur-Faktoren, welche CDSF Grösse erklären. Darüber hinaus zeigen die Ergebnisse, dass Vorteile der CDSF Grösse von strategischen Komplexitätsfaktoren abhängen.

Artikel III trägt zur Power Perspektive bei, indem er Auswirkungen von Machtkämpfen im TMT untersucht. Die Analyse von S&P 500-Unternehmen zwischen 2004 und 2013 zeigt, dass politische Konflikte zwischen CEOs und Divisionsleitern den Finanzerfolg negativ beeinflussen. Da dieser Effekt von der strategischen Bedeutung des Geschäftsbereichs eines Divisionsleiters abhängt, deuten die Ergebnisse an, dass kontextuelle Machtfaktoren einen Grenzzustand des Machtkampfs darstellen.

Zusammen festigen die drei Artikel das Verständnis von «Strategic Leadership» Konstellationen, indem sie die Effekte von Führungskräften untersuchen, die bisher im Schatten des CEO unbeachtet blieben. Neben diesem theoretischen Beitrag hat diese Dissertation zudem einige praktische Implikationen für Verwaltungsräte, CEOs und Unternehmensstrategen.

1. Introduction

A company's success or failure is often closely linked to the strategic foresight and leadership of its senior executives. Jack Welch is commonly cited as a successful Chief Executive Officer (CEO) who, during his 20-year tenure at General Electric, increased the value of the firm from USD 14 to 400 billion through rigorous portfolio management (Colvin, 1999: 10). In contrast, many observers pin Kodak's inability to develop a digital photography business, which ultimately resulted in the firm's bankruptcy in 2012, on Walter A. Fallon who led the firm as CEO between 1972 and 1983 (Derousseau, 2015): In 1975, when the Kodak engineer, Steven Sasson, internally presented the first digital camera, the management famously misjudged that "no one would ever want to look at their pictures on a television set" (Estrin, 2015).

In 1984, Hambrick and Mason marked the beginning of the academic study of managerial effects on organizational outcomes by establishing the *upper echelons perspective*: Arguing that the personal characteristics of senior executives (e.g., education, functional experiences, values, etc.) shape their judgement in decision-making, they suggested that, as a result, the personal characteristics are reflected in organizational outcomes. Since then, researchers have widened the theoretical scope of the field – which was initially predominantly limited to the socio-demographic backgrounds of top management team (TMT) members – by putting more emphasis on behavioral aspects, such as the interactions of executives with actors in- and outside the organization (Finkelstein, Hambrick, & Cannella, 2009).

Within this stream of literature, researchers have delivered ample findings in areas, such as CEO succession events (e.g., Cannella & Lubatkin, 1993; Shen & Cannella, 2002), TMT characteristics (e.g., Hambrick, Cho, & Chen, 1996; Hambrick, Humphrey, & Gupta, 2015), CEO-TMT relationships (e.g., Cao, Simsek, & Zhang, 2010; Tang, Crossan, & Rowe, 2011), board influence (e.g., Westphal, 1999; Zajac & Westphal, 1996), and individual managerial roles (e.g., Hambrick & Cannella, 2004; Menz & Scheef, 2014). However, in contrast to the definitions of managerial roles and the board of directors, the TMT definition is often blurred and inconsistent in different studies (Mooney & Amason, 2011; Roberto, 2003). Whereas certain studies define the TMT as only the five highest compensated executives in a given year (e.g., Tang et al.,

I wish to thank Markus Menz for his valuable comments and feedback that helped me improve this introduction.

2011), others include all direct reports of the CEO or all executives who hold a vice president title or higher (e.g., Finkelstein & Hambrick, 1990; Michel & Hambrick, 1992). Scrutinizing this ambiguity, Ma and Seidl (2016) recently introduced the concept of *strategic leadership constellations* arguing that a static TMT definition falls short of capturing the relevant actors who participate in strategic decision-making. Instead, they describe how executives on lower hierarchical levels could be involved in strategic decision-making, while some of the formal TMT members could be excluded. Thereby, they tap into actors in the TMT periphery who are brought in depending on the information-processing requirements of the strategic decision at hand (Mooney & Amason, 2011; Roberto, 2003).

These peripheral actors are often invisible to the outside world and their role in strategic leadership is often overlooked, because the CEOs stand in the spotlight and absorb all the public attention. For example, Jack Welch's success at GE was facilitated by a reconfigured strategic planning function, which supported the company's portfolio management and strategic initiative execution (Ocasio & Joseph, 2008). In contrast, during 1981 Kodak's market intelligence unit issued a report in which they correctly predicted the advent of digital photography and stated that the company had ten years to adapt to the new technology (Mui, 2012). However, although the CEO, Walter Fallon, supported this report, the firm failed to transform, due to resistance in the senior management (2012). Among the opposing executives was Kay Whitmore, a chemist who was heading the photographic division at that time (Dickinson, 2004). In the decade following the report, Whitmore neglected the development of the digital business and instead devised Kodak's acquisition of Sterling Drug to focus more on the chemicals industry (Loomis & Mendes, 1993).

1.1. Motivation

A closer examination of the GE and Kodak examples shows that it is often not sufficient to focus only on the CEO (or the TMT as a whole) to comprehensively understand a firm's strategic success or failure. Instead, the examples show a more nuanced picture, which highlights the importance of strategic leadership constellations at the apex of an organization. The three articles in this dissertation increase the understanding of such strategic leadership constellations in the TMT and its periphery. More specifically, the articles address the following shortcomings in the upper echelons perspective:

Shortcoming 1: Lack of understanding of CEO advisers

The concept of strategic leadership constellations integrates the CEO-TMT interface perspective – which presumes that CEOs affect outcomes by composing and managing the TMT – and the CEO-adviser perspective, which considers strategic advice by CEO confidants both in- and outside the TMT (Ma & Seidl, 2016). Although numerous studies have explored the CEO-TMT interface (e.g., Cao et al., 2010; Haleblian & Finkelstein, 1993; Tang et al., 2011), we still know little about CEO advisers and their involvement in strategic decision-making (Arendt, Priem, & Ndofor, 2005).

A group of advisers, which typically reports directly to the CEO although they are not necessarily represented in the TMT, are corporate strategists (Menz & Scheef, 2014). These strategy professionals play an essential role in strategic leadership, since they are involved in the majority of strategic decisions and their work "molds the shape of all other plans because it encompasses basic decisions for these plans" (Murdick, 1964: 37). However, despite their prominent advisory role, we still know little about the development and benefits of this managerial function, because previous studies seldom built on each other, thereby resulting in a disconnected body of literature.

Shortcoming 2: Neglect of information-processing in the TMT periphery

Since strategic choice requires the processing of ambiguous information, the upper echelons perspective is closely linked to the information-processing theory. In this regard, previous research found that firms operating in industries with high information-processing requirements benefit from large TMTs, thereby arguing that TMT size approximates the team's information-processing capabilities (Haleblian & Finkelstein, 1993). Outside the TMT, peripheral advisers help process and interpret information (Arendt et al., 2005), depending "on the information-processing needs of the decision that must be made" (Mooney & Amason, 2011: 44).

As outlined in the first shortcoming, especially corporate strategists stand out among other groups of CEO advisers, since they support the majority of strategic decisions, for instance by analyzing competitors, evaluating acquisition targets, or detecting environmental changes (Angwin, Paroutis, & Mitson, 2009; Kaplan & Norton, 2005). They can therefore be regarded as "outsourced" information-processing capacity of the TMT and should be taken into consideration when analyzing information-processing in strategic decision-making. However, at present we know little about how

these strategy professionals take the information-processing burden from the ultimate decision maker(s) and how their advice relates to firm outcomes.

Shortcoming 3: Lack of attention to power contests between individual TMT members

Building on the behavioral theory of the firm (Cyert & March, 1963), the power perspective presumes that strategic decision-making is not rational, but results, instead, from bargaining and political conflicts in the TMT (Pfeffer, 1981). Ocasio (1994) extends this theory by describing how individual TMT members, whose interests differ from the CEO's, engage in power contests and challenge the CEO's authority. Similarly, Hambrick (2007: 336) emphasizes the importance of relationships between individual TMT members by observing that many executives engage "in bilateral relations with the CEO but [have] little to do with each other", thus calling for research on the effects of influential TMT subgroups. However, despite the TMT members' unequal influence, previous power studies generally treated the TMT as a group (e.g., Eisenhardt & Bourgeois, 1988; Haleblian & Finkelstein, 1993; Tang et al., 2011), thereby neglecting TMT fragmentation and power differences between individual executives (Hambrick, 1995, 2007).

The heads of operating divisions in multibusiness organizations are such an influential TMT subgroup that has attracted little scholarly attention thus far (Finkelstein et al., 2009). In strategic leadership, these executives are characterized as influential, because "they often oversee very large organizations, have considerable autonomy, and sometimes are even bestowed such titles as president, managing director, or even CEO of their respective business units" (Finkelstein et al., 2009: 10). However, despite their potentially high power, we still know little about their relationship with the CEO and we do not understand whether and how they engage in political power contests.

1.2. Overview and Publication Status of Articles

In sum, studies in the upper echelons perspective have produced an extensive body of knowledge about CEOs, boards of directors, and TMTs. However, the described shortcomings highlight that previous research paid little attention to less prominent actors in decision-making who, thus far, were either overlooked because they stood in the shadow of the TMT, or whose individual effects were blurred in aggregate TMT analyses. The articles in this dissertation therefore jointly aim to shed light on such

strategic leadership constellations both inside the TMT and in its periphery. Furthermore, the three articles aim to identify contingency factors that moderate the impacts of strategic leadership constellations on organizational outcomes.

In order to fulfill this purpose, the articles apply multiple research methods and approach the identified shortcomings from different angles. The first article is based on a systematic review of literature on corporate strategists and aims to increase the understanding of this group as advisers of the CEO. The second article applies an exploratory research approach to empirically examine information-processing in the TMT periphery based on a cross-sectional, survey-based sample of European corporate development and strategy functions (CDSF). The third article takes a deductive approach and empirically tests hypotheses in the power perspective based on a large-scale, archival data sample of North-American CEO-divisional head pairs. Table 1-1 summarizes the overall purpose that connects the three articles, as well as their individual research questions, approaches, methods, and contexts.

Table 1-1: Dissertation overview

Overall purpose	- Increase the understanding of relevant strategic leadership constellations in the TMT and its periphery - Identify contextual contingencies that moderate the effects of strategic leadership constellations		
	Article I: A Review of Research on Corporate Strategists	**Article II: Determinants and Consequences of CDSF size**	**Article III: Effects of the Power Gap between the CEO and Divisional Head**
Research questions	- What aspects characterize the CEO adviser role of corporate strategists? - How and why has the role of corporate strategists evolved over time? - How do corporate strategists add value in strategic decision-making and strategy implementation?	- What types of CDSF exist? - Which organizational information-processing requirements explain the variations in CDSF size? - Under which circumstances do firms benefit from the CDSF's information-processing?	- How do power contests between CEOs and divisional heads influence firm performance? - To what extent does a division's subunit power facilitate a power contest of its head with the CEO?
Approach	Conceptual / review	Empirical (inductive, exploratory)	Empirical (deductive, theory testing)
Context	n/a	105 European corporate development and strategy functions in 2013	827 CEO-divisional head pairs in S&P 500 firms between 2004 - 2013
Method	Systematic literature search and longitudinal review of 51 articles	Cross-sectional survey-based sample; ordinary least squares regression analysis	Archival data sample; fixed effects linear regression analysis

Article I: From Long Range to Strategic Planners – A Review of Research on Corporate Strategists

Author: Fabian Barnbeck

Article status: This article is in preparation for submission to *Long Range Planning*, following a recent editorial that encouraged a review aimed at tracing how strategic planning practices have evolved over time (Laamanen, 2017). We thank Steven Floyd, Markus Menz, Winfried Ruigrok, Charlotta Sirén, and Richard Whittington for their insightful discussions and comments that helped us improve the article.

Abstract: Corporate strategists first emerged after World War II in the role of the long range planner who later – after several popularity cycles – transformed into today's strategic planners and Chief Strategy Officers. Due to corporate strategists' prominent position in headquarters, several scholars analyzed their roles, backgrounds, organizational setups, and relationships ever since the 1960s. However, due to the changing responsibilities and name of strategists, these research articles seldom built on each other and repeatedly studied similar issues while neglecting others. In this review, we aim to trace the development of corporate strategists over the years to distinguish between the core characteristics that remained stable and the aspects of the role that evolved. Furthermore, we identify promising areas for future research to increase the understanding of this prominent group of strategy practitioners.

Article II: Determinants and Consequences of Corporate Development and Strategy Function Size

Authors: Markus Menz & Fabian Barnbeck

Article status: Published in *Strategic Organization* in 2017. Earlier versions of the article were presented at the Strategic Management Society (SMS) St. Gallen Special Conference "Rethinking Corporate Headquarters" in 2015 and at the Academy of Management (AOM) Annual Meeting 2016 in Anaheim. At the SMS Special Conference, the article was one of the finalists for the Best Proposal Prize. We thank Editor Gianmario Verona and three anonymous reviewers for their guidance and helpful comments. We also thank Patricia Klarner, Markus Kreutzer, Sven Kunisch, Tomi Laamanen, and Christine Scheef for the insightful discussions and comments and gratefully acknowledge the survey funding provided by the consulting firm Roland Berger.

Abstract: The corporate development and strategy function (CDSF) at headquarters is critical for contemporary firms' strategy activities, yet we know little about its design and structure. We explore how firms determine the need for strategy resources at the corporate level and, thus, the CDSF size, as well as the extent to which they benefit from this structural choice. Drawing on a survey of strategy heads from 105 large listed European firms, as well as archival data, our analysis indicates that a) the number of CDSF employees differs substantially across firms, suggesting distinct CDSF types and economies of scale in the CDSF; b) environmental, strategic, and structural factors explain this variance; and c) the CDSF size is consequential for a firm's performance, although one size does not fit all firms. Overall, the study highlights the importance of strategy professionals and functions for a firm's strategy processes.

Article III: The Kingdom Within – Performance Effects of the Power Gap between the CEO and Divisional Head

Authors: Fabian Barnbeck & Markus Menz

Article status: This article was presented at the EIASM Workshop on Top Management Teams and Business Strategy Research 2018 in Geneva and is accepted for presentation at the AOM Annual Meeting 2018 in Chicago. Based on the conference feedback, the article will be revised and prepared for submission to the *Administrative Science Quarterly*. We thank David J. Collis, Sven Kunisch, and Winfried Ruigrok for their insightful discussions and comments that helped us improve the article.

Abstract: In contemporary corporations, the relationship between the corporate CEO and the divisional heads is potentially contested and characterized by political conflicts, because of differing interests and views. We argue that the more powerful the divisional head relative to the CEO the more likely are power contests, which may harm the overall firm. An analysis of 827 CEO-divisional head pairs in S&P 500 firms from 2004 to 2013 reveals that the power of the divisional head relative to the CEO's – measured as differences in tenure, compensation, ownership, and board membership – is negatively related to firm performance. The results also show that this effect is contingent upon the division's subunit power, which is represented by its business weight relative to the overall firm, as well as its attractiveness for the firm's portfolio. Overall, our study suggests that the CEO should be aware of too powerful divisional heads, because they may influence the corporate agenda and performance.

1.3. Discussion

Theoretical contributions

Upper echelons perspective. Overall, the three articles advance the upper echelons perspective by emphasizing the relevance of lower-level executives, such as corporate strategists and divisional heads, in strategic leadership constellations. Conforming to the propositions by Hambrick and Mason (1984) on effects in the upper echelons perspective generally, the articles' findings suggest that the relevance of strategic leadership constellations is contingent upon contextual factors, such as strategic task demands for corporate strategists and subunit power for divisional heads. On a more granular level, the articles address the previously identified shortcomings in the upper echelons perspective in the areas of (1) CEO advisers, (2) information-processing in the TMT periphery, and (3) power contests between individual TMT members.

First, the literature review (Article I) focuses on corporate strategists as influential CEO advisers, because they are involved in the majority of strategic decisions and historically have a very close relationship with the CEO. Thus, the article's portrayal of how these strategy professionals developed, contributes to the *CEO-Adviser model*. For instance, Arendt et al. (2005: 688) propose that CEOs are less likely to rely on formal advisory systems (such as "competent firm insiders") when facing increased levels of environmental dynamism. The literature review supports this proposition by tracing how the influence of corporate strategists declined after their forecasting techniques failed to predict environmental shocks.

Second, Article II increases the understanding of *information-processing in the TMT periphery* (e.g., Mooney & Amason, 2011; Roberto, 2003). Inferring from its findings about the antecedents of CDSF size, the results indicate that corporate strategists support the CEO (and TMT) with the information-processing related to environmental, strategic, and structural complexity. The results also suggest that this information-processing support is especially valuable in the context of strategic task demands, since product diversification and acquisition activity moderate the performance effect of CDSF size. This finding complements previous strategic leadership research on information-processing, which showed that firms with larger TMTs perform better in turbulent environments (Haleblian & Finkelstein, 1993). In

contrast, in the TMT periphery, the benefits of CDSF size are not contingent upon environmental, but strategic complexity factors.

Third, Article III advances the *power perspective* (Pfeffer, 1981) by studying the power gap between the CEO and lower-ranking TMT members. It addresses the perspective's shortcoming of predominantly treating the TMT as a collective body and reveals the "dark side" of influential TMT subgroups by identifying the adverse performance effects of powerful divisional heads. Moreover, it examines the previously proposed interplay between individual and contextual power sources (Pfeffer, 1992), which indicates that the strategic importance of a contestant's subunit is a boundary condition of a political conflict to unfold.

Besides their joint focus on strategic leadership constellations, the three articles make shared contributions to related research fields.

Strategy professionals. By increasing the understanding of corporate strategists and their role in strategic planning, Article I and II both contribute to research on strategy professionals (Whittington, Cailluet, & Yakis-Douglas, 2011) in the strategy-as-practice perspective (Jarzabkowski, 2003; Whittington, 1996). In this stream, proponents argue that an intimate understanding of strategizing micro-activities is required before the effects of strategic planning on overall firm outcomes can be identified (Whittington & Cailluet, 2008). Consequently, this stream produced numerous "detailed, up-close [examinations] of strategizing work", however failed to address high-level factors that affect the strategy profession (Whittington et al., 2011: 541).

Article I addresses this disparity by linking the development of the micro-level activities of corporate strategy professionals to environmental, organizational, and technological forces. The literature review particularly traces how the corporate strategists' role, methodologies, organizational setups, and relationships evolved in response to environmental shocks (e.g., the oil crisis) or new organizational actors (e.g., divisional planning staffs). Furthermore, based on the review, opportunities for future research are outlined, which are promising to identify the advantages of corporate strategy professionals.

Article II, on the contrary, substantiates one aspect of Article I's review framework by focusing on the organizational setup of corporate strategists. In particular, it empirically examines CDSF size, which, in combination with the hierarchical level, determines the structural setup of corporate strategists in an organization (Litschert,

1967). The results of the study show several high-level environmental, strategic, and structural factors that jointly explain the variations in CDSF size, thereby enabling inferences about the relative importance of the strategists' activities. For instance, compared to environmental aspects, strategic factors explain more variance in CDSF size, thereby indicating that cross-divisional coordination and alliance management are more important tasks of CDSFs than competitive and environmental analyses.

Corporate headquarters and multidivisional firm. All three articles contribute to research on corporate headquarters (CHQ) in multidivisional (M-form) organizations. Since the emergence of this organizational form (Chandler, 1962), researchers have examined the CHQ's roles, design, and subsidiary relationships to show how the corporate entity creates value across multiple product or geographic divisions (Menz, Kunisch, & Collis, 2015). Within the CHQ design domain, the sizing and staffing of corporate functions are areas of particular interest (Collis, Young, & Goold, 2007; Kleinbaum & Stuart, 2014). Furthermore, researchers recently began to study powerful divisional managers' influence on the organizational outcomes of multidivisional firms (Vieregger, Larson, & Anderson, 2017).

Due to their focus on strategists on the corporate level, Articles I and II both substantiate our understanding of CHQ staffing by particularly concentrating on the CHQ's principal entrepreneurial function in strategic planning (Chandler, 1991). In this context, especially Article II sheds light on decisions concerning CHQ design, because it shows that firms match CDSF size to their environmental uncertainty, strategic task demands, and structural complexity. Furthermore, Article II's results indicate that firms with high strategic task demands are more likely to benefit from large teams of corporate strategists.

Article III contributes indirectly to research on CHQ-subsidiary relationships by uncovering a contested leadership setting with adverse performance effects for M-form organizations. More specifically, its findings indicate that powerful divisional heads, when representing an operating division that is strategically important to the overall firm, are more inclined to challenge the CEO. The article therefore suggests that the likelihood of a power contest between the two executives is linked to the CHQ-subsidiary relationship, thereby implying that future studies should take the leadership constellation into account when analyzing the relationships between CHQs and operating divisions.

Practical implications

In addition to the outlined theoretical contributions, the three articles have several implications for boards of directors, CEOs, and strategy professionals, which I will explain in the following.

First, the findings about power dynamics within the TMT are particularly relevant to boards of directors who need to be sensitive towards political conflicts with potentially negative performance effects. For example, the supervisory body should proactively avoid pairing influential operating divisions with powerful executives in order to mitigate risks of disrupting power contests. If such pairings are unavoidable, boards should introduce incentive schemes that ensure the prioritization of corporate interests over divisional interests and individual career aspirations.

Second, the identified performance consequences of CDSF size are relevant to CEOs in CHQ design decisions. Article II particularly indicates that CDSFs are resourced according to a firm's environmental, strategic, and structural information-processing requirements. However, on the performance side, only strategic task demands moderate the performance effect of CDSF size, thereby suggesting that CEOs should particularly consider activities related to cross-divisional coordination, as well as mergers and acquisitions, when sizing the CDSF.

Third, strategy professionals can benefit from the insights generated in Article I. For instance, they can learn from the mistakes that their predecessors made, such as their misleading trust in quantitative methods, which is especially relevant today, as predictive forecasting algorithms are on the rise again. Furthermore, the fate of previous corporate strategists shows that these executives need to continuously challenge – and, if necessary, adapt – their role in order to respond to changing contextual factors, such as environmental disruptions or new managerial roles.

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2. Article I: From Long Range to Strategic Planners – A Review of Research on Corporate Strategists

Fabian Barnbeck

Abstract: Corporate strategists first emerged after World War II in the role of the long range planner who later – after several popularity cycles – transformed into today's strategic planners and Chief Strategy Officers. Due to corporate strategists' prominent position in headquarters, several scholars analyzed their roles, backgrounds, organizational setups, and relationships ever since the 1960s. However, due to the changing responsibilities and name of strategists, these research articles seldom built on each other and repeatedly studied similar issues while neglecting others. In this review, we aim to trace the development of corporate strategists over the years to distinguish between the core characteristics that remained stable and the aspects of the role that evolved. Furthermore, we identify promising areas for future research to increase the understanding of this prominent group of strategy practitioners.

Keywords: corporate strategists, long range planners, strategic planners, chief strategy officers, strategy professionals

We thank Steven Floyd, Markus Menz, Winfried Ruigrok, Charlotta Sirén, and Richard Whittington for their insightful discussions and comments that helped us improve the article.

2.1. Introduction

In the years following World War II, when environmental changes and complex organizational structures increased uncertainty for corporations, specialized long range planners were introduced at the headquarters to assist the key decision-makers in strategy formulation (Greenwood, 1964; Henry, 1977; Whittington, Cailluet, & Yakis-Douglas, 2011). Later, this executive role – which is unique, since it "molds the shape of all other plans because it encompasses basic decisions for these plans" (Murdick, 1964: 37) – evolved into today's strategic planner who essentially stayed the same but, in addition to strategy formulation, also took over responsibilities concerning strategy execution. In recent years, this value-adding function at corporate headquarters (CHQ) became increasingly challenged. In 2015, for instance, Deutsche Bank announced a significant reduction of their corporate strategist staff (Manager Magazin, 2015), while Samsung decided to terminate the function entirely in 2017 (Reuters, 2017). Interestingly, this phenomenon is not new and, over the years, corporate strategists went through several popularity cycles (Whittington et al., 2011) during which some corporate planning units disappeared, only to reemerge after a few years.

Due to their prominent role in strategic planning, corporate strategists attracted many strategic management scholars over the decades (e.g., Bazzaz & Grinyer, 1981; Greenwood, 1964; Grinyer, Al-Bazzaz, & Yasai-Ardekani, 1986; Javidan, 1987; Menz & Scheef, 2014), which resulted in both practice- and research-oriented articles. However, due to the role's volatile popularity, as well as the terminology changing from long range to strategic planners, these studies seldom built on each other. Consequently, scholars repeatedly probed similar aspects while neglecting others, thereby resulting in a disconnected body of research that produced only indicative findings. Due to this disconnect, we presently have no integrated understanding of how and why the role of corporate strategists evolved. We also lack answers to important questions, most notably about the specific added value of this managerial role. By addressing these shortcomings, we pursue two goals with this literature review. First, we would like to isolate the stable core characteristics of corporate strategists and trace the role's aspects that evolved over the years. Second, we will identify worthwhile areas for future research that are promising to close the existing knowledge gaps.

By reviewing and integrating the merely loosely connected literature concerning this senior strategic role, we will inform concepts in several strategic management research streams, such as strategic leadership constellations, functional TMT members,

strategic planning practices, entrepreneurial corporate functions, and strategy professionals. For instance, in the strategy-as-practice perspective, the review contributes to previously identified research questions about strategy practitioners (Whittington, 2003), namely *where those individuals are located* and *how they are organized, what their backgrounds and skills are*, and *what methodologies they apply*. In the strategic leadership perspective, the article increases our understanding of the role and decision-making involvement of CEO advisers in the TMT periphery (Arendt, Priem, & Ndofor, 2005; Roberto, 2003). The review also gives a partial overview of corporate headquarters' "black-boxed" inner workings (Menz, Kunisch, & Collis, 2015: 669) by shedding light on a prominent value-creating corporate function.

Following this introduction, we conceptualize corporate strategists and explain our review approach in the next chapter. Afterwards, we trace how this executive role developed since its emergence based on our review of previous articles. In the third chapter, we synthesize our findings and identify promising directions for future research before concluding this article with a brief outlook on the future of corporate strategists.

2.2. Review Approach

Although the definition of strategy professionals includes strategic planning staffs on all organizational levels, as well as external consultants (Whittington et al., 2011), in this review we focus on strategy professionals on the corporate level for two reasons. In contrast to strategy consultants who often assist organizations only in specific strategy-related activities, corporate strategists are usually involved during the entire strategy cycle. Moreover, they typically do not have other operational responsibilities, which distinguishes them from decentralized strategy professionals on the divisional level (Ang & Chua, 1979). Notwithstanding, we draw on findings about other strategy professionals if they inform the relationships of corporate strategists with those actors (e.g., the division of work between corporate and divisional strategic planners). Following Mintzberg (1994a), we define *corporate strategists* as full-time[1] strategy specialists employed at the CHQ who are dedicated to develop and execute strategic or long range plans. This definition encompasses both the head and staff of corporate strategy/planning functions.

[1] It is noteworthy that the early corporate planners sometimes held additional, non-strategy-related responsibilities and therefore differ slightly from this definition. Nevertheless, we include them in the scope of our analysis.

Following the guidelines of Webster and Watson (2002), as well as those of Short (2009), we conducted a structured search to identify all relevant articles on *long range and strategic planners*, *planning departments*, *strategy functions*, and *Chief Strategy Officers* (CSOs) that jointly portray a comprehensive picture of corporate strategists. Initially, we used the EBSCO database to search all the articles that were published in the leading academic and practitioner management journals[2] for the keywords listed in Table 2-1. This search yielded 160 articles, which we screened manually to exclude the studies that were irrelevant to our review. In a next step, we searched the articles' lists of references to identify any further papers that needed to be included. This process resulted in 51 articles published between 1961 and 2017 (Appendix 2-1 summarizes the findings, methodologies, and research foci of each article). Due to their relatively old age – about two thirds were published before the year 2000 – most of the articles are either conceptual or based on descriptive observations.

Next, we studied all the identified articles in detail and synthesized their findings on corporate strategists in the following categories: *role & methods*, *personal background*, and *organizational setup & network*. During this initial review, we recognized four phases in the role's evolution, which suggested a chronological presentation of the findings to allow tracing the role's development over time. Afterwards, we consolidated the corporate strategists' characteristics in each phase and identified the external forces that explain the evolution of the role in each period.

[2] The searched journals include: *Academy of Management Journal*, *Administrative Science Quarterly*, *Academy of Management Review*, *Management Science*, *Strategic Management Journal*, *The Academy of Management Annals*, *Journal of Management*, *Journal of Management Studies*, *Journal of Economics & Management Strategy*, *Organization Studies*, *Strategic Entrepreneurship Journal*, *Strategic Organization*, *Long Range Planning*, *Global Strategy Journal*, *Business Strategy and the Environment*, *Harvard Business Review* and *MIT Sloan Management Review*.

Table 2-1: EBSCO search keywords

"Corporate Strategy Staff"	"Corporate Planning Department"	"Long Range Planning Function"
"Corporate Strategy Department"	"Corporate Planning Function"	"Long Range Planning Unit"
"Corporate Strategy Function"	"Corporate Planning Unit"	"Long Range Planning Group"
"Corporate Strategy Unit"	"Corporate Planning Group"	"Long Range Planning Director"
"Corporate Strategy Group"	"Corporate Planning Director"	"Chief Strategy Officer"
"Corporate Strategy Director"	"Long Range Planning Staff"	"Corporate Planner"
"Corporate Planning Staff"	"Long Range Planning Department"	"Corporate Strategist"

2.3. Review Findings

As summarized in Table 2-2, corporate strategists emerged after World War II and reached their first popularity peak during the early 1970s. In the subsequent years, environmental turbulence sent corporate strategists into a decline, which lasted until the mid-1990s. Since then, they have regained influence by expanding their role to address new challenges and avoid previous mistakes. In the following, we present the review's results in detail and suggest explanations why certain characteristics of corporate strategists changed along the four phases.

Table 2-2: Review summary

	Emergence	Peak	Crisis	Revitalization
Period	Until circa 1965	Circa 1966 – circa 1975	Circa 1976 – circa 1995	Since circa 1996
Avg. studies per year	0.15	1.44	0.95	0.81
Theoretical perspectives	- Formal planning - Formulation and implementation	- M-form organization	- Industrial organization - Positioning school	- Resource-based view - Learning school
Environmental drivers	- Growing organizational complexity - Environmental uncertainty - Pressure to innovate	- Decentralization	- Environmental volatility (e.g., oil crisis) - Rise of management consultants	- Globalization - Technological disruptions
Role & methods	- Technical and formalized - Crafting overall long range plans - Environmental forecasting	- Internal status increased - Range of tasks broadened - Actual planning was cascaded down to divisional planning staffs	- Decline due to failure of quantitative tools and methods - Rise of qualitative methods and scenario planning - Focus on specific, administrative tasks - Actual planning completely handed over to divisions	- Detection of emergent strategies outside the planning cycle - Broader role of strategists - Involved in strategy implementation - Communication on all organizational levels
Personal background	- Relatively young - Line management background - Higher educational degrees than the firm average	- Emergence of professionally educated planners - Majority still recruited internally due to line experience - Average tenure of US planners relatively short (3.5 years)	- Multifaceted backgrounds with both external and internal hires - First recruiting from strategy consultancies	- US CSOs typically hired internally - In Europe, 40% outsiders - Communication and social skills as important as analytical mindset
Organizational setup & network	- Functions rather small - Started several hierarchical layers below CEO to move up over the years - Working relationships mostly with other staff functions	- Located close to the CEO - Relative small on average - Emerging divisional staffs tend to be larger than corporate units - Corporate strategists with formal authority over divisional planners	- Downsizing corporate strategy staffs, sometimes accompanied by "upskilling" - Involving of external consultants for analytical tasks - In the UK, some functions were moved away from the CEO	- Senior hierarchical location close to CEO crucial for effectiveness - Strategist staff size varies substantially between firms - Reliance on consulting support in strategy formulation

Phase 1 (until *circa* 1965): Emergence

In the years following World War II, many US organizations introduced long range planning systems, which were initially oversaw by line managers on a part-time basis. In the mid-1950s, firms began to install dedicated long range planning units at their CHQs (Summer, 1961), which adopted the responsibility for the planning systems. With this expansion of planning and forecasting capacities, firms reacted to the increased complexity of their organizational structures, risen environmental uncertainty, and competitive pressures to innovate (Greenwood, 1964; Henry, 1977; Summer, 1961). Towards the end of this period, Chandler (1962), Ansoff (1965), and Learned, Christensen, Andrews, and Guth (1965/1969) published studies, which established the foundation for the theoretical field of strategic management that would shape the academic discourse in the following years. Especially Ansoff's portrayal of very technical, top-down planning, which he developed based on his observations during his tenure at Lockheed, are clearly recognizable in the descriptions of the first generation corporate strategists.

Role and methods. During this first phase, the corporate strategist's role – at that time they were described as long range planners – was characterized by its technical nature and formalized routines, which were predominantly focused on developing formal plans at the top of the organization (Branch, 1964; Greenwood, 1964). However, these early strategists did not only craft the overall long-term plans for their organizations, but also worked out plans in various functional areas (Branch, 1964). Similarly, Greenwood (1964) notes that the long range planners sometimes assisted line managers translate the long-term strategy into operating plans. Therefore, planning units were, at that time, predominantly focused on formulating plans and left their implementation to line managers – a distinction that was also reflected in the early seminal works on strategic management (e.g., Learned et al., 1965/1969).

Besides this focus on strategy formulation, the early strategists scanned and forecasted the environment to detect external changes that would impact on the long range plans (Greenwood, 1964). In order to increase the accuracy of their environmental forecasts, the planners introduced quantitative, operations research techniques, such as "simulation studies", "linear programming", and "network analysis" (Weston, 1973: 510), which was a trend that also contributed to Ansoff's (1964) "quasi-analytical" approach to strategy formulation. In sum, this first generation of strategists was

characterized by a relatively isolated position at the top of their organizations with a limited, technical role focused on formal planning and environmental forecasts.

Personal background. The corporate strategists of the first generation were relatively young – their average age was 43 years – compared to other, similarly compensated executives (Branch, 1964). During this phase, it was said that a deep understanding of the company's operations was essential for strategists (Summer, 1961). Similarly, Branch (1964: 92) explains that "line experience seems desirable to develop understanding of the more directly productive phase of the enterprise and to provide greater acceptance when function exclusively as staff". In terms of education, the early strategists' level of education typically exceeded the company average (Litschert, 1967) and undergraduate education often related to the company's industry (Branch, 1964; Litschert, 1967). On graduate level, however, the educational fields varied, which indicates that the education of those executives "involved broadening rather than further specialization". This could be explained by the "multifaceted management endeavor" that strategic planning represents (Branch, 1964: 93).

Organizational setup and network. During the early years, many corporate strategists initially did not report to the CEO directly (Branch, 1964), but were located several layers down in the organization (Steiner, 1970: 134). However, close to the end of the first phase, their internal importance had increased and they had moved up the hierarchy to directly report to the CEO (Litschert, 1967). At that stage, planning teams were reportedly quite small: Fifty percent of the studied organizations had a function smaller than five employees, which indicates that they were more focused on producing qualitative than voluminous outputs (Branch, 1964).

Within the CHQ, early strategists spent a considerable amount of time working together with various other staff functions (Branch, 1964). Apart from that, we know relatively little about the relationships of these executives within their organizations, thereby indicating that the early planners were isolated from their firms' operations. However, Greenwood (1964: 228) describes how effective planners began to descend "from the ivory tower" to assist operating executives implement approved plans and facilitate cross-divisional communication. This development was arguably triggered by the increasing popularity of multidivisional organizational structures (M-form organizations), which increased the planning complexity for corporate strategists and ultimately led to the decentralization of planning tasks in the subsequent phase.

Phase 2 (*circa* 1966-1975): Peak

From 1966 until the mid-1970s – the second phase – the popularity of corporate strategists increased. In 1970, the first study on the presence of long range planning functions reported that 67 percent of 137 US firms had installed planning units – most of them located on the corporate level (Weston, 1973). In Europe, Keppler, Bamberger, and Gabele (1979) even found that 79 percent of West German firms had installed a central planning function in 1973/74, thereby indicating that the trend had expanded overseas. What distinguished the second from the first phase, was the widespread adoption of M-form organizational structures, which changed the role of corporate strategists fundamentally. Although the M-form organization was already theoretically introduced in 1962 (Chandler, 1962), it took firms until the second half of the 1960s to implement it widely (Hoskisson, 1987). General Electric, for example, introduced strategic business units in the early 1970s, which transferred certain planning responsibilities to the divisional level (Ocasio & Joseph, 2008).

Role and methods. During this second phase, the status of formal planning within firms increased and this was accompanied by long range planners' tasks becoming broader to include more operational duties (Steiner, 1970). For example, corporate strategists were actively involved in various steps of the M&A process, such as target selection and synergy evaluation (Mason, 1968). However, in the course of introducing multidivisional structures, decentralized planning staffs were installed on lower levels of the organization (e.g., Friedrich & van't Land, 1974) and the actual formulation of plans was cascaded down the hierarchy (Kudla, 1976; Shagory, 1975). The corporate strategist therefore evolved from the one who carried out the planning to "the coordinator of planning done by line and staff throughout the company" (Steiner, 1970: 135). In this role, corporate strategists provided market assumptions and formulated goals for the divisions, but instead of developing the plans themselves, they supervised and integrated divisional planning activities (e.g., Litschert, 1971; Steiner, 1970; von Allmen, 1969). At that time, Pennington (1972) emphasized more drastically that planners ought to become assistants of the executives on lower levels of the planning organization to stay relevant in this changed setting.

At the same time, the planning systems administered by corporate strategists became too inflexible and ineffective (Henry, 1977), which resulted in the trend of "loosening [the systems] up [to] stimulate more innovation and creativity" (Steiner, 1970: 136). Interestingly, it appears that the trend towards less formalization, which

started at the end of the 1960s, resulted in new problems. In a 1974 survey, strategists identified the lack of formalization as the most pressing issue of their planning systems (Al-Bazzaz & Grinyer, 1980). In conclusion, the second phase ended in an "identity crisis" for corporate strategists that would transition into the next phase.

Personal background. The years between 1965 and 1975 were characterized by a steep increase in the demand for strategists (Whittington et al., 2011) and, as a result, professionally educated planners emerged (Shagory, 1975; Steiner, 1970). The majority of corporate strategists was, however, still recruited internally (Eppink, Keuning, & de Jong, 1976; Litschert & Nicholson, 1972). This can be explained by the increased importance of line experience that was required to understand the decentralized developed plans that needed to be coordinated and integrated (Pennington, 1972). Interestingly, certain companies introduced rotation programs that aimed at regularly familiarizing the strategists with the challenges of line managers (and *vice versa*) (Litschert & Nicholson, 1972) – a concept that would reemerge at IBM three decades later (Harreld, O'Reilly III, & Tushman, 2007). The continued technical nature of strategy formulation, as outlined by Ansoff (1965), required corporate strategists to have a strong analytical mindset and technical expertise to perform various quantitative analyses and environmental forecasts (e.g., Denning, 1969; Litschert & Nicholson, 1972; Mason, 1968).

Organizational setup and network. As corporate strategists had moved close to the CEO (e.g., Bazzaz & Grinyer, 1981; Higgins & Finn, 1977; Litschert, 1971), they became "an extension of the chief executive responsible for providing an objective analytical ability free from functional or executive responsibilities" (Denning, 1969: 67). During this phase, the average staff size of corporate strategists remained small, however, scholars observed significant outliers, which indicates that certain companies decided to employ a very large number of strategists on the corporate level. For instance, Higgins and Finn (1977) identified one company that employed thirty planners on a full-time basis, while the average function in the UK consisted of only 3.8 planners. Bazzaz and Grinyer (1981) similarly found that the average corporate planning team was relatively small, but noted that a number of sample firms employed very large planning staffs consisting of more than fifty planners.

This huge variance in corporate strategist staff size can be explained by considering the newly introduced divisional planning teams, which tended to be larger than their corporate counterparts (Bazzaz & Grinyer, 1981). In this regard, Friedrich and

van't Land (1974) described two possible configurations for planning teams in M-form organizations. In the first option, a relatively large central planning staff fulfills both overall strategic and operational planning. In the second option, only a small team of experts at the top develops the overall strategy, while multiple planning departments on the divisional level formulate operational plans.

During the years of the second phase, corporate strategists would remain in the lead over the divisional planning units and hold formal authority over their counterparts. For instance, they supervised divisional planning activities, coordinated them across business units, and had the right to request analyses (Friedrich & van't Land, 1974). In this coordinating role, corporate strategists were crucial for connecting and moderating between the CHQ and the operating entities. They were specifically "communicating corporate goals and priorities to divisional managers, assessing business-level plans presented to the top management, and aggregating business-level plans into corporate plans" (Grant, 2003: 506).

Phase 3 (*circa* 1976-1995): Crisis

In the following phase, which lasted until the mid-1990s, several factors contributed to the decline of corporate strategists. During the 1970s and 1980s, environmental volatility (e.g., the oil crisis) took planners by surprise and demonstrated the inability of their forecasting techniques to predict rapid environmental changes, thereby challenging a substantial part of their role (e.g., Edwards & Harris, 1977; Grant, 2003; Pinnell, 1986). In addition, with the M-form organization maturing and management consultancies becoming more popular, the activities of corporate strategists were increasingly taken over by the divisional level or external consultants (Rumelt, Schendel, & Teece, 1991). As a result, some large, multidivisional companies closed down their corporate strategy functions during this period (Ang & Chua, 1979; Bonn & Christodoulou, 1996; Houlden, 1995).

In order to understand the decline of corporate strategists, an alternative explanation can be found in academia, which challenged the value-added of formal strategic planning. Based on Michael Porter's contributions to the Industrial Organization (1980, 1985), superior performance was theoretically rooted in a firm being positioned in an attractive industry (based on a generic strategy) and not in top-down strategies or internal management capabilities (Hoskisson, Wan, Yiu, & Hitt, 1999). Furthermore, towards the end of this phase, Henry Mintzberg described how

strategies can result from an emergent process (Mintzberg & Waters, 1985) and pessimistically attested the ineffectiveness of the formalized strategic planning that was conceptualized during the 1960s (Mintzberg, 1994a).

Role and methods. In this setting, the "mature" corporate planning departments completely handed all the actual planning over to the divisional levels and focused their work on single "strategic issues", as well as "sensing the environment", instead of trying to forecast it precisely (Houlden, 1985: 52). Within the formal planning system, observers described the role of corporate strategists as somewhat administrative, with its design, organization, and continuous improvement being their main activities (e.g., Al-Bazzaz & Grinyer, 1980; Bonn & Christodoulou, 1996; Javidan, 1987). Consequently, expensive strategic planners were increasingly pressured to justify their added value, which was conveyed by the fact that certain corporate planners "were required to prepare detailed reports of [their] performance" (Bonn & Christodoulou, 1996: 546). Since economic volatility had proven the quantitative operations research techniques applied by corporate strategists useless, qualitative tools became more important (Houlden, 1985). Examples of more qualitative methods are the "SWOT or TOWS analysis", "competitor benchmarking", or the "industry structure analysis" (Houlden, 1995: 106). Moreover, corporate strategists added the scenario analysis to their toolbox to deal with the increased environmental uncertainty (Grant, 2003; Huss & Honton, 1987).

Personal background. During the third phase, the backgrounds of strategists became more multifaceted and a combination of external and internal hires with a diverse mix of functional experiences was sought (Houlden, 1985; Houlden, 1995). This shift – away from exclusive internal recruiting – indicates that firms responded to the inability of previous strategists to predict fundamental environmental changes by bringing in fresh insights. Furthermore, after the advent of strategy consultancies, companies began to recruit corporate strategists from these firms, because they potentially provided industry knowledge, as well as an outside perspective (Prete & Boschetti, 1990).

Organizational setup and network. Due to their declined influence, a significant share of corporate strategists in the UK were moved from the CEO to the finance function between 1985 and 1992 (Houlden, 1995). Not surprisingly, firms downsized their corporate strategy staffs during the ongoing decentralization of strategic planning (Grant, 2003; Jennings, 2000), which is also confirmed by an analysis of job

advertisements between 1960 and 2003 (Whittington, Yakis-Douglas, Ahn, & Cailluet, 2017). Moreover, with the responsibility for recurring planning activities being handed over to the divisions, analytical expertise was increasingly "insourced" from strategy consultancies, thereby further challenging the *raison d'être* of corporate strategists. Whereas strategy units collaborated only sporadically with outside consultants at the beginning of the third phase (Keppler et al., 1979), external strategy professionals began to take over "intelligence activities" from corporate strategists from the mid-1980s onwards (Grant, 2003: 508). As a result, certain firms replaced their formerly large corporate planning staffs with a small number of highly qualified strategists, which indicates that those functions were focusing on single strategic issues, while repetitive planning and analytical tasks were reassigned to the operating divisions and strategy consultants, respectively.

Phase 4 (since *circa* 1996): Revitalization

Ever since the mid-1990s, globalization and technological disruptions accelerated the competitive environment and imposed new challenges on CEOs, thereby giving the managerial role of corporate planners – who were thenceforth labeled as strategic planners or Chief Strategy Officers – a second spring (Delmar, 2003). This reemergence is also documented by a sharp increase in strategic planning job advertisements in the *New York Times* during these years (Whittington et al., 2011). Meanwhile, the resource-based view became popular among strategic management scholars (Barney, 1991; Wernerfelt, 1984, 1995), shifting the focus back "inside the black box of the firm" (Hoskisson et al., 1999: 437). By rooting a firm's competitive advantage in its resource endowment, managerial skills became more important than in the Industrial Organization concept, thereby potentially contributing to the new rise of corporate strategists.

Role and methods. Following Mintzberg's (1994b) recommendations for detecting and fostering strategies that emerge outside the formal planning system, corporate strategists started working on all layers of their organizations. As a result, their role broadened and became more multifaceted depending on the various challenges faced by the company (Angwin, Paroutis, & Mitson, 2009; Breene, Nunes, & Shill, 2007; Menz, Müller-Stewens, Zimmermann, & Lattwein, 2013). Compared to previous periods, especially two aspects are notable. First, compared to their predecessors, modern-day strategists are much more involved in the implementation of strategic plans

(Breene et al., 2007; Menz et al., 2013). This increased focus on strategy execution might have resulted from the pressure on corporate strategists to make their value-added more visible during the previous period. Second, arguably a side effect of the increased implementation focus, the strategist's role involves frequent communication with employees on all hierarchical levels and also with external stakeholders (Angwin et al., 2009; Breene et al., 2007; Dye, 2008). Gone are the days of the isolated planner at the top during the 1960s or his later successors whose interactions were mostly limited to members of the formal planning system. In today's world, corporate strategists need to be comfortable with communicating on all levels of the organization to detect emerging strategies, convey the CEO's vision, and ensure strategy implementation. Furthermore, as competitive environments accelerated, their work became "more *ad hoc*" (Prete & Boschetti, 1990: 24), which led to a new round of decreasing formalization (Bonn & Christodoulou, 1996). At present, apart from the annual formal strategy cycle, the role of corporate strategists is characterized by the absence of repetitive routines, because strategic issues arise on a non-regular basis in a wide variety of areas (Angwin et al., 2009).

Personal background. Today, CSOs in the US are typically recruited internally and have been with the firm for a substantial number of years. Breene et al. (2007) report that 84 percent of the executives in their sample were hired internally and had worked for their companies for an average period of eight years prior to assuming the CSO position. In Europe, the picture differs, as more than 40 percent are recruited externally (i.e., they have less than two years of firm experience) (Menz et al., 2013). This difference can be explained by the different profiles of the CSO roles in the US and Europe, since scholars suggest that the optimal CSO candidate depends on the role that he or she is intended to fulfill (Angwin et al., 2009; Powell & Angwin, 2012). In terms of education, two thirds of European CSOs hold a graduate degree in business administration or economics, which is a substantive increase compared to the previous decades and might be explained by the increased number of universities that offer specialized programs (Menz et al., 2013). Since modern corporate strategists need to detect strategies that emerge outside the planning system and ensure strategy execution, successful strategists are not distinguished according to their analytical abilities – which are still the role's basic requirement – but by their communication skills and social sensitivity (Angwin et al., 2009).

Organizational setup and network. Research on CSOs emphasizes the importance of a close proximity to the CEO, since it bestows on strategists the indirect authority needed to successfully carry out their role (Breene et al., 2007; Kaplan & Norton, 2005). Consequently, it appears that a large number of CSOs, both in the US and in Europe, report directly to the CEO (Breene et al., 2007; Menz et al., 2013). In their analysis of the hierarchical location of CSOs, Menz and Scheef (2014) report that the share of S&P 500 firms with CSOs in the TMT increased from 34 percent in 2004 to 49 percent in 2008. Moreover, they find that product diversification, acquisition activity, and TMT role interdependence are positively associated with CSO presence in the TMT. In terms of staff size, Menz and Barnbeck (2017) find substantial differences between European corporate development and strategy functions. They identify that firms' industry fragmentation, related diversification, acquisition and alliance activity, as well as firm size, are positively related to function size. In contrast, unrelated diversification, the number of operating divisions, and divisional influence in the TMT are negatively associated with the number of corporate strategists. Interestingly, their findings indicate that serial acquirers and diversified firms benefit from larger corporate development and strategy functions in terms of return on assets.

The unique relationship with divisional strategy teams who, in the previous phase, were increasingly taking over responsibilities from corporate strategists, is described to evolve as a newly introduced strategy process matures (Paroutis & Pettigrew, 2007). In the course of this, corporate strategists change from adaptive (e.g., collaboration or initiation) to recursive (e.g., coordination or execution) activities, while the reverse can be observed for divisional teams. Furthermore, this shifting activity distribution is suggested to be crucial for the improvement of the strategy process's outcome (Paroutis & Pettigrew, 2007). Since modern corporate strategists have expanded their focus to strategy implementation, they rely extensively on the support of external consultants in strategy formulation (Breene et al., 2007).

2.4. Overall Synthesis & Opportunities for Future Research

By bridging the disconnect of previous articles on corporate strategists, the portrayed arc reveals common themes across the four phases, aspects of the managerial role that evolved over time, as well as existing knowledge gaps.

First, the impact of changes in the environmental and organizational context of corporate strategists on their role represent a common theme across all four generations.

Changes in contextual factors – such as environmental shocks or the emergence of other strategy professionals (Grant, 2003) – called the relevance of corporate strategists into question and thereby advanced the development of the role. Second, the vast majority of strategists consistently reported directly to the CEO with whom they maintained a trusted relationship (e.g., Breene et al., 2007). This emphasizes the prominent role that corporate strategists play as the "extended work bench" of the CEO and marks them as an influential group of strategy practitioners outside the TMT. Third, despite fluctuations associated with the observed popularity cycles, the average number of corporate strategists remained small over the years. However, although corporate strategy functions tend to be smaller than their divisional counterparts, their overall costs are reportedly equal (Bazzaz & Grinyer, 1981), thereby indicating that the corporate role requires a broader skillset.

Besides these stable core characteristics of corporate strategists, several aspects of their role changed over the years. Most notably, their set of tasks evolved from initially focusing only on technical planning and forecasting, to administrating the planning systems and, later, to managing individual strategic issues and strategy implementation. Since the actual planning was cascaded down the hierarchy in the course of this development, the role became less technical and involved more personal interactions. Consequently, the relationships and communication skills of corporate strategists became more important. Whereas early strategists were predominantly isolated in the CHQ, interacting only with the CEO and other corporate functions, their successors coordinated the decentralized planning activities, thereby connecting the CHQ with the divisions. Later, the importance of interpersonal skills increased even further, since modern corporate strategists need to be comfortable with communicating on all hierarchical levels to ensure strategy implementation. Remarkably, at present the corporate strategist role, which started off as being extremely formalized in the 1960s, is characterized by a complete absence of formalized routines (Angwin et al., 2009).

In addition to the presented findings on corporate strategists, the review also highlighted previous articles' predominantly conceptual and indicative nature, which resulted in very few empirically supported findings. For instance, we still know very little about the relationships of this managerial function, its critical contingencies, and most notably, its effects on firm outcomes. Regarding the latter, recent research has identified no performance consequences of CSO membership in the TMT (Menz & Scheef, 2014), but suggested that serial acquirers and diversified firms may possibly

benefit from larger corporate strategist teams (Menz & Barnbeck, 2017). Since financial performance measures may perhaps be too distant from the activities of strategy practitioners to detect direct effects, future research should study intermediate outcomes that are closer to the actual work of corporate strategists (Whittington & Cailluet, 2008). Based on the literature review, we have identified several areas for future research that are promising to uncover specific value-adds of corporate strategists. In the following, we outline these research opportunities and derive possible research questions in each area (Table 2-3).

Table 2-3: Opportunities for future research on corporate strategists

Research opportunity	Potential research questions
Opportunity 1: Learning processes in strategizing	- Do corporate strategists deliberately apply learning processes, such as knowledge articulation, codification, sharing, or internalization, to advance their role and keep abreast of changing environmental conditions? - Are the learning processes applied by corporate strategists positively related to the effectiveness of the planning system (or the quality of strategic initiatives)? - What role does the previous strategizing experience of the organization (e.g., the age of the strategic planning system or the number of conducted strategic initiatives) play in the effectiveness of deliberate learning processes?
Opportunity 2: Implications of new technologies for corporate strategists	- Which new technologies will support corporate strategists in their role? Which of their activities can be automated? Which ones will become more important (e.g., sensemaking)? - Which new skills do corporate strategists need to master to excel at their role? - What is the optimal setup between corporate strategists and technical executives, such as CTOs, CDOs, or CIOs? - To whom should the upcoming insights and analytics functions optimally report? What is their interaction with corporate strategists?
Opportunity 3: Relationships of corporate strategists	- Under which conditions do firms benefit from employing a CSO who complements the CEO in terms of functional, industry, and firm experience? - How frequently do corporate strategists communicate with the CEO, divisional strategists, or venture teams? How does this pattern change over time? - Under which circumstances do firms benefit from granting corporate strategists formal authority over their divisional counterparts? - Do conflicts between corporate and divisional strategists benefit their effectiveness?

Opportunity 1: Learning processes in strategizing

The review illustrates that strategists who are unable to adapt to changing contexts and continue with their past routines, will lose their influence within the firm (Pennington, 1972; Pinnell, 1986) and ultimately cease to exist. During the 1970s and 1980s many planning functions followed this route, because they failed to adapt their role in response to the emergence of divisional units (e.g., Pennington, 1972; Steiner, 1970), challenges by uncertain environments (e.g., Grant, 2003; Henry, 1977; Whittington et al., 2017), new requirements of the firm (Pinnell, 1986), or simply the maturity of the planning system (e.g., Houlden, 1985; Paroutis & Pettigrew, 2007). In order to avoid this fate and stay relevant, it is possible that today's corporate strategists not only fulfill their respective responsibilities, but also continuously interpret their situation, detect new requirements concerning their role, and initiate learning processes.

We therefore encourage researchers to study whether and how corporate strategists advance their role and the strategy process by applying organizational learning routines. Interestingly, previous literature in the field already suggested the need for analyses concerning the dynamic character of strategic planning configurations (Wolf & Floyd, 2017) and observational studies described how corporate strategists evolved over time (Harreld et al., 2007; Jennings, 2000; Ocasio & Joseph, 2008). However, we do not know whether corporate strategists deliberately drive the adjustment of their role and configuration in response to contextual changes. In contrast to other CHQ functions, which are obligatory or can transparently track their value-added, such proactive behavior is especially important for strategists, because their added value is purely subjective and difficult to quantify.

If corporate strategists apply learning processes to adapt to new situations, it can be regarded as a dynamic capability in the sense of Teece, Pisano, and Shuen (1997), since they would help the firm secure its competitive advantage during the course of a changing environment. We therefore hope that future studies will shed light on this topic and explore not only how corporate strategists detect environmental shifts, but also how they systematically develop their role through organizational learning in response to those shifts. Thereby, similar studies on strategy-related functions, such as strategic alliances (Kale & Singh, 2007) or M&A (Trichterborn, zu Knyphausen-Aufseß, & Schweizer, 2016), can serve as a starting point for studying similar mechanisms applied by corporate strategists in, for example, the context of the recurring strategy cycle or strategic initiatives.

Opportunity 2: Implications of new technologies for corporate strategists

A contextual shift that has impacted the role and applied methodologies of corporate strategists in recent years, was the emergence of new, disruptive technologies. As outlined in several practitioner-oriented articles, strategists are increasingly using tools – that are enabled by these new technologies – in their day-to-day work, which indicates that they are reversing the trend away from technical methods. We expect that this return to their technical roots will impose severe challenges to corporate strategists and we believe that this deserves closer examination.

In the near future, companies will integrate predictive machine learning algorithms that leverage their extensive, but unstructured, datasets into their decision-making processes (Shields, 2018), thereby increasing the amount and quality of information available to strategists. Innovative firms already apply such technologies, for instance, in their product development, in the identification of attractive acquisition targets, or in their footprint optimization (Davenport, 2016). In the long term, this trend will potentially result in the advent of "strategizing machines" that automate a large amount of today's strategists' tasks (Davenport, 2016). Although such technology will still rely on human inputs and sensemaking, its emergence will have substantial implications for corporate strategists.

In terms of personal background, corporate strategists will likely be required to add computer science to their skillset, as a recent executive survey showed that managers regard technological proficiency and data analysis to be more important skills in the future than strategy development (Harvard Business Review, 2017). The survey also disclosed the increasing importance of "people skills" to counter the ramifications of workplace automation. Therefore, if applied to corporate strategists, it is likely that they will become teachers of how to use the predictive tools applied in strategic planning on all levels of the organization (Shields, 2018).

Regarding working relationships, we expect that the increasing influence of technical executives in the C-suite (i.e., Chief Technology/Information/Digital Officers) will challenge the legitimacy of corporate strategists, and that this will potentially result in a popularity decline similar to the one that followed on the emergence of divisional planners in the third phase. Highlighting the convergence of technical and strategic roles in 1992 already, Stephens, Ledbetter, Mitra, and Ford (1992: 449) noted that the Chief Information Officer is an "active participant in strategy planning". Moreover, the adoption of independent "insights and analytics functions", which will be significantly

involved in strategic decision-making, will encroach further on the core activities of corporate strategists and potentially spark conflicts (van den Driest, Sthanunathan, & Weed, 2016).

In sum, the recent practitioner-oriented articles indicate that the introduction of new, technology-enabled strategy practices will significantly impact on corporate strategists in future. We therefore hope that future research will identify best practices for the role and organizational setup of corporate strategists in the digital age.

Opportunity 3: Relationships of corporate strategists

Based on the literature review, a notable aspect in the evolution of corporate strategists was the increasing importance of their interactions and working relationships with other actors in the organization. Although previous articles identified their most important relationships, we still know very little about them – particularly in terms of their antecedents, contingencies, and outcomes. Hence, we encourage researchers to substantiate this area and to study the corporate strategists' relationships with the CEO, divisional strategists, and venture teams more closely.

Over time, research consistently acknowledged a close and trusted relationship with the CEO as a success factor of corporate strategists (e.g., Breene et al., 2007; Denning, 1969; Dye, 2008). For instance, Breene et al. (2007) reported that the CSOs in their sample knew their superiors for five years on average, before assuming the strategy post. They explained that this personal connection and proximity is crucial, since it bestows on the strategist – whose role is usually not associated with commanding authorities – the CEO's executive powers. In terms of personal backgrounds, previous research suggested that firms benefit from employing a CSO whose background complements the CEO's (Vancil, 1967). Both findings raise the question of contingencies in the CEO-CSO relationship, which we believe is a promising research area for future studies. For instance, outsider CEOs will conceivably benefit more from selecting a company veteran as CSO who has built an extensive network in the organization, instead of selecting a confidant from the outside. Furthermore, the benefits of complementary CEO-CSO backgrounds can also depend on a firm's competitive environment or industry life cycle stage.

Besides the CEO, the divisional strategy units became important counterparts of the corporate strategists and reshaped their role after first emerging during the second phase. Some would argue that the two groups are two sides of the same coin and together

they represent the total number of strategizing resources in the firm. We therefore believe that the interaction between corporate and divisional strategists is crucial for the success of strategic planning and that it is a worthwhile direction for future research. The initial study in this area by Paroutis and Pettigrew (2007) shows that this relationship evolves as the planning process matures and indicates that this change determines the outcome of the process. However, previous studies indicated that the relationship between corporate and divisional strategists varies from firm to firm. While certain researchers portray corporate strategists as more powerful than divisional units (Friedrich & van't Land, 1974), others describe how divisional units have taken over the lead, which sometimes resulted in the downsizing or even termination of the corporate function (Grant, 2003; Houlden, 1995). These observations impose the question under which circumstances top-down modes are preferable over bottom-up ones and *vice versa*. Researchers should therefore not assume that the relationship remains stable over time but should examine how it dynamically evolves as a firm's strategic challenges change (Jennings, 2000; Paroutis & Pettigrew, 2007).

The relationship between corporate strategists and venture teams that are spread across the organization is another worthwhile area for future research. In order to foster fundamental innovation, firms employ corporate venture teams that search for new business and investment opportunities outside the organization's core (e.g., Chen & Nadkarni, 2017). Thus, the purpose of these venturing units lies "at the intersection of entrepreneurship and strategic management" and overlaps with that of the corporate strategists to strategically renew the firm (Chen & Nadkarni, 2017: 37). In recent years, corporate venturing increased in popularity, as corporate investors tripled globally between 2011 and 2016 (Himler, 2017). Although this development suggests that venture teams are a relatively recent phenomenon, early research on the first generation of corporate strategists already characterized the special relationship between the two groups as far back as the 1970s: At that time, temporary venturing units were "responsible for finding, investigating, and developing new business opportunities either through acquisition or internal development" and were typically initiated by, but acting independently from, the central strategy department (Litschert, 1971: 39). Due to their increasing popularity in recent years, we encourage researchers to follow this trail and to study the relationship between "traditional" strategy departments and "agile" venture teams more closely.

2.5. Conclusion

In this article, we integrated the previously disconnected research streams on early long range planners and their CSO successors. We identified the dynamic aspects of this executive role that evolved during the years and we traced the stable characteristics that remained constant. We also synthesized previous articles' mostly indicative findings on corporate strategists to identify starting points for future empirical studies to generate statistically substantiated insights.

Overall, we are optimistic about the future of corporate strategists, because the challenges imposed by disrupting technologies and accelerating competitive environments are likely to increase the need for strategizing resources in CHQs. Ironically, the initial study on corporate strategists described a very similar environment that led to the emergence of corporate planners in the first place (Summer, 1961), thereby emphasizing the stable core of this managerial function. However, the fact that today an increasing number of firms employ highly paid CSOs in their TMTs (Menz & Scheef, 2014), while others have begun to downsize their strategy functions (e.g., Deutsche Bank & Samsung), emphasizes the need to better understand this executive role. We therefore hope that this article sparks the interest of management scholars to investigate the outlined research questions, thereby closing the existing gaps in our knowledge about corporate strategists.

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Appendix 2-1: Literature overview

Study	Focus	Methodology	Key findings
Summer (1961)	Role & methods; Organizational setup & network; Personal background	Conceptual, illustrative examples	Full-time corporate planners emerged since the mid 1950s - previously line managers had part-time responsibility to coordinate functional plans. The increased importance of the planning function was triggered by increased planning complexity, divisionalization, required innovation speed, and required technical knowledge. Specific firm-specific expertise, financial accounting knowledge, and communication skills were necessary for effective planners.
Branch (1964)	Role & methods; Organizational setup & network; Personal background	Survey of 35 North-American corporate planning groups	One third of the corporate planners have an additional function. The planning units are relatively small, indicating a focus on the quality rather than quantity of work. Not all report to the CEO. Units work on overall as well as functional plans. Considerable amount of time spent on interactions with other staff units. Relatively young executives with little prior planning experience (some line experience helpful). High educational level from various fields.
Greenwood (1964)	Role & methods; Organizational setup & network	Conceptual, findings from studying 45 North-American corporate planning staffs	Corporate planners add value by (1) studying the environment for changes, (2) check the consistency of a firm's operations with the strategy, and (3) supporting operational managers in translating long- into short-term plans.
Litschert (1967)	Role & methods; Organizational setup & network; Personal background	Interviews with executives in 40 companies	Long range planning groups are usually small, located near the top management. Employees obtained slightly higher educational degrees than in other departments. Departments are involved in the development of long range plans, periodic market analyses, development of assumptions, financial analyses, and feasibility studies.
Vancil (1967)	Role & methods; Organizational setup & network; Personal background	Conceptual	Chief planner's personality should be compatible with the president. FTE growth in the department is a sign of success. Often, planning departments have a close relationship with the controlling department.
Mason (1968)	Role & methods; Organizational setup & network	Conceptual, findings from studying 6 corporate planning groups	Corporate planning groups are involved in various steps of the M&A process, such as target selection and synergy evaluation, working closely with top management. Usually, they aggregate various inputs from internal and external parties.
Denning (1969)	Role & methods; Organizational setup & network	Case studies of 3 corporate planning functions in UK firms	Corporate planning departments should have direct access to the CEO. The firm's environment and structure (e.g., internationalization, divisionalization) define the optimal role of the planning department in the areas of strategic management and coordination. The authors propose a framework that allows to cluster planning activities into those that are optimally initiated, coordinated, or carried out by the planning unit.

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Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
von Allmen (1969)	Role & methods; Organizational setup & network	Conceptual	Corporate planners break down corporate objectives for the divisions and corporate functions, monitor the environment of the firm, design and administer the planning system, and manage acquisitions. It is essential for new planners to produce tangible results quickly and build a network with the key decision-makers. Thus, it is advisable that the planner is member of the TMT. Potential conflicts arise between the planning and finance function.
Steiner (1970)	Role & methods; Organizational setup & network; Personal background	Conceptual, illustrative examples	Corporate planners are accepted in the US and moved up in the firms' hierarchies. Due to their proximity to the TMT, their breadth of activities increased to also more operational tasks. Often, corporate planners (and planning staff) were promoted from lower-level line management positions. The role of planners changed from the 'pure' planner to the coordinator of planning and teacher of planning methodologies (most relevant in decentralized firms).
Litschert (1971)	Role & methods; Organizational setup & network	Survey of 28 long range planning groups and interviews with planning executives from 7 companies	Planning groups are located at the top of the organization and usually report to the CEO. They are relatively small and exist both in the CHQ as well as the business units. Planning groups in technologically stable environments were structured in subunits, each dedicated to a specific function. Sometimes, planning groups are complemented by teams to explore new business opportunities.
Litschert & Nicholson (1972)	Role & methods; Personal background	Interviews with corporate planning executives from 7 companies	Long range planning groups are usually not staffed with professional planners but with managers who obtained an undergraduate education in the company's industry (plus an MBA). Often, rotation programs between the long range planning group and line managers are in place. However, a small permanent team (and the head of the unit) are excluded from the program to ensure planning continuity.
Pennington (1972)	Role & methods; Personal background	Conceptual, illustrative examples	Corporate planners should provide planning expertise (carry out some analyses, make valid assumptions) to line managers who carry out the actual planning. Ideally, planners are recruited from line management positions, as they have knowledge of the firm's operations and respect within the firm.
Weston (1973)	Organizational setup & network	Survey of 162 North-American firms	67% of the firms have introduced a formal long range planning function. Those functions are predominantly found at the corporate level only (24%) or both the corporate and the divisional level (57%). Planning functions only at the divisional level were very rare (only 4%).
Knoepfel (1973)	Role & methods; Organizational setup & network	Conceptual	To cope with organizational politics and resistance towards change, corporate planners should have significant experience in the corporation. Political and communication skills become as important as technical expertise.
Friedrich & van't Land (1974)	Role & methods; Organizational setup & network	Case study of a European steel company	A planning unit can either be installed as a central department or as decentralized units in the divisions that are supervised by a small team at the top. In the latter case, the corporate team holds formal authority and has the right to request analyses.

(continued)

Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
Shagory (1975)	Role & methods; Personal background	Conceptual, illustrative examples	Corporate planners are responsible for the coordination of divisional strategies, identification of growth prospects, market research, formulation of corporate plans, and M&A negotiations. Usually, planners transfer from internal positions and are trained on the job; however, the first companies start to recruit planners externally.
Eppink, Keuning & de Jong (1976)	Role & methods; Organizational setup & network; Personal background	Survey of corporate planners in 20 Dutch companies	The vast majority of Dutch planning units was introduced in the early 1970s, which thus slightly lags behind Anglo-Saxon firms. However, first planning departments are being closed down in highly diversified firms that decentralize planning responsibilities. The planning staffs are relatively small (avg. 3 FTE). Most of the planners have an accounting and finance background, and the majority are internal appointees (85%). The most important part of the role is coordination - formal tools and techniques are reported to be not very important.
Kudla (1976)	Role & methods; Organizational setup & network	Interviews with planning executives in 14 North-American firms	Corporate planning departments coordinate and review divisional plans, assist in the development of overall goals, and provide environmental assumptions. They interact with divisional staff groups as well as intermediary planning groups, which facilitate the communication across multiple business units. Multidivisional firms increasingly tend to only have decentralized planning departments in the business units.
Henry (1977)	Role & methods; Organizational setup & network	Three field studies of corporate planning systems in 29 North-American firms	Planning units of the 1960s were significantly renewed in the early 70s. The author identifies three problem clusters that caused the change: Issues associated with management attitudes, the design of the planning system, and the method to manage the system. In most of the cases, the early planning systems were too formalized and thus became ineffective.
Higgins & Finn (1977)	Organizational setup & network	Two surveys of CEOs and corporate planning executives in 71 UK firms	A close relationship with the CEO is important for the planning executive. On average, planning departments consist of 5.6 employees - they tend to increase with firm size. Overall, CEOs think that the advantages of corporate planning outweigh its disadvantages.
Ang & Chua (1979)	Organizational setup & network	Survey of corporate planning executives in 113 North-American firms	More than half of the firms had installed dedicated central planning departments. The size of these units varied significantly (1 - 100 employees). Most notable difficulties in the planning efforts were the availability of reliable forecasting data and the communication between the TMT and lower hierarchical levels.
Keppler, Bamberger & Gabele (1979)	Role & methods; Organizational setup & network	Survey of 181 Western German firms	79% of the German firms had established central planning positions. Usually, they coordinate long range planning across hierarchical levels. 80% of the planning units carried out additional tasks (e.g., business planning or execution supervision). In contrast to the US, German units usually do not report directly to the CEO but one level below - however, none reported to a non-TMT member. Divisionalized firms and companies under innovation pressure tend to install central planning units.

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Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
Al-Bazzaz & Grinyer (1980)	Role & methods; Organizational setup & network	Survey of corporate planners in 48 UK firms	Corporate planners have a limited set of responsibilities with a focus on the design and administration of the planning process. Corporate planners perceive their greatest contribution to be in the identification of problems, strengths, and weaknesses. However, they note that their contributions are hard to quantify.
Bazzaz & Grinyer (1981)	Role & methods; Organizational setup & network	Survey of corporate planners in 48 UK firms	The existence of specialized corporate planners is significantly associated with firm size. Specialist planners usually have a high hierarchical status. Planning departments at the corporate level are usually small compared to units on lower hierarchical levels (however, the total costs are similar). The activities of corporate level planners are more extensive than those of business level planners.
Leontiades & Tetzel (1981)	Role & methods	Cross-sectional study of 88 North-American firms (survey data)	At the corporate level, the time Chief Planning Officers spend on business-level planning is inversely related to the time spent on corporate-level planning. In addition, they spend more time on corporate-level planning if their firm is very diversified.
LaForge & Wood (1982)	Role & methods	Survey of corporate planners in 59 North-American banks	In 1977, two thirds of the respondents reported to use operations research techniques, such as simulations, regression techniques, linear programming, or network analysis. The results indicate that larger banks are more likely to use operations research than smaller ones.
Houlden (1985)	Role & methods; Organizational setup & network; Personal background	Survey of corporate planning units in 105 UK firms	Both existence and size of corporate planning units are related to firm size. Other suggested antecedents of the setup of corporate planners are related diversification, organizational centralization, CEO leadership style, and internal and external turbulence. As corporate planning matures, planning is transferred to line managers and focus shifts to single strategic issues and implementation. 67% of the planners report to the CEO. 96% hold university degrees. Balanced recruiting in terms of functional, firm, and methodological expertise.
Grinyer, Al-Bazzaz & Yasai-Ardekani (1986)	Role & methods; Organizational setup & network	Survey of corporate planners in 48 UK firms	Empirical analysis of contextual factors on the use of qualified specialists, their status, their tasks in the planning process, and the formality of planning. Firm size is positively associated with the number of specialized planners. Planners employ more sophisticated forecasting and evaluation techniques when the firm's core technology is vulnerable. Planners are located on lower hierarchical levels in firms with high market shares.
Pinnell (1986)	Role & methods	Conceptual	Description of the evolving role of corporate planning departments. Planners need to adapt their role to the requirements of the firm's situation (i.e., boom, recession, recovery). Significant event was the oil crisis in the early 70s on the role of corporate planning departments.
Javidan (1987)	Role & methods	Survey of planning executives in 101 North-American firms	Effective planning staffs generate inputs on the corporate and divisional level, and administer the planning system. The communication of corporate goals, identification of divisional strategies, and evaluation of corporate strategies and goals have the highest impact on the staff's effectiveness.

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Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
Prete & Boschetti (1990)	Role & methods; Personal background	Conceptual, illustrative examples	Planning needs to be more flexible and less formalized (ad hoc instead of annual). Strategists are not the architects of strategy anymore but coordinate the process, supply analyses, monitor environmental changes, and sometimes ensure implementation. External consulting experience and experience in other industries are suggested to be beneficial.
Kukalis (1991)	Role & methods	Cross-sectional study of 115 North American manufacturing firms (survey data)	In general, planners are more effective when their setup accounts for the firm's context. Specifically, they are more involved in the planning process if the environment is stable (low complexity), firm size is large, and the products of the business units are related.
Mintzberg (1994a)	Role & methods	Conceptual, illustrative examples	Planners should add value by detecting emerging strategies throughout the organization, carrying out analyses on an ad-hoc basis, and ensuring that line managers engage in strategic planning by asking challenging questions.
Houlden (1995)	Role & methods; Organizational setup & network; Personal background	Survey of strategic planners in 86 UK firms	The findings of their 1985 study were confirmed. Overall, the number of firms with corporate planning units increased since 1985 due to medium-sized companies. In the course of decentralization, some large organizations discontinued their central planning departments. Results indicate that some planning units were moved from the CEO to the CFO.
Bonn & Christodoulou (1996)	Role & methods	Interviews with strategic planning executives in 80 Australian firms	The number of companies with planning departments decreased between 1982 and 93 from 94% to 65%. In addition, the role of planning departments changed from a methodology driven unit carrying out the planning to a unit coordinating the planning of line managers and administrating the process. Moreover, many planning departments were required to report their quantified value-add in 1993.
Jennings (2000)	Role & methods; Organizational setup & network	In-depth case study of a UK utilities company	Examination how the planning process and planning organization evolved after the privatization of a company. In course of divisionalization, planning staff was relocated from the CHQ to the business units. The small remaining central planning unit was mainly responsible for coordination.
Grant (2003)	Role & methods; Organizational setup & network; Personal background	In-depth case studies of 8 oil majors based on interviews with 28 strategists and archival data	Corporate planning departments in oil majors support the TMT in strategic decision-making by conducting analyses, administering the planning process, connecting corporate and divisional managers, and internal consulting. Usually, the planners are recruited from line management or other CHQ functions (avg. tenure 3-5 years). As environments became more turbulent, responsibility for strategic decision making was decentralized. Consequently, corporate units decreased in size while divisional units grew.

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Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
Delmar (2003)	Role & methods; Personal background	Conceptual, illustrative examples	Before assuming the CSO position, executives were typically a company's original founder, who stepped aside for a professional manager, the former CEO of an acquired firm, or an external management consultant.
Kaplan & Norton (2005)	Role & methods; Organizational setup & network	Conceptual, illustrative examples	The authors propose to integrate strategic planning departments with an Office of Strategic Management that oversees strategy execution. They propose nine processes, which the combined unit should carry out and recommend that the unit has direct access to the CEO. In terms of size, they state that the combination does not necessarily imply an FTE increase.
Paroutis & Pettigrew (2007)	Role & methods; Organizational setup & network	In-depth case study of a UK utilities company	Both the activities and interactions between corporate and divisional strategy teams change with the age of the strategic planning process. The authors indicate that interactions between strategy teams on different hierarchical levels can affect the effectiveness of the strategic planning process.
Breene, Nunes & Shill (2007)	Role & methods; Personal background	Survey of 200 North-American CSOs and press review of 100 CSO appointments	US CSOs split their time almost evenly between strategy formulation and execution, the latter being slightly more important. The authors stress the importance of communication on various hierarchical levels. Typically, strategists have extensive prior firm and industry experience before becoming CSO.
Dye (2008)	Role & methods; Organizational setup & network	Roundtable discussion with 6 North-American CSOs	A close relationship with the CEO and communication on both the corporate and business level is vital for success. In the development of the long-term strategy, CSOs balance short and long-term goals. It is advantageous to have a good relationship with the finance function.
Ocasio & Joseph (2008)	Role & methods; Organizational setup & network	In-depth case study of General Electric	At GE, the first long range planning units emerged from consultation services and marketing services. Shortly afterwards, long range planning was renamed into strategic planning. Later, planning activities were decentralized and coordinated by the corporate planning unit - the specific configuration varied according to the preferences of the respective CEO in power.
Angwin, Paroutis & Mitson (2009)	Role & methods; Organizational setup & network; Personal background	Interviews with 97 strategy practitioners in the UK	CSOs and their small teams are typically reporting directly to the CEO. Their tasks span from strategy initiation, reflection, to execution. To coordinate and connect various internal and external stakeholders, they need strong communication skills in addition to their technical skillset.

(continued)

Appendix 2-1 (continued)

Study	Focus	Methodology	Key findings
Whittington, Cailluet & Yakis-Douglas (2011)	Organizational setup & network	Descriptive study of New York Times job advertisements (1960-2000)	Overall, the job market for strategic planning professionals is very cyclical: A steep demand increase during the 1960s was followed by drops in times of economic downturns - in particular during the 1990s.
Powell & Angwin (2012)	Role & methods; Personal background	Conceptual, findings from 24 interviews with UK CSOs	Depending on the organizational context and stage of the strategy process, firms should design the CSO role according to one of four categories: internal consultant, specialist, coach, and change agent.
Paroutis & Heracleous (2013)	Role & methods	Exploratory interviews with strategy directors in 11 UK firms and a longitudinal case study of a UK utilities company	Senior strategists utilize different dimensions of first-order strategy discourse (i.e., identity, functional, contextual, metaphorical) during the phases of institutional adoption to accomplish specific outcomes.
Menz, Müller-Stewens, Zimmermann & Lattwein (2013)	Role & methods; Organizational setup & network; Personal background	2 surveys of CSOs in German-speaking Europe (n = 90 & 54)	European CSOs typically report to the CEO but are not a member of the TMT and are mainly involved in corporate development, process management, and portfolio management. Two thirds have a business or economics degree and 40% have less than 2 years firm-experience before assuming the CSO position. The median department size is 6 FTE. One success factor is the collaboration with a variety of other corporate functions.
Menz & Scheef (2014)	Organizational setup & network	Longitudinal study of 150 North-American firms (2004-2008, archival data)	In the US, a firm's diversification degree, acquisition activity, and TMT role interdependence are antecedents of CSO presence in the TMT. However, no direct or indirect performance effects of CSO presence in the TMT were identified.
Whittington, Yakis-Douglas, Ahn & Cailluet (2017)	Role & methods; Organizational setup & network	Longitudinal study of 2,882 strategic planner job advertisements (1960-2003, archival data)	Together with increased environmental turbulence, strategic planners became more decentralized and conducted less economic analyses. Relatively stable was the importance of analysis and forecasting as part of strategic planner jobs - however, compared to marketing executives, the importance of analysis and forecasting decreased as environments became more turbulent.
Menz & Barnbeck (2017)	Organizational setup & network	Cross-sectional study of 105 European firms (survey and archival data)	Industry fragmentation, product diversification, acquisitions, alliances, firm size, and the number and influence of business units are associated with corporate development and strategy function size. Serial acquirers and diversified firms benefit from larger corporate development and strategy functions in terms of ROA.

3. Article II: Determinants and Consequences of Corporate Development and Strategy Function Size

Markus Menz

Fabian Barnbeck

Abstract: The corporate development and strategy function (CDSF) at headquarters is critical for contemporary firms' strategy activities, yet we know little about its design and structure. We explore how firms determine the need for strategy resources at the corporate level and, thus, the CDSF size, as well as the extent to which they benefit from this structural choice. Drawing on a survey of strategy heads from 105 large listed European firms, as well as archival data, our analysis indicates that a) the number of CDSF employees differs substantially across firms, suggesting distinct CDSF types and economies of scale in the CDSF; b) environmental, strategic, and structural factors explain this variance; and c) the CDSF size is consequential for a firm's performance, although one size does not fit all firms. Overall, the study highlights the importance of strategy professionals and functions for a firm's strategy processes.

Keywords: corporate development and strategy function, chief strategy officers, corporate headquarters, corporate strategy, planning unit, strategy department

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We thank Editor Gianmario Verona and three anonymous reviewers for their guidance and helpful comments. We also thank Patricia Klarner, Markus Kreutzer, Sven Kunisch, Tomi Laamanen, and Christine Scheef for the insightful discussions and comments and gratefully acknowledge the survey funding provided by the consulting firm Roland Berger.

3.1. Introduction

The contemporary corporation is characterized by a portfolio of diverse product and geographic operating units and a (structurally) separate corporate headquarters (CHQ) entity (Chandler, 1962, 1991; Collis, Young, & Goold, 2007; Menz, Kunisch, & Collis, 2015). The CHQ plays a key role in economically justifying a firm's presence in multiple businesses (Collis & Montgomery, 1998). Indeed, besides performing obligatory and shared services functions, the CHQ's primary role is to create value for the overall firm (Chandler, 1962, 1991; Collis et al., 2007; Foss, 1997). To perform these activities, the CHQ hosts corporate executives and staff, as well as central functional units in areas such as finance and human resources (HR) (Menz et al., 2015), referred to as corporate functions (Campbell, Kunisch, & Müller-Stewens, 2012; Gospel & Sako, 2010; Kunisch, Müller-Stewens, & Campbell, 2014).

Of all corporate functions, the most important is probably the one responsible for a firm's corporate development and strategy. Indeed, early on, corporate-level planning was described as *the* core CHQ activity, since it "molds the shape of all other plans because it encompasses basic decisions for these plans" (Murdick, 1964: 37). The emergence of the corporate planning function dates to the 1950s, with Greenwood (1964: 227-228) noting that "the trend toward formal LRP [long-range planning] since World War II has been accompanied by the formation of many special planning staffs at the corporate level of American business." This function's prevalence has since increased substantially. While an early survey revealed that 55 percent of large U.S. firms had a centralized planning function in the late 1970s (Ang & Chua, 1979), a more recent study reported 94 percent in 1999 (Collis et al., 2007).

Initial field-based research has illustrated that, in contemporary corporations, this corporate function is usually responsible for tasks relating to the firm's strategy processes, which range from strategic analyses and planning, to execution and corporate development activities, such as mergers and acquisitions (M&A) and alliances (Angwin, Paroutis, & Mitson, 2009; Breene, Nunes, & Shill, 2007; Kaplan & Norton, 2005; Menz, Müller-Stewens, Zimmermann, & Lattwein, 2013). For instance, the Corporate Strategy Office of the U.S. technology firm Cisco, led by Senior Vice President and Chief Strategy Officer Hilton Polanski, includes 1) "strategy development, planning, and execution", 2) "acquisitions", 3) "venture-type investments and investment-backed alliances", and 4) the "corporate technology group" (Cisco, 2017). Another example is the Corporate Development function at the German logistics firm Deutsche Post DHL

Group, which reports to the CEO and is responsible for "corporate strategic projects, strategic planning, corporate organization, and market research," as well as "directly engaged in mergers and acquisitions" (Deutsche Post DHL Group, 2017). Thus, although this function has similar core responsibilities across large firms, it has different names, including corporate development, planning, and strategy, which we summarize here as the *corporate development and strategy function* (CDSF).

Owing to its involvement in a firm's strategic decisions and its roles in coordinating and integrating other units, this function has a special position in the CHQ (Kaplan & Norton, 2005). While administrative functions are usually performed in the CHQ owing to potential scale economies and efficiency gains (Collis et al., 2007), corporate development and strategy as a key entrepreneurial function is presumed to contribute to a firm's corporate advantage through superior capabilities and resources. For instance, in contrast to other value-adding corporate functions, such as marketing and research and development, corporate planning is one of the few functions that exists irrespective of a firm's specific corporate strategy (Berg, 1973). Thus, this function provides a unique empirical setting to enhance our understanding of the CHQ's value creation.

In light of the CDSF's prevalence, multifaceted roles, and apparent importance, the lack of knowledge about this core CHQ function, particularly about its structure and design, motivated this study. As the sparse research indicates, firms make two main structural decisions concerning their CDSF. The first structural choice relates to the CDSF's location in the organizational hierarchy. For instance, several field-based studies conclude that a close relationship between a firm's strategy function and its CEO is important, ensuring sufficient resources and senior executives' attention (Breene et al., 2007; Kaplan & Norton, 2005). Unsurprisingly, in the vast majority of firms, the strategy function reports directly to the CEO (Angwin et al., 2009; Menz et al., 2013). However, a recent large-scale study reveals that while a firm's strategic and structural complexity affects the decision to have the CDSF's head, the chief strategy officer (CSO), in the top management team (TMT), this decision alone does not impact performance (Menz & Scheef, 2014).

This finding suggests that a closer examination is required of the second structural choice, which relates to the CDSF's workforce size. Interestingly, although early studies of the CDSF often refer to the function's size as a key structural feature (e.g., Ang & Chua, 1979; Friedrich & van't Land, 1974; Litschert, 1967), this has not

been substantiated. The few initial field-based studies indicate that choices regarding the CDSF's structure and design affect its effectiveness, and that its strategy capabilities and information-processing capacities and, thus, its personnel resources, are particularly decisive (Breene et al., 2007; Kaplan & Norton, 2005; Menz et al., 2013).

In contrast to the CDSF's hierarchical location, the function's size appears to differ substantially across firms, ranging from small teams of two or three corporate strategists (Angwin et al., 2009) to departments with more than 50 employees (Grant, 2003). Some contemporary corporations have an even larger CDSF. For instance, the Group Strategy and Planning function of Germany's largest bank, Deutsche Bank, employed about 70 professionals in 2011 (Deutsche Bank, 2012), and the Corporate Strategy Office of South Korea's conglomerate Samsung had about 200 staff in early 2017 (Reuters, 2017), which is similar to Cisco's approximately 200 corporate strategy staff in 2016 (Network World, 2016). This variance and the generally limited understanding of the CDSF have led to the questions how firms determine how many people to employ in the CDSF and to what extent they benefit from this structural choice.

To analyze these questions, we opted for an exploratory empirical research approach. Such an approach, which focuses on identifying the facts and patterns in the data rather than testing formal hypotheses based on theory (Helfat, 2007; Oxley, Rivkin, & Ryall, 2010), is appropriate when relatively little is known about an interesting phenomenon and/or no theory can fully explain it (Hambrick, 2007). Using survey and archival data from 105 European firms, our study explores the extent to which environmental, strategic, and structural factors affect choices regarding the CDSF size and these decisions' consequences. With our study, we extend early and more recent work in this area (e.g., Bazzaz & Grinyer, 1981; Javidan, 1987; Kaplan & Norton, 2005) and motivate future theory-testing studies. Thereby, we contribute more broadly to the understanding of corporate functions (Campbell et al., 2012; Kunisch et al., 2014) and the CHQ's inner workings (Collis et al., 2007; Kleinbaum & Stuart, 2014; Menz et al., 2015).

Following Oxley et al.'s (2010) suggestions for a "just-the-facts" empirical approach, we describe the study's method in the next section and then present its results. Finally, we discuss how the findings inform extant knowledge and future research on the CDSF.

3.2. Method

Owing to the lack of research on the CDSF, specifically its design and structure, we examined a comprehensive set of environmental, strategic, and structural contextual factors that may affect the number of CDSF staff, as well as several consequences for the firm. While our empirical research design follows the recommendations for fact-based research (Hambrick, 2007; Helfat, 2007; Oxley et al., 2010), the identification of the variables is based on a review of prior research on the CDSF, the CHQ, strategy professionals, and strategic planning (Collis et al., 2007; Egelhoff, 1991; Menz & Scheef, 2014; Rogers, Miller, & Judge, 1999; Wolf & Floyd, 2017). Although fact-based inquiry does not rely on formal hypotheses, we considered it appropriate to not only describe the data and the measurement of each of the variables, but also to explain the rationale for their inclusion, as well as the basic logic for their association with the CDSF size. Indeed, the overall study is implicitly guided by contingency logic (Burns & Stalker, 1961; Chandler, 1962; Child, 1975; Donaldson, 2001; Galbraith, 1973) that contextual factors affect choices regarding the CDSF size and its effectiveness.

Sample and data

We used survey and archival data of large, listed European firms for our study. Information on the CDSF size and other features was obtained from a survey of the largest firms located in 14 European countries, which was part of a larger study of CSOs and their CDSF.[1] Depending on the size of the economy, we selected the 30 to 100 largest publicly listed companies in each of these countries, since only relatively large firms have a dedicated CDSF. This sample allowed us to analyze the CDSF of firms with different corporate strategies and across different industry sectors. Further, listed firms ensure data availability and the consistency of financial and other firm data. We next screened publicly available sources, such as annual reports, press releases, company websites, and professional social media platforms, to collect the contact information of the highest-ranking executive responsible for corporate development and strategy. If we were unable to find any information about this executive position, we contacted the respective firms. Our final contact database included 500 executives with titles such as senior vice president strategy, head of strategic development, and executive

[1] The firms included in our study are located in the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

vice president corporate development, summarized as *chief strategy officers* (Menz & Scheef, 2014).

In 2013, we invited these senior executives to participate in our English electronic survey. After several rounds of follow-ups, we received 121 questionnaires, yielding a response rate of 24 percent. Of the respondents, 110 provided information on the structure and design of their firm's CDSF. We obtained these firms' archival data through the Thomson One database, annual reports, and press releases. Missing archival data reduced the sample size by five cases to a final sample of 105 firms for the analysis of the determinants of the CDSF size and by eight cases to a final sample of 102 firms for the analysis of the CDSF size's consequences. To account for potential sample selection and nonresponse biases, we compared the average number of employees and sales of the respondents' firms to those of firms for which we could not identify a CSO and to those of the non-respondents. In both analyses, t-tests revealed no significant differences between the groups.

CDSF size

This study's main variable is the *CDSF size*, operationalized as the total number of employees of the corporate function responsible for corporate development, strategy, and related tasks. Specifically, we asked the CSOs to state the number of employees (fulltime equivalents, FTEs), which included the respondent, in their department as at the end of 2012. To be considered a CDSF, the respective function had to have at least one employee, which is consistent with previous research on other central functions (Kale, Dyer, & Singh, 2002). In two cases, the CDSF had only one employee, namely the CSO. Further, an initial inspection of the CDSFs in our sample revealed very large functions with the number of employees exceeding 100, which deviated far from the mean CDSF size. Owing to this skewness, we log-transformed the CDSFs' number of employees.

Determinants of CDSF size

In contemporary corporations, firms' external environment *and* internal organizational context usually affect decisions regarding the CHQ and its various subunits' design and structure (Menz et al., 2015). Specifically, as elaborated below, we explored the extent to which several characteristics of the overall firm's environment, strategy, and structure affect the CDSF size.

Environmental factors. We examined the influence of three environmental aspects on the CDSF size: industry change, industry volatility, and industry fragmentation. Owing to our study's focus on the firm's corporate-level, we used aggregate measures of the firm's overall business portfolio by calculating the industry environment of all two-digit standard industrial classification (SIC) code segments in which a firm operates. Thereafter, we weighted the measures by the respective segment's sales (Karim, Carroll, & Long, 2016). To calculate the three industry measures, we considered *all* listed European firms active in the identified two-digit SIC code segments. In line with prior research (Hambrick & Cannella, 2004), we deemed measures based on two-digit SIC codes as sufficiently accurate, while ensuring that every SIC code segment consisted of at least four firms and that the study's sample remains sufficiently large.[2]

First, a firm's *industry change* may affect the strategic task demands and, thereby, the CDSF size. Both industry growth and decline, and the correspondingly high levels of uncertainty, may increase the need to develop new strategic plans or revise the existing plans, which are normally the CDSF's tasks (Bazzaz & Grinyer, 1981; Breene et al., 2007). We measured industry change by regressing the industry sales against time (from t-5 to t-1) for all two-digit SIC code segments. The beta-coefficient of the regression was then divided by the average sales of the respective industry segment during the five years (Karim et al., 2016). By using the absolute values of industry change, we included both industry growth and decline.

Second, a firm's *industry volatility* may influence the size of the CDSF. For firms with businesses operating in volatile industries that bear great uncertainty regarding their future developments, formulating strategies becomes more difficult and plans need to be adjusted more frequently than in industries with stable growth (or decline) (Grant, 2003). For instance, while developing scenarios or establishing strategic foresight systems is critical in volatile industries, it may require strategy resources and expertise for the CDSF. To measure industry volatility, we again draw on the regressions computed to calculate industry change. However, for this measure, we divided the standard errors of the slope coefficients by the average industry sales during t-5 and t-1 (Karim et al., 2016).

[2] Robustness tests using three and four-digit SIC code segments, which substantially reduced the sample sizes, led to similar, however, less significant results.

Third, a firm's *industry fragmentation* may determine the amount of personnel resources the CDSF requires. Fragmented industries are characterized by a relatively high number of competitors and, therefore, are very heterogeneous, whereas, in concentrated industries, a few rivals dominate the market (Porter, 1980). Since performing competitive analysis (or supporting the businesses in it), is usually a task of the CDSF (Breene et al., 2007; Menz & Scheef, 2014), industry fragmentation is likely to relate to the CDSF size. We measured industry fragmentation as the inverse of the four-firm market concentration ratio within each two-digit SIC code segment in t-1.

Strategic factors. We considered three factors that characterize the firm's corporate strategy and its execution and which are likely to determine the strategic task demands on the corporate level and, thereby, the size of the CDSF: diversification strategy, acquisition activity, and alliance activity.

First, a firm's product *diversification* strategy may affect the number of staff the CDSF requires. Related diversification strategies increase the amount and complexity of the strategic activities at the firm's corporate level (Geringer, Tallman, & Olsen, 2000; Henderson & Fredrickson, 1996) because they, for example, involve the exploitation of commonalities across the business portfolio (Hill, Hitt, & Hoskisson, 1992; Hoskisson, 1987). Conversely, we expect *un*related diversification strategies to reduce the strategic task demands at the corporate level, because operational synergies are relatively limited. Hence, the CDSF's activities, such as managing corporate-wide strategic initiatives (Kaplan & Norton, 2005), are likely to depend on the firm's diversification strategy. We used Palepu's (1985) entropy measure in t-1, which distinguishes between the degrees of a firm's related, unrelated, and total diversification of its business portfolio.

Second, a firm's *acquisition activity* may determine the CDSF's resources and capabilities. Acquisitions create additional task demands and complexity for a firm's senior management (Haspeslagh & Jemison, 1991), thus, influencing the organization of its strategy activities, for example, the structural choice to have a CSO in the TMT (Menz & Scheef, 2014). Since the CDSF typically coordinates or performs acquisition tasks, such as target selection, due diligences, and post-merger integration (Angwin et al., 2009; Breene et al., 2007; Mason, 1968), a firm's acquisition activity is likely to affect the CDSF size. We measured a firm's acquisition activity as the logarithm of the median number of acquisitions during the previous three years from t-3 to t-1 (Laamanen & Keil, 2008).

Third, a firm's *alliance activity* may affect the CDSF size. Strategic alliances are another indicator for additional task demands (Kale et al., 2002), and are considered as "[...] another management challenge for stressed-out executives, as big companies enter into literally thousands of relationships spanning the globe" (Breene et al., 2007: 91). Given that the CDSF frequently manages the firm's alliance portfolio (Menz et al., 2013), a firm's alliance activity is likely to determine the CDSF size. Similar to a firm's acquisition activity, we measured a firm's alliance activity as the logarithm of the median number of alliances during the previous three years from t-3 to t-1.

Structural factors. Finally, we explored the extent to which a firm's corporate structure determines the CDSF size. Specifically, we considered three factors of the firm's structure: firm size, span of control, and organizational divisionalization.

First, a firm's *size* is one of the most obvious structural features that may determine the CDSF size. The size of an organization is positively related to its complexity and the corresponding information-processing demands (Egelhoff, 1991; Henderson & Fredrickson, 1996). Large firms implement administrative coordination mechanisms, such as "sophisticated planning and control systems," to cope with complexity (Mintzberg, 1979: 230). In light of the CDSF's pivotal role in these activities (Angwin et al., 2009; Paroutis & Pettigrew, 2007), firm size is likely to affect the CDSF size. We measured firm size as the logarithm of the firm's total number of employees (FTEs) at the end of t-1.

Second, a firm's *span of control* may affect the CDSF size. Span of control, conceptualized in our study as the number of businesses reporting directly to the CHQ, relates to the amount of information that central functions need to consolidate (Collis et al., 2007), particularly the CDSF. The number of business units represents the firm's horizontal scale and indicates the complexity of the strategizing activities for the CDSF, for example, organizing the firm's overall strategy process, including the strategic analysis and target-agreement process, which may thus influence the CDSF size. We measured a firm's span of control as the number of business units on the first level of structural separation below the CHQ in t-1.

Third, a firm's organizational *divisionalization* may determine the CDSF's resources and capabilities. In divisionally organized firms, much of the strategizing occurs on the divisional level, whereas functionally organized firms have more functions centralized at the CHQ (Collis et al., 2007). In the latter firms, the CDSF usually has to deal with higher corporate-level complexity and is therefore responsible for a broader

range of strategy activities, including market and competitive strategies (Hoskisson, 1987), which may affect the CDSF size. As the firm's structure is usually reflected in the top management roles (Guadalupe, Li, & Wulf, 2014; Menz, 2012), we calculated a firm's divisionalization as the fraction of divisional TMT members in relation to the overall number of TMT members in t-1, based on the TMT members' titles as published in the annual report.

Consequences of CDSF size

Even though the CDSF plays an important role in the firm's strategy processes and may contribute to its corporate advantage (Grant, 2003; Javidan, 1987; Kaplan & Norton, 2005), there is little systematic evidence of its implications. Javidan's (1987: 305) study reveals that the extent to which the CDSF performs various roles is correlated with its perceived effectiveness, especially with its "impact on strategic decisions" and "contribution to firm performance." Menz and Scheef (2014), on the other hand, find that the structural decision to have the CDSF head in the TMT does not affect financial performance. To account for the variety of CDSF's potential consequences, we explore the extent to which the CDSF size may be associated with three different, widely applied types of performance: a firm's growth, profitability, and financial market performance. We analyzed the three years subsequent to measuring the CDSF size of all the performance measures, since the CSO (and thus the CDSF) is considered "the guardian of that space one to three years out, when the decisions made (or not made) today will show consequences" (Breene et al., 2007: 91).

First, the CDSF size may affect a firm's growth, specifically its *sales growth*. One of the key CDSF responsibilities is to ensure future growth and the firm's viability (Breene et al., 2007; Menz et al., 2013). A recent study revealed that more than 80 percent of CSOs consider exploration and growth-oriented activities, such as supporting new business (model) development, (very) important aspects of their role (Menz et al., 2013). In some firms, the highest-ranking strategy executive bears the title "chief growth officer" (Breene et al., 2007; Menz & Scheef, 2014). The CDSF's personnel resources support growth-oriented activities and thus the achievement of a growth strategy. We measured firm growth as the compound annual growth rate (CAGR) of its sales from t+1 to t+3 (Cho & Pucik, 2005).

Second, the CDSF size may affect a firm's profitability, specifically its *return on assets (ROA)*. One the one hand, more CDSF staff increases the firm's capacity to

conduct comprehensive analyses covering a wide range of strategic issues and to develop alternative strategic options—activities that improve the quality of the firm's strategic plans and decisions (Javidan, 1987). The number of staff also ensures that strategies are executed with sufficient rigor and speed, which may be particularly important in respect of opportunities that arise quickly, such as acquisitions (Kaplan & Norton, 2005). On the other hand, the number of CDSF employees may also be associated with substantial direct and indirect costs. CDSF employees are usually highly qualified and have strong strategy-related expertise (Breene et al., 2007), for example, they often have an MBA from a top business school and several years of consulting experience (Menz et al., 2013), thus demanding relatively high salaries. Increasing the CDSF size may also involve internal and external coordination and administrative costs. Decision making and information processing within the CDSF may become more complex and slow down, because larger organizational units tend to be more bureaucratic and hierarchical (Collis et al., 2007). We measured firm profitability as its average return on assets (ROA) during the three years t+1 to t+3 (Cho & Pucik, 2005).

Third, the CDSF size may affect a firm's financial market performance, specifically its *market-to-book ratio (MTB)*. The inclusion of this outcome in our study follows a similar logic as the one for firm profitability, but assuming that the stock markets anticipate a CDSF's long-term contributions before they become visible in a firm's accounting-based performance. We measured a firm's financial market performance as its average MTB during the three years t+1 to t+3 (Cho & Pucik, 2005). This market-based measure reflects the premium shareholders place on the firm's equity and thus expresses the stock market expectation regarding the firm's future development.

Control variables

We controlled for other factors that may affect the CDSF size and its consequences, but which lay outside our study's conceptual scope. To account for different macroeconomic dynamics in the 14 countries in our sample, we included their median *gross domestic product (GDP) growth* between t-3 and t-1 (Newman & Nollen, 1996), using data retrieved from Eurostat. When analyzing the performance consequences of the CDSF size, we controlled for the respective measure's *industry performance* in the two-digit SIC code segment from t+1 to t+3.

As the firm's performance situation may affect the choices regarding the CDSF size and its effects, we accounted for *prior performance*, using the ROA in t-1 to analyze the determinants of the CDSF size, the ROA in t0 to analyze the effect of the CDSF size on firm growth and profitability, and the MTB in t0 for the effect of CDSF size on financial market performance. In the analyses of the consequences of the CDSF size, we considered *firm size*, *diversification*, *acquisition activity*, and *alliance activity* as other potentially influential control variables. Moreover, we controlled for *TMT size* in t-1, including the logarithm of the number of executives stated in the annual report. The number of executives in the TMT may indicate the amount of strategy resources a firm needs and, thus, may affect the CDSF size.[3]

We also controlled for the CDSF's other important structural feature besides its size, namely the function's location within the organizational hierarchy. CDSFs that report directly to the CEO may have a higher status and may be granted more resources than those reporting to other executives, such as the chief financial officer. Using a dummy variable, we asked the function's heads to indicate whether they have a direct *CEO reporting line*, which was coded as 1 and 0 otherwise. Finally, we accounted for the *CSO position tenure* in years, as CDSF heads with longer position tenures might have more legitimacy and power, thus obtaining more resources. A similar reasoning suggests that CSO tenure is associated with our study's outcomes.

3.3. Results

Descriptive results

Figure 3-1 shows the number of employees in the CDSF against the total number of firm employees (both in FTEs). It illustrates the substantial variance in the CDSF size across firms—ranging from just one employee to 110 employees—and indicates a positive correlation between firm size and the CDSF size. The geometric mean CDSF size is 6.72 FTEs (0.53 per 1,000 FTEs) and the median CDSF size is 5 FTEs (0.52 per 1,000).

Table 3-1 displays the differences in the CDSF size (absolute values and per 1,000 FTEs) across regions, industry sectors, and firm size clusters. There are relatively

[3] We initially also considered several other potentially relevant firm-level control variables, specifically firm age, HR slack, and firm internationalization. Since the results did not change and the controls' effects were not significant, we excluded them from the final analysis.

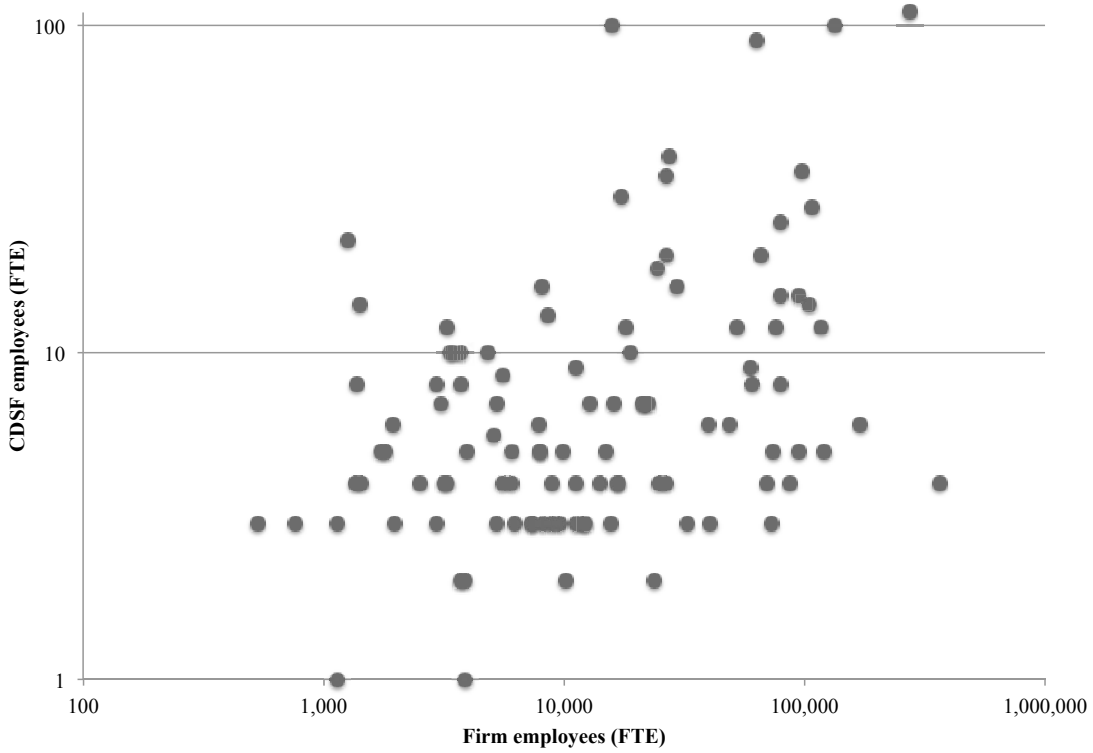
small differences in the CDSF size between firms domiciled in four different European regions, with median CDSF sizes of 5 FTEs in Benelux (0.55 per 1,000), Latin European (0.58 per 1,000), and in Nordic countries (0.43 per 1,000), and 7 FTEs in German-speaking countries (0.53 per 1,000).[4] The variance of the CDSF size across the industry sectors is, however, considerable, ranging from 4 FTEs in consumer goods/retail firms (0.31 per 1,000), 5 FTEs in industrial firms (0.56 per 1,000), 6 FTEs in life sciences firms (0.33 per 1,000), 6.5 FTEs in general services firms (0.39 per 1,000) to 8 FTEs in financial services firms (1.28 per 1,000). Hence, only controlling for the firm size, the CDSF in financial services firms is between twice and more than four times larger than the CDSF in other sectors' firms.

An intriguing finding of the descriptive analysis is that the size of the firm matters for the CDSF size, but not as one would expect at first sight. By distinguishing between three different firm size clusters—small firms with fewer than 5,000 employees, medium-sized firms with 5,000 to 25,000 employees, and large firms with more than 25,000 employees—we find that larger firms also have a larger CDSF in absolute terms (see Figure 3-1), whereas the CDSF size per 1,000 FTEs decreases substantially with increases in the firm size—from a median of 2.70 per 1,000 FTEs for small firms to 0.15 per 1,000 FTEs for large firms. Figure 3-2 illustrates this negative correlation between the CDSF size per 1,000 FTEs and a firm's size. This indicates that firms benefit from "economies of strategizing" at the corporate level, and suggests the need to control for firm size in subsequent analyses.

Table 3-2 shows the descriptive statistics and correlations of all the variables. Since all the correlations are below 0.5 (except for the correlations between related and unrelated diversification, as well as between related diversification and span of control), multicollinearity was not an issue in our analysis. The variance inflation factors, which are all below two, also verified this.

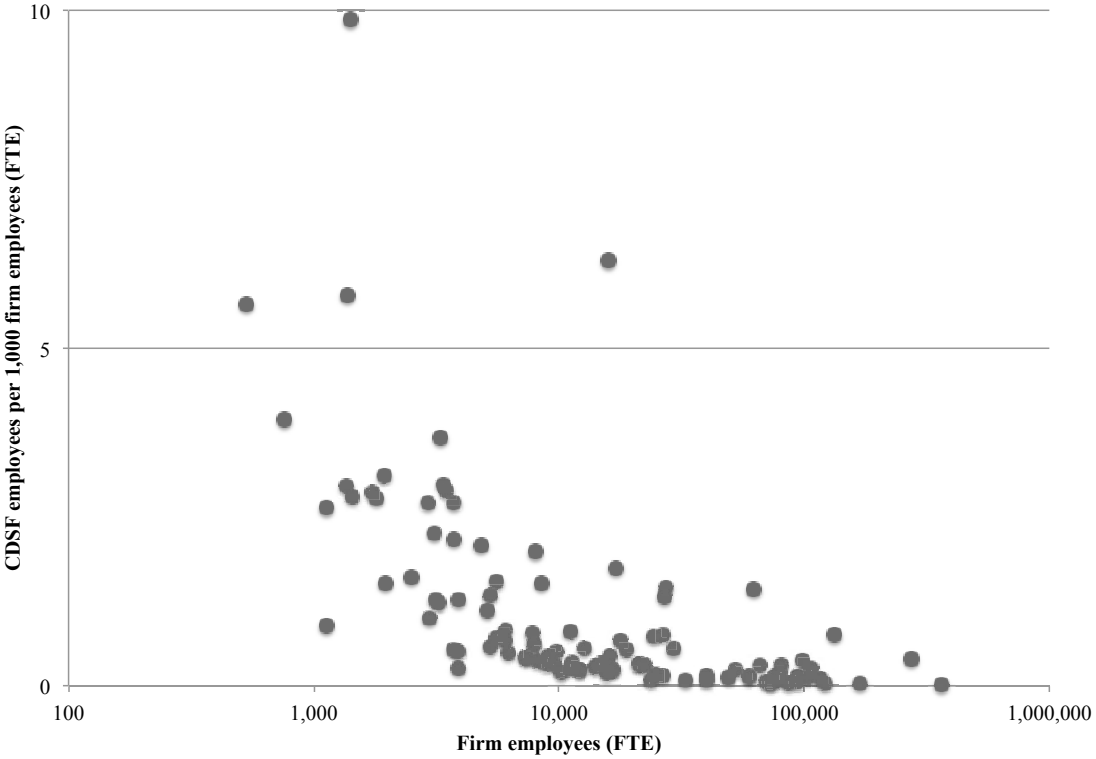
[4] German-speaking (i.e. DACH) countries: Austria, Germany, and Switzerland; Nordic countries: Denmark, Finland, Norway, and Sweden; Latin European countries: France, Italy, Portugal, and Spain; Benelux countries: Belgium, Luxembourg, and the Netherlands.

Figure 3-1: Scatter diagram of CDSF size against firm size



(N = 105)

Figure 3-2: Scatter diagram of CDSF size per 1000 FTEs against firm size



(N = 104; excluding one extreme case with a CDSF size of 17.5 per 1000 FTEs.)

Table 3-1: Descriptive information on CDSF size

	All	Region				Industry Sector					Firm Size			Number of BUs		
		DACH	Nordic	Latin Europe	Benelux	Financial Services	Consumer Goods & Retail	Industrial	Life Sciences	Services	Fewer than 5,000 FTEs	5,000 to 25,000 FTEs	More than 25,000 FTEs	1-3	4-5	6-10
Number of Firms	105	57	20	15	13	19	13	44	7	22	29	43	33	60	29	16
CDSF Size (in FTEs)																
Arithmetic Mean	11.7	10.2	6.9	19.1	17.0	7.9	16.1	7.6	13.3	20.0	6.2	8.5	20.7	9.9	17.9	7.3
Geometric Mean	6.7	6.7	5.3	8.4	7.8	6.7	6.1	5.8	7.8	9.0	4.9	5.5	11.6	6.3	8.3	6.0
Minimum	1.0	1.0	3.0	3.0	2.0	3.0	1.0	2.0	3.0	1.0	1.0	2.0	3.0	1.0	2.0	3.0
Maximum	110.0	110.0	36.0	100.0	100.0	18.0	110.0	35.0	40.0	100.0	22.0	100.0	110.0	100.0	110.0	20.0
Percentiles 10%	3.0	3.0	3.0	3.4	2.2	3.0	3.0	3.0	3.0	3.0	2.0	3.0	4.0	3.0	2.8	3.0
50%	5.0	7.0	5.0	5.0	5.0	8.0	4.0	5.0	6.0	6.5	5.0	5.0	12.0	5.0	6.0	6.3
90%	21.2	17.0	10.6	65.2	32.4	14.2	34.4	15.1	34.0	83.2	10.4	12.8	39.2	20.2	46.8	15.0
CDSF Size per 1,000 FTEs																
Arithmetic Mean	1.26	1.27	0.75	0.94	2.40	2.22	0.35	1.03	0.70	1.64	3.2	0.7	0.3	1.6	0.9	0.7
Geometric Mean	0.53	0.56	0.48	0.35	0.78	1.00	0.22	0.62	0.32	0.45	2.2	0.5	0.2	0.7	0.4	0.4
Minimum	0.01	0.04	0.04	0.01	0.08	0.09	0.01	0.05	0.04	0.04	0.3	0.1	0.0	0.0	0.0	0.0
Maximum	17.50	9.88	2.64	2.98	17.50	9.88	1.10	3.94	1.75	17.50	17.5	6.3	1.5	17.5	6.3	2.7
Percentiles10%	0.10	0.12	0.15	0.05	0.25	0.13	0.06	0.15	0.04	0.07	0.8	0.2	0.0	0.1	0.1	0.1
50%	0.52	0.53	0.43	0.58	0.55	1.28	0.31	0.56	0.33	0.39	2.7	0.4	0.2	0.6	0.4	0.3
90%	2.88	3.01	2.00	2.85	5.48	5.68	0.78	2.76	1.57	2.81	5.7	1.5	0.8	3.0	2.3	2.0

Table 3-2: Descriptive statistics and correlation coefficients

	Mean	S.D.	1	2	3	4	5	6	7	8	9
1 CDSF size (log)	1.905	0.914	1.00								
2 GDP growth	0.019	0.012	0.05	1.00							
3 Prior performance (ROA)	0.061	0.050	0.03	0.04	1.00						
4 TMT size (log)	1.539	0.588	0.19 +	-0.36 ***	0.04	1.00					
5 CEO reporting line	0.714	0.454	0.13	0.01	0.27 **	-0.01	1.00				
6 CSO position tenure	2.838	3.163	-0.16 +	-0.01	-0.03	-0.11	0.01	1.00			
7 Industry change	0.034	0.030	-0.14	-0.04	-0.02	0.06	-0.01	0.09	1.00		
8 Industry volatility	0.019	0.013	-0.02	-0.20 *	-0.12	0.09	0.02	-0.09	0.41 ***	1.00	
9 Industry fragmentation	0.563	0.153	0.13	-0.12	-0.21 *	0.10	0.04	-0.05	0.07	-0.08	1.00
10 Related diversification	0.668	0.483	0.20 *	0.00	-0.27 **	0.07	-0.02	0.17 +	-0.16	-0.15	0.20 *
11 Unrelated diversification	0.299	0.375	-0.12	0.04	0.23 *	0.12	0.21 *	-0.05	0.03	0.10	-0.17 +
12 Total diversification	0.967	0.428	0.13	0.03	-0.10	0.18 +	0.16	0.15	-0.15	-0.08	0.08
13 Acquisition activity (log)	0.667	0.720	0.29 **	0.08	0.01	0.21 *	0.09	0.02	-0.11	-0.11	-0.12
14 Alliance activity (log)	0.453	0.625	0.41 ***	0.00	-0.15	0.25 *	-0.08	-0.02	-0.20 *	-0.10	-0.13
15 Firm size (log)	9.477	1.520	0.42 ***	0.03	0.00	0.27 **	0.10	0.00	-0.18 +	-0.03	-0.27 **
16 Span of control	3.810	1.641	0.11	-0.05	-0.18 +	0.18 +	0.07	0.12	-0.11	-0.08	0.15
17 Divisionalization	0.361	0.287	0.02	-0.17 +	0.07	0.44 ***	0.21 *	0.11	0.10	0.13	-0.03
18 Sales growth (t+1 to t+3)[α]	-0.093	0.099	0.05	0.19 +	0.15	-0.20 *	-0.02	-0.06	0.00	-0.09	0.02
19 Average ROA (t+1 to t+3)[α]	0.050	0.043	0.08	0.10	0.57 ***	0.06	0.06	0.03	-0.07	-0.25 *	-0.02
20 Average MTB (t+1 to t+3)[α]	1.981	1.436	0.02	0.03	0.39 ***	0.24 *	-0.06	-0.08	-0.04	-0.15	-0.04

	10	11	12	13	14	15	16	17	18	19
10 Related diversification	1.00									
11 Unrelated diversification	-0.53 ***	1.00								
12 Total diversification	0.67 ***	0.28 **	1.00							
13 Acquisition activity (log)	0.01	0.18 +	0.17 +	1.00						
14 Alliance activity (log)	0.02	0.10	0.12	0.32 ***	1.00					
15 Firm size (log)	0.05	0.16	0.19 *	0.48 ***	0.46 ***	1.00				
16 Span of control	0.64 ***	0.12	0.83 ***	0.21 *	0.14	0.18 +	1.00			
17 Divisionalization	0.13	0.23 *	0.35 ***	0.41 ***	0.01	0.31 **	0.22 *	1.00		
18 Sales growth (t+1 to t+3)[α]	-0.07	-0.08	-0.15	-0.18 +	-0.18 +	-0.10	-0.17 +	-0.19 +	1.00	
19 Average ROA (t+1 to t+3)[α]	-0.20 *	0.07	-0.16	-0.03	-0.10	0.05	-0.13	-0.06	0.31 **	1.00
20 Average MTB (t+1 to t+3)[α]	-0.13	0.07	-0.09	0.05	-0.07	0.08	0.00	-0.01	0.14	0.59 ***

$N = 105$

[α] $N = 102$

$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Determinants of CDSF size

To explore the determinants and consequences of the CDSF size, we used lagged ordinary least squares (OLS) regression analysis. Table 3-3 presents the results of the analysis of the determinants of CDSF size. Model 1 contains only the control variables, whereas Models 2 to 4 each respectively also includes the potential environmental, strategic, and structural determinants of the CDSF size. Model 5 includes all the independent variables. To verify our analysis, we also performed the analysis using *un*related instead of related diversification, as displayed in Model 6. Compared to Model 1, adding the independent variables increases the statistical significance of Models 3 to 6 ($p < 0.001$).

First, only one environmental factor is significantly related to the CDSF size. A firm's industry fragmentation has a significant positive effect on the CDSF size in the full model (Model 2: not significant; Model 5: $p < 0.01$), whereas industry change and industry instability do not affect it.[5] Second, two of the three strategic factors are strongly associated with the CDSF size. Related diversification is positively related to the CDSF size (Model 3: $p < 0.01$; Model 5: $p < 0.001$), whereas unrelated diversification has a negative effect on the CDSF size (Model 6: $p < 0.01$). Further, a firm's alliance activity affects the CDSF size positively (Model 3: $p < 0.001$; Model 5: $p < 0.01$). A firm's acquisition activity, however, only relates significantly to the CDSF size in the full model (Model 3: not significant; Model 5: $p < 0.1$). Third, depending on the model, two or three structural factors determine the CDSF size. The firm size (Model 4: $p < 0.001$; Model 5: $p < 0.01$) is positively related to the CDSF size, whereas a firm's span of control (Model 4: not significant; Model 5: $p < 0.05$) and divisionalization (Models 4 and 5: $p < 0.1$) have a negative effect on the CDSF's number of staff. Interestingly, Model 6 shows that a firm's acquisition activity, span of control, and divisionalization do not predict the CDSF size when *un*related diversification instead of

[5] A model not shown includes the three environmental factors, the initial controls, and firm size as an additional control, revealing that industry fragmentation is positively related to CDSF size ($p < 0.01$).

related diversification is included. As discussed below, this suggests that, depending on the firm's corporate strategy, different CDSF types exist.[6]

Table 3-4 summarizes the analysis results of the determinants of the CDSF size, including the effect directions, significance levels, and predicted effect sizes (based on full Models 5 and 6). While the CDSF is a relatively small function, its size depends on the firm's internal, and partly on its external, context. For example, Model 5 predicts that firms pursuing a related diversification strategy and actively undertaking acquisitions and forming alliances at values of one standard deviation above the mean, have a CDSF that is more than twice as large as that of firms with an average value in these areas.[7]

[6] We performed several robustness tests using (a) three region dummies instead of a country's GDP growth and (b) four industry sector dummies instead of the environmental factors to analyze the strategic and structural determinants' effects on the CDSF size. As the effects' significance remains the same, or even increases, the analysis confirms the robustness of our (firm-level) results.

[7] To account for a potential endogeneity bias in our study, we followed a recently applied and recommended procedure (Kreutzer et al., 2014; Semadeni et al., 2014). We specifically considered a firm's acquisition and alliance activity as potentially endogenous regressors, because firms with a larger CDSF may be capable of undertaking more acquisitions and/or forming alliances than firms with smaller functions. We used a two-stage least squares (2SLS) estimation to control for endogeneity and then compared the results with those of the initial OLS regression (Bascle, 2008). Both the Hausman and the Durbin-Wu-Hausman tests were nonsignificant, suggesting that acquisition and alliance activity are exogenous and their estimates unbiased.

Table 3-3: Results of OLS regression analyses for CDSF size

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	1.127 **	0.747	0.899 *	-0.909	-1.551 *	-1.517 *
	(0.389)	(0.560)	(0.356)	(0.581)	(0.729)	(0.747)
Controls						
GDP growth	9.798	11.149	3.733	5.014	3.709	6.456
	(7.705)	(7.865)	(6.940)	(7.192)	(6.550)	(6.710)
Prior performance (ROA)	-0.579	0.041	1.881	-0.034	3.164 +	2.961 +
	(1.813)	(1.889)	(1.692)	(1.715)	(1.646)	(1.688)
TMT size (log)	0.345 *	0.346 *	0.064	0.255	0.078	0.084
	(0.161)	(0.161)	(0.152)	(0.170)	(0.158)	(0.161)
CEO reporting line	0.293	0.257	0.267	0.267	0.234	0.267
	(0.200)	(0.202)	(0.179)	(0.191)	(0.172)	(0.177)
CSO position tenure	-0.041	-0.033	-0.057 *	-0.038	-0.041 +	-0.036
	(0.028)	(0.028)	(0.025)	(0.026)	(0.024)	(0.024)
Environment						
Industry change		-5.192			-0.182	-1.168
		(3.309)			(2.812)	(2.859)
Industry volatility		3.524			9.207	8.758
		(7.539)			(6.294)	(6.447)
Industry fragmentation		0.758			1.542 **	1.534 **
		(0.607)			(0.532)	(0.547)
Strategy						
Related diversification			0.483 **		0.739 ***	
			(0.170)		(0.208)	
Unrelated diversification						-0.603 **
						(0.216)
Acquisition activity (log)			0.184		0.241 +	0.181
			(0.117)		(0.126)	(0.127)
Alliance activity (log)			0.544 ***		0.425 **	0.434 **
			(0.136)		(0.141)	(0.145)
Structure						
Firm size (log)				0.248 ***	0.196 **	0.195 **
				(0.058)	(0.062)	(0.063)
Span of control				0.031	-0.128 *	0.020
				(0.053)	(0.060)	(0.049)
Divisionalization				-0.619 +	-0.652 +	-0.419
				(0.337)	(0.330)	(0.338)
F	1.970 +	1.700	5.410 ***	3.980 ***	5.250 ***	4.700 ***
R^2	0.091	0.124	0.311	0.249	0.449	0.422
Change in R^2	N/A	0.034	0.220 ***	0.158 ***	0.359 ***	0.332 ***
N	105	105	105	105	105	105

Unstandardized regression coefficients; standard errors in parentheses.

$^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Change in R^2 relative to Model 1

Table 3-4: Summary of the results and effect sizes

Model 5				Model 6			
Determinant	Effect on CDSF Size	Predicted CDSF Size		Determinant	Effect on CDSF Size	Predicted CDSF Size	
		-1 S.D.	+1 S.D.			-1 S.D.	+1 S.D.
Industry change	n.s.	n.s.	n.s.	Industry change	n.s.	n.s.	n.s.
Industry volatility	n.s.	n.s.	n.s.	Industry volatility	n.s.	n.s.	n.s.
Industry fragmentation	Positive**	x 0.79	x 1.27	Industry fragmentation	Positive**	x 0.79	x 1.26
Related diversification	Positive***	x 0.70	x 1.43	Unrelated diversification	Negative**	x 1.25	x 0.80
Acquisition activity (log)	Positive^{+}	x 0.84	x 1.19	Acquisition activity (log)	n.s.	n.s.	n.s.
Alliance activity (log)	Positive**	x 0.77	x 1.30	Alliance activity (log)	Positive**	x 0.76	x 1.31
Firm size (log)	Positive**	x 0.74	x 1.35	Firm size (log)	Positive**	x 0.74	x 1.35
Span of control	Negative*	x 1.23	x 0.81	Span of control	n.s.	n.s.	n.s.
Divisionalization	Negative^{+}	x 1.21	x 0.83	Divisionalization	n.s.	n.s.	n.s.

$^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Consequences of CDSF size

Table 3-5 shows the results of the analysis of the consequences of CDSF size. Models 1, 2, and 5 present the direct effects of CDSF size on, respectively, a firm's growth (sales growth), profitability (ROA), and financial market performance (MTB). CDSF size is positively associated with a firm's subsequent sales growth ($p < 0.05$), whereas it is not significantly related to the ROA and the MTB. In short, the CDSF's amount of personnel resources appears to facilitate the implementation of the firm's growth strategy, but has no significant direct impact on its financial performance.

Given these results, we also explored whether the CDSF size affects a firm's performance under certain conditions. Indeed, following a contingency logic, and considering initial qualitative fieldwork findings, the tasks that the CDSF needs to perform may determine its optimal number of employees (Kaplan & Norton, 2005). Hence, a CDSF should be sufficiently large to meet the task demands of the firm's specific context. To analyze this aspect, we examined the extent to which the interaction terms between the CDSF size and the various environmental, strategic, and structural factors relate to the three performance measures. Models 3 and 4 in Table 3-5 include the two significant interaction terms (only significant interaction terms are presented). First, as displayed in Model 3, the interaction term between the CDSF size and total diversification is positively related to the ROA ($p < 0.1$). Figure 3-3 shows, using values of one standard deviation above and below the mean, that diversified firms are more likely to benefit from a large CDSF size than other firms. Second, as displayed in Model 4, the interaction term between the CDSF size and the acquisition activity is positively

associated with firms' future ROA ($p < 0.01$). Figure 3-3 shows that firms with a high (low) acquisition activity benefit (suffer) when the CDSF size increases.[8]

Table 3-5: Results of OLS regression analyses for sales growth, ROA, and MTB

	Sales Growth	ROA			MTB
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	0.102	0.000	0.003	-0.012	0.273
	(0.074)	(0.028)	(0.028)	(0.027)	(0.539)
Controls					
Prior performance[α]	-0.068	0.506 ***	0.509 ***	0.507 ***	0.952 ***
	(0.189)	(0.074)	(0.073)	(0.071)	(0.051)
Industry performance	0.664 ***	0.004	0.008	0.000	0.008
	(0.164)	(0.028)	(0.027)	(0.026)	(0.021)
GDP growth	1.528 *	0.131	0.092	0.213	6.525
	(0.732)	(0.289)	(0.286)	(0.278)	(5.516)
CEO reporting line	-0.019	-0.009	-0.010	-0.010	-0.351 *
	(0.020)	(0.008)	(0.008)	(0.008)	(0.152)
CSO position tenure	-0.002	0.001	0.001	0.001	-0.004
	(0.003)	(0.001)	(0.001)	(0.001)	(0.022)
Firm size (log)[β]	-0.015 +	0.003	0.002	0.004	0.020
	(0.008)	(0.003)	(0.003)	(0.003)	(0.056)
Diversification[γ]	-0.028	-0.007	-0.001	-0.005	0.016
	(0.021)	(0.009)	(0.010)	(0.009)	(0.167)
Acquisition activity (log)	-0.014	-0.005	-0.005	-0.009	0.007
	(0.014)	(0.006)	(0.006)	(0.006)	(0.107)
Alliance activity (log)	-0.027	-0.002	-0.003	-0.006	0.042
	(0.018)	(0.007)	(0.007)	(0.007)	(0.128)
CDSF size					
CDSF size (log)	0.025 *	0.001	0.001	-0.001	-0.076
	(0.012)	(0.005)	(0.005)	(0.004)	(0.090)
Interactions					
CDSF size (log) x					
Diversification			0.022 +		
			(0.012)		
Acquisition activity (log)				0.017 **	
				(0.006)	
F	3.53 ***	6.110 ***	6.010 ***	6.960 ***	37.36 ***
R^2	0.280	0.402	0.424	0.460	0.804
Change in R^2	N/A	N/A	0.022 +	0.058 **	N/A
N	102	102	102	102	102

Unstandardized regression coefficients; standard errors in parentheses.

+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

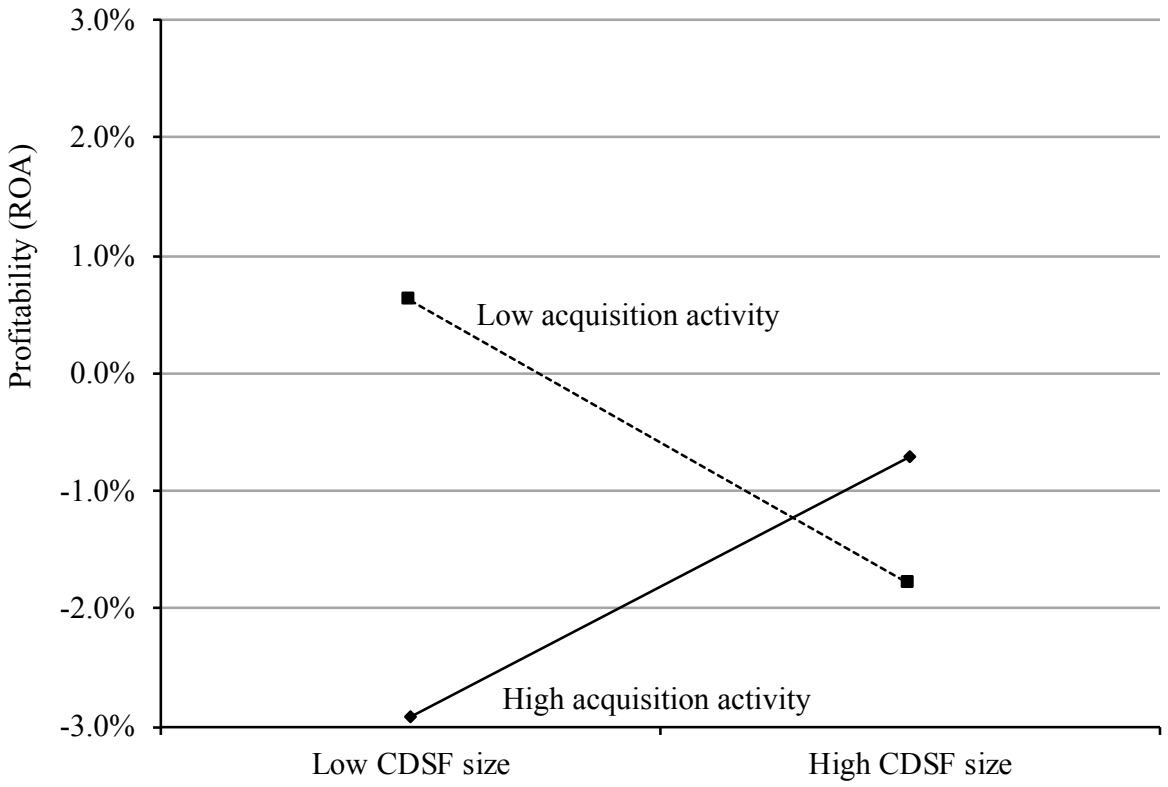
α For Models 1-4: ROA in t0; for Model 5: MTB in t0

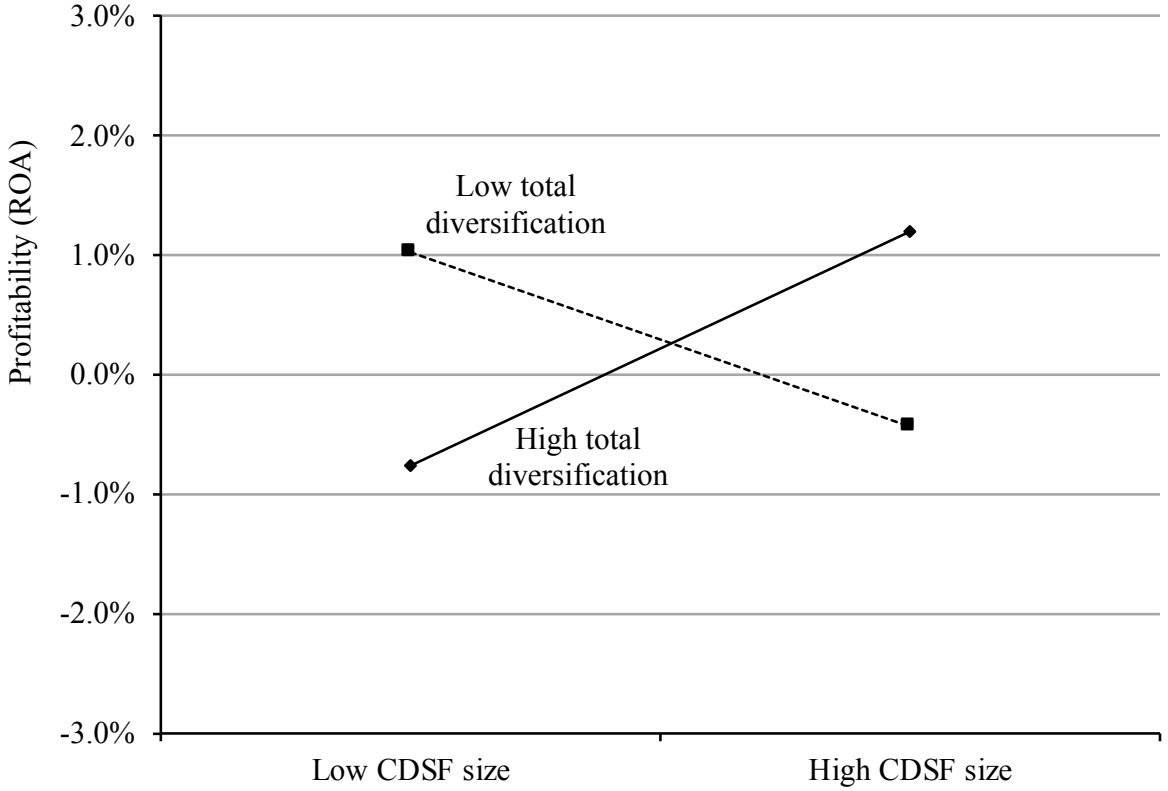
β For Model 1: log sales; otherwise log employees

γ For Model 1: related diversification; otherwise total diversification

[8] In post-hoc analyses, we considered several three-way interactions, such as the effect of a fit between the CDSF size, firm size, and the firm's diversification strategy on performance. We also examined possible curvilinear relationships between the CDSF size and the outcomes, as well as interactions with the various determinants. However, none of these relationships was significant.

Figure 3-3: Interaction effects of CDSF size and diversification/acquisition activity





3.4. Discussion

Motivated by a lack of knowledge about the CDSF, we studied how firms determine the need for and organization of strategy resources at the corporate level and, thus, the size of the CDSF, as well as the extent to which they benefit from this structural choice. While our exploratory analysis of the determinants and consequences of the CDSF size allows us to shed light on a previously largely unexplored phenomenon (Hambrick, 2007), as discussed in the following, the results call for future (theory-testing) studies to help us improve our understanding of the various facets of the CDSF.

Interpretation of the findings

The study's first insight is that there is a substantial variation in the number of CDSF staff across firms, both in absolute terms and relative to firm size, which suggests distinct CDSF types and economies of scale in the CDSF. The cross-industry sample of 105 large listed European firms with CDSF sizes ranging from 1 to 110 FTEs allowed us to analyze the CDSF size differences between firms. The CDSF differs widely across industry sectors, firms of different sizes, and corporate strategies, while the geographic region in which the firm is domiciled seems to not matter much. While previous field-based research cumulatively leads us to suggest differences in CDSF size (Angwin et al., 2009; Grant, 2003), our study offers the first large-sample evidence that a variety of CDSFs exist.

Our analysis reveals major differences in the CDSF across broader industry sectors, even when controlling for firm size. This suggests that the CDSF plays different roles in different industries, and that specific CDSF types and configurations of the strategy processes depend on industry recipes and characteristics, such as the extent of regulation. Notably, financial services firms have a relatively large CDSF, perhaps because of the sector's regulatory compliance requirements, risk management issues, and (digital) transformation, which increase the task demands. An alternative explanation is that, depending on the industry sector, approaches to organize the corporate development and strategy-related activities vary. For instance, consumer goods and retail firms typically have strong centralized marketing functions that perform strategy-related tasks, such as competitive analysis, which may explain these firms' relatively small CDSF.

The study also reveals that, with increasing firm size, the CDSF size relative to firm size decreases. One explanation is that, as firms increase in size, they tend to

become more unrelated diversified and divisionalized and therefore have a relatively smaller CDSF than smaller firms. However, a post-hoc analysis of the relationship between CDSF size per 1,000 FTE and firm size that controlled for unrelated diversification and divisionalization confirmed our initial result. Thus, it appears that having a CDSF involves some fixed costs and that firms may benefit from economies of scale in the CDSF. Indeed, when discussing our study results with CSOs, they suggested that, in order to function effectively, a minimum CDSF size is required, usually a team of about three to five, which is largely independent of a firm's size. While prior research suggests economies of scale in the CHQ's administrative roles, such as performing public company and shared services, because they involve repetitive information-processing tasks (Collis et al., 2007), our study indicates that economies also exist for entrepreneurial CHQ functions, like the CDSF.

The study's second insight is that firms particularly make decisions pertaining to the need for and organization of strategy resources and capabilities at the corporate level, thus concerning on the number of CDSF staff, under consideration of the strategic and structural task demands. Notably, these findings are consistent with those of research on the other structural CDSF choice, its location in the organizational hierarchy (Menz & Scheef, 2014). However, since we find that only an industry's competitiveness significantly affects decisions concerning the number of strategy staff, it appears the specific environmental characteristics are less important in determining the CDSF's task demands.

Notably, we find that a strategy of related diversification is positively related to CDSF size, while *un*related diversification is negatively related. This result extends previous research findings on overall CHQ size to a specific discretionary corporate function (Collis et al., 2007). One explanation for this is that related diversifiers usually adopt a strategic planning parenting style, which may require more corporate-level resources, while unrelated diversifiers more often rely on a financial control style (Goold & Campbell, 1987). Thus, depending on a firm's corporate strategy, there are different approaches to staffing the CDSF. One CDSF type, the *corporate planner*, focuses on corporate strategic planning tasks; another, the *corporate developer*, has a broader corporate development role with additional responsibility for strategy execution activities, such as M&A, alliances, and corporate venturing. Firms with a portfolio of unrelated businesses seem to opt for the former, smaller CDSF type, while related diversifiers, such as financial services firms, often have the latter, larger CDSF type.

Further supporting this insight, our study also reveals that a firm's divisionalization determines the CDSF's size, which is in line with earlier research suggesting that corporate planning departments are smaller in divisionalized firms that delegate strategy activities to their divisions (Friedrich & van't Land, 1974; Grant, 2003). Owing to our study's focus on the design of a specific corporate function and its determinants, we did not consider divisional managers responsible for business development and strategy activities. Although there are fulltime strategists on multiple levels (Paroutis & Pettigrew, 2007), it is not uncommon for business unit managers to fulfill these tasks in addition to their other, more operational, responsibilities, which complicates defining and identifying their strategy-related contributions (Ang & Chua, 1979). Nonetheless, future research should examine how strategizing activities are orchestrated in multidivisional firms and particularly study the roles of the CDSF and strategy staff elsewhere in the organization.

The study's third insight is that the CDSF size appears to be associated with a firm's performance, although one size does not fit all firms. The results indicate that the CDSF size is positively associated with a firm's subsequent sales growth, but not its profitability (ROA) and market based-performance (MTB). An explanation for this finding is that more CDSF staff may imply more resources, information-processing capacity, attention, and legitimacy for dealing with future growth, which is a key CDSF responsibility (Breene et al., 2007; Menz et al., 2013), while the CDSF does not directly affect short-term to mid-term financial performance, which is prioritized by other corporate functions, such as finance and operations.

However, our results indicate that the CDSF size does affect a firm's profitability under certain conditions. First, firms that align their strategy capabilities at the corporate level and, thus, the number of CDSF staff with the requirements of their diversification strategy, have a higher profitability (ROA). For example, a Swiss consumer goods firm that was 1.5 times more diversified than the sample median and had a CDSF size (relative to its firm size) 2.8 times as large as the sample median (about 1.44 per 1,000 FTEs) exceeded the average ROA from t1 to t3 of the sample median by 1.6 percentage points. This pattern, which suggests that one size does not fit all firms, is consistent with research findings that a fit between the corporate strategy, structure, and systems (Hill et al., 1992), or between the strategy and the planning processes (Rogers et al., 1999), improves performance.

Second, a relatively large CDSF benefits active acquirers' future ROA, probably because receiving a larger amount of dedicated resources for their various M&A activities may particularly matter to them. For instance, a medium-sized media company headquartered in a Nordic country that performed three times as many acquisitions as the average firm in our sample and that had more than twice as many staff in its CDSF (relative to its firm size) than the industry and region median (about 0.81 per 1,000 FTEs) exceeded the median ROA of our sample by 3.5 percentage points. Prior studies suggest that M&A-related learning processes and post-acquisition decisions occur in the CDSF (Zollo & Singh, 2004), and that acquisition experience increases the future ROA (Barkema & Schijven, 2008). Interestingly, compared to the other determinants, a firm's acquisition activity had little if any significant effect on CDSF size. An explanation for this could be that extraordinarily active acquirers tend to create dedicated M&A functions, sometimes separate from the CDSF, which then assume some of the M&A-related activities the CDSF usually performs. Hence, while firms seem to neglect the task demands associated with M&A when staffing the CDSF, a firm's specific acquisition activity should guide decisions regarding the CDSF's design.

Contributions and future research

In sum, our study is the first to take a systematic approach to improve our understanding of the CDSF's design and its consequences, expanding this area's field-based studies (e.g., Bazzaz & Grinyer, 1981; Javidan, 1987; Kaplan & Norton, 2005). In addition, the study informs research into strategizing activities in complex settings and into the professionalization of strategy (e.g., Grant, 2003; Paroutis & Pettigrew, 2007; Whittington, 2003; Whittington, Cailluet, & Yakis-Douglas, 2011). We complement the literature by exploring the contextual factors that seem to affect decisions on CDSF size and by uncovering the extent to which this structural choice affects outcomes. Overall, our study suggests that the CDSF is a critical element for a firm's strategic leadership and supports a contingency perspective on fulltime strategists (Menz & Scheef, 2014; Whittington, Yakis-Douglas, Ahn, & Cailluet, 2017).

Specifically, given the findings on the consequences of CDSF size, our study adds a piece to the puzzle of the benefits of fulltime strategists, informing strategy-as-practice and strategic leadership research. Research found that the CDSF's first structural choice, its location in the organizational hierarchy, does not affect performance (Menz & Scheef, 2014), while our study indicates that the other structural

choice, the CDSF's number of staff, which for instance represents its information-processing capacity and resources, may make a difference. However, given our study's exploratory nature and the limitations regarding the sample, data, and the potential endogeneity issues that we cannot completely rule out, our findings are suggestive and should motivate future studies.

There is an urgent need for research into the CDSF that builds on theory beyond a general contingency logic. Indeed, our study suggests that there are different, partially complementary and partially competing, theoretical explanations for the determinants and consequences of CDSF size, and points to arguments that build on institutional theory, information-processing theory, and the resource-based view. For instance, CDSF size differences across different industry sectors suggest that the organization of corporate development and strategy activities partly depend on a sector's institutional environment, including the specific regulations. These differences further support the notion of industry-specific approaches towards the CDSF's structure and design, and suggest that the adoption of best practices (or even trends/fashions) may provide firms with legitimacy. Otherwise, our study indicates that the amount and/or organization of corporate strategy resources may be decisive. In this vein, future studies should focus on how the CDSF staff's overall quality and capabilities (e.g., using their qualifications or salaries), as well as the CDSF's collaboration with internal and external strategy-related teams and units (e.g., divisional strategy units, consultants), affect strategic and financial outcomes.[9]

Our study also suggests focusing on the CDSF as a central entity for the firm's corporate strategy activities may inform research on strategic planning and strategy processes. Assuming that the CDSF size is inversely related to decentralized strategizing and thus proxies the extent of formalized, top-down strategic planning, the existence of a (large) CDSF can interpreted as an analytical tool in the tradition of the design or planning schools of strategy formation (Andrews, 1971; Ansoff, 1965). While our study provides only limited support that systematically organizing corporate strategy processes is beneficial, future research on the CDSF may contribute to the debate of the formation of effective corporate strategies (Ansoff, 1991; Mintzberg, 1990, 1991), and

[9] Since we did not identify significant effects of CDSF size on the MTB, this raises doubts about the suitability of market-based performance measures for such studies, as it is difficult for investors and analysts, who affect the firm's market valuation, to obtain information about the CDSF.

may thereby meet the criticism in strategic planning research of the "lack of empirical investigation of the phenomenon itself" (Grant, 2003: 492).

Since the CDSF is a key central function, our study contributes to the knowledge of corporate functions (Campbell et al., 2012; Kunisch et al., 2014) and, thus, of the CHQ's functioning (Collis et al., 2007; Kleinbaum & Stuart, 2014; Menz et al., 2015), and thereby more broadly enhances our understanding of the modern corporation's organization design. Specifically, the findings suggest that future studies on the CHQ value-added should direct attention to the CDSF and other selected corporate functions that are presumed to contribute to the firm's corporate advantage, instead of "black-boxing" the CHQ. Some of our findings may also be valid for other corporate functions; for instance, a firm's corporate strategy and structure are likely to affect the design of corporate HR and marketing functions. Nonetheless, we encourage scholars to examine the determinants and consequences that are specific to other, potentially value-adding, corporate functions.

Recent research has also indicated that the roles and statuses of corporate functions, such as the CDSF, change over their lifecycle (Kunisch et al., 2014), which may have implications for their design. Grant (2003) documented a decentralization of strategic planning at the oil majors in the 1990s, including the reduction of the number of corporate strategic planners at Mobil from 38 in 1990 to 12 in 1996. While in 2015 Deutsche Bank decided to substantially downsize its CDSF and to discontinue the CSO position (Manager Magazin, 2015), other firms have recently increased the scope of their CDSF's role. For instance, the new Corporate Development function of Swiss insurance firm Helvetia has the mandate to "support the efficient implementation of the helvetia 20.20 strategy and will also group and drive forward the company-wide initiatives and programmes," and includes the recently established Digital Ventures department (Helvetia Group, 2017). Owing to our cross-sectional study design and limited data availability, we did not focus on the potential changes of the CDSF that might provide insights into changes at the CHQ (Kunisch, Menz, & Ambos, 2015).

3.5. Conclusion

The study findings offer substantiated insights that business practitioners and consultants should consider when designing the CDSF. Indeed, a wide range of design alternatives is available for large firms, ranging from a small corporate planning team with a few employees to a full-fledged corporate development department with more

than 100 employees. Ideally, the CDSF should be equipped with a sufficient number of staff to cope with a firm's conditions. Our research identifies the criteria that guide decisions on the appropriate number of CDSF staff. While firms *do* account for several environmental, strategic, and structural factors when designing the CDSF, they *should* specifically align the CDSF's size with the firm's strategic task demands. To conclude, since understanding the CDSF is of great interest to business practitioners and consultants, we trust that our study will stimulate research in this area.

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4. Article III: The Kingdom Within – Performance Effects of the Power Gap between the CEO and the Divisional Head

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Abstract: In contemporary corporations, the relationship between the corporate CEO and the divisional heads is potentially contested and characterized by political conflicts, because of differing interests and views. We argue that the more powerful the divisional head relative to the CEO the more likely are power contests, which may harm the overall firm. An analysis of 827 CEO-divisional head pairs in S&P 500 firms from 2004 to 2013 reveals that the power of the divisional head relative to the CEO's – measured as differences in tenure, compensation, ownership, and board membership – is negatively related to firm performance. The results also show that this effect is contingent upon the division's subunit power, which is represented by its business weight relative to the overall firm, as well as its attractiveness for the firm's portfolio. Overall, our study suggests that the CEO should be aware of too powerful divisional heads, because they may influence the corporate agenda and performance.

Keywords: CEOs, divisional heads, top management teams, power, political contests, subunit power, multidivisional firm

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We thank David J. Collis, Sven Kunisch, and Winfried Ruigrok for their insightful discussions and comments that helped us improve the article.

4.1. Introduction

Ever since Jeffrey Pfeffer laid the groundwork for the power perspective (1981), researchers explored how power structures within a firm's top management team (TMT) affect organizational outcomes (e.g., Daily & Johnson, 1997; Greve & Mitsuhashi, 2007; Tang, Crossan, & Rowe, 2011). Generally, power studies presume that the CEO is the most powerful individual in the organization (Daily & Johnson, 1997). However, the CEO's power is regularly challenged in political contests by other TMT members who have different interests than the CEO and challenge his or her authority (Ocasio, 1994). Consequently, such power struggles create time-consuming distractions for the TMT and affect performance negatively (Eisenhardt & Bourgeois, 1988; Salancik & Pfeffer, 1977).

In contemporary corporations – especially in the widespread multidivisional (M-form) organizations – the heads of the (product and geographic) operating units are powerful CEO rivals, because they have direct control over large parts of their firms and their primary interest is the performance of their division and not necessarily of the overall company (e.g., Lachowitz & Bottger, 2008; Ready, 2004). These executives are therefore inclined to interfere with the CEO's agenda and attempt to influence corporate initiatives according to their divisional interests.

As is the case with the majority of political conflicts in the TMT, power contests between the CEO and the divisional head take place behind closed doors and cannot be observed from the outside. An exceptionally well-documented example, is the long-lasting power contest between Jürgen Schrempp and Helmut Werner at the top of Daimler-Benz AG in the 1990s (Bluethmann, 1997; Waller, 2000). In 1995, Werner, who successfully managed the transformation of the Mercedes-Benz division, had reasonable hopes of becoming the holding company's CEO. However, it was Schrempp who was promoted to the top post and afterwards pushed an overdue corporate strategy that would merge the holding company with the Mercedes-Benz subsidiary – and thereby disempower his powerful rival. Werner, whose division accounted for 75 percent of the group's revenues and almost all the profits, fiercely opposed this initiative and fought for preserving the autonomy of his business unit. After several months of conflict, Schrempp won over three of Werner's most important allies in the TMT, which ultimately forced the powerful divisional head to leave the firm.

Given the apparent importance of the power contests between the CEO and the divisional head for organizational outcomes, the lack of knowledge about this topic is

surprising. Although previous studies showed that the power structures between the CEO and the rest of the TMT (e.g., Haleblian & Finkelstein, 1993; Tang et al., 2011), the board of directors (e.g., Westphal & Zajac, 1995), and between co-CEOs (Krause, Priem, & Love, 2015), matter for performance, the CEO-divisional head relationship has been largely neglected. We address this gap and argue that individual power differences operationalized as differences in tenure, compensation, ownership, and board membership, between the CEO and the head of the largest division affect firm performance. Since executives can, in addition to individual attributes (Finkelstein, 1992), source power from the organizational subunit that they represent (Pfeffer, 1992; Salancik & Pfeffer, 1977), we also analyze how the division's importance to the firm affects this relationship.

Our findings are based on a sample of 827 CEO-divisional head pairs in S&P 500 firms from 2004 to 2013 and show that the power of a divisional head – relative to that of the CEO – is negatively related to firm performance. Moreover, our results show that this effect is contingent upon the division's subunit power, which is represented by its business weight relative to the overall firm and its attractiveness for the firm's portfolio. Therefore, our findings indicate that representatives of strategically important subunits can build on their subunits' contextual power to prioritize their interests over the CEOs' in a political conflict. Facing the accumulated power of these contestants, CEOs have difficulties in executing their corporate agenda and cannot maximize overall firm performance.

Our findings contribute to strategy research in several ways. First, by revealing the negative performance effects of powerful divisional heads relative to the CEO, our findings improve the understanding of power structures within the TMT, which were, thus far, predominantly studied by conceptualizing the TMT as a collective body (e.g., Cao, Simsek, & Zhang, 2010; Haleblian & Finkelstein, 1993; Tang et al., 2011). Second, our study contributes to the power perspective by empirically untangling the interplay of individual and subunit power, as indicated by Pfeffer (1992) and Mitsuhashi and Greve (2004). Third, by highlighting a staffing issue in contemporary multimarket corporations, our study contributes to research on corporate headquarters (CHQ) by particularly focusing on the CHQs' relationships with the operating divisions (e.g., Gupta, 1987; Menz, Kunisch, & Collis, 2015; Roth & Nigh, 1992).

4.2. Theory and Hypotheses

In the coalitional view of organizations (Cyert & March, 1963), the "dominant coalition" – often equated with a firm's TMT (e.g., Finkelstein, 1992; Haleblian & Finkelstein, 1993; Hambrick & Mason, 1984) – is a group of individuals at the top of organizations who decide on organizational policies. Building on this perspective, political power models presume that strategic decisions are not made rationally, but rather result from bargaining between actors in the dominant coalition (Pfeffer, 1981). In order to enforce their preferences, powerful actors use covert political tactics, such as agenda and information control, forming and relying on coalitions, and using committees (Pettigrew, 1973; Pfeffer, 1981). Thereby, these actors use their power to "overcome the resistance of others" and those "who possess the greatest power, will receive the greatest reward from the interplay of organizational politics" (Pfeffer, 1981: 28).

In order to understand how power structures in the dominant coalition relate to firm performance, researchers mainly studied the power gap between the CEO and the rest of the TMT as a whole (Eisenhardt & Bourgeois, 1988; Haleblian & Finkelstein, 1993; Tang et al., 2011), thereby identifying a predominantly negative effect of a dominant CEO. To our knowledge, the only study that focuses on power differences between individual executives, examines the power gap between co-CEOs, which reveals a curvilinear relationship with firm performance, thereby indicating that power differences are beneficial but only up to a certain extent (Krause et al., 2015). Since these studies implicitly assume that the CEO is the most powerful executive in the organization (Daily & Johnson, 1997), they neglect other individual TMT members. Although CEOs have the most hierarchical power in the dominant coalition, other executives can be as powerful as – or even more powerful than – the CEO, when taking into consideration other individual attributes, such as their compensation, stock ownership, as well as their network in- and outside the organization (Finkelstein, 1992).

One group of these potentially powerful executives are the heads of the operating divisions in contemporary corporations, especially in M-form organizations (Finkelstein, Hambrick, & Cannella, 2009). While functional TMT members, such as Chief Marketing Officers and Chief Strategy Officers, supervise only small corporate staffs with few direct reports (Menz, 2012), divisional heads bear the general management responsibility for entire operating units (Finkelstein et al., 2009). In this capacity, these executives have substantial influence on the execution of strategic plans

within their division (Gupta & Govindarajan, 1984), which is why CEOs rely on their cooperation to implement the corporate agenda. In order to support divisional heads in this "CEO-like" role, they often have their own divisional management teams and functional staffs who facilitate their discussions with the corporate CEO and headquarters (Aaker, 2008; Lachowitz & Bottger, 2008). Although divisional heads can, thus, be quite powerful – their compensation packages sometimes exceed that of the corporate CEO (Collis & Montgomery, 1998) – we know very little about their power and the CEO's power relationship with them.

The individual power gap between the CEO and divisional head

The executives in the dominant coalition collectively share the management of a firm (Finkelstein, 1992) – especially in organizations consisting of several operating divisions. Here, the CEO delegates general management responsibility for a division to its respective divisional head, which can cause adverse effects for the company overall, due to misaligned corporate and divisional interests, violation of the unity-of-command principle, and individual career aspirations.

First, divisional heads occasionally have a silo mentality and are hesitant to collaborate with the CHQ and their peers to realize cross-divisional synergies (Aaker, 2008; Ready, 2004). This silo thinking is often manifested in the divisional head's incentive scheme, which is designed to maximize the division's financial performance, instead of the corporation's overall success (Drazin & Rao, 1999; Hambrick, 1995). In support of this claim, Santaló and Kock (2009) found that the variable compensation of divisional heads in diversified firms tends to be cash-based (in all likelihood connected to divisional performance), whereas CEO incentives are predominantly equity-based. Consequently, the interests of corporate CEOs and divisional heads are potentially misaligned, which may escalate in power contests between the two executives (Ocasio, 1994). If divisional heads are powerful – relative to the CEO – they will be more inclined to engage in such power contests and have more leeway to maximize their division's success at the expense of the firm's overall performance.

Second, the shared leadership setting may violate the unity-of-command principle, which posits that, to avoid confusion and ensure efficiency, every employee in a firm should have only one superior from whom he or she receives orders (Fayol, 1949; Gulick & Urwick, 1937). Otherwise, Fayol warns that "authority is undermined, discipline is in jeopardy, order disturbed and stability threatened" (1949: 24). If a

divisional head stands between the CEO and the organization, this principle can be impaired, because employees often feel more loyal to their division and its leader than to the corporation and its CEO. For example, in the Daimler-Benz case, Werner ensured that his workforce was committed to him when he – in the division's cafeteria – emotionally presented his vision of an autonomous operating unit, which the attendees honored with a standing ovation (Waller, 2000: 159). We argue that divisional heads who are powerful relative to the CEO, are more successful at rallying their "troops" and, thus, amplify the "identity conflict" of divisional employees. As a consequence, the CEO's authority in the division is damaged, which impairs his or her ability to implement the corporate agenda and ultimately results in suboptimal firm performance.

Third, the divisional executive's career aspirations may perhaps further increase tensions with the CEO. Due to their role, which develops their general management abilities and enables them to gain an intimate knowledge of the firm's operations, divisional heads are often the logical candidates to become the next CEO (Drazin & Rao, 1999; Finkelstein et al., 2009). Hence, a divisional head who is powerful relative to the CEO, is likely aspiring to replace the incumbent, thereby representing a fertile breeding ground for political conflicts in the dominant coalition (Ocasio, 1994). For example, if the contestant assumed the divisional head position before the appointment of the corporate CEO, he or she is likely to have deeper relationships with the other executives, thereby facilitating coalition building against the incumbent. In the case of Daimler-Benz, for instance, the power contest was not concluded until Schrempp managed to break Werner's coalition with key divisional executives by promising them TMT positions in the new organization (Waller, 2000: 166). Political behaviors, such as coalition building, distract the involved executives from their day-to-day activities and delay important decisions and initiatives (Eisenhardt & Bourgeois, 1988). Therefore, power contests have a negative effect on decision-making, which, in turn, damages a firm's financial performance (Eisenhardt & Bourgeois, 1988; Salancik & Pfeffer, 1977).

In sum, we argue that firms in which the CEO faces powerful divisional heads will perform worse than other firms and hypothesize that:

> *Hypothesis 1: The power of the divisional head relative to that of the CEO is negatively associated with firm performance.*

The moderating role of the division's subunit power

In addition to individual attributes, executives can build on the contextual power of their subunit, as "some [subunits] are more influential than others" (Pfeffer, 1992:

163). In the particular context of divisional heads in contemporary organizations, we argue that a division's control over scarce resources, autonomy from the CHQ, and visibility in- and outside the organization can strengthen its representatives in a power contest with the CEO.

First, organizational subunits, which are located on the same structural level, source power from their control over scarce, critical resources or their ability to solve critical problems for the organization (Pfeffer, 1992). For instance, organizations may well depend on the financial resources (e.g., revenues, profits, or cash flow) generated by large divisions to cross-subsidize infant businesses. Furthermore, large divisions may perhaps control group-wide functions that were decentralized from the CHQ, such as research and development (Argyres & Silverman, 2004), marketing (Aaker, 2008), human resources (Hambrick, 1995), or strategic planning (Grant, 2003). Smaller divisions, in contrast, often represent their organizations' future ability to generate resources, for example, by controlling valuable technologies that are required to seize growth opportunities (Medcof, 2001). Consequently, the CEO's position in a political conflict with a divisional head is weakened when facing a rival who controls the bulk of the financial resources, future business development, or critical functions on which the CHQ depends.

Second, due to the delegation of the decision-making rights to the divisional level in order to avoid information overload at the CHQ, very large or fast-growing operating divisions are likely to be more autonomous (Finkelstein et al., 2009; Sengul & Gimeno, 2013). This autonomy enables these divisions to build up exclusive knowledge of their competitive environment and operations (Jensen & Meckling, 1991), and to control the relationships with key stakeholder groups, such as customers, suppliers, or shareholders (Lachowitz & Bottger, 2008). In a power contest with the CEO, divisional heads can exploit this information advantage to pursue individual goals (Mudambi & Navarra, 2004) and potentially tap into their stakeholder relationships to form a coalition against the incumbent.

Third, in contrast to individual power sources, subunit power often has grown historically and is manifested in the organization (Salancik & Pfeffer, 1977). Thus, it is more stable than individual power and it makes power contests with executives who represent powerful divisions more challenging for CEOs. Whereas CEOs can replace the heads of weak divisions relatively easily, because the boards of directors are typically not involved in their performance evaluation, the heads of powerful divisions

enjoy a higher job security (Drazin & Rao, 1999). These executives benefit from the attention that their divisions attract in- and outside the organization (Bouquet & Birkinshaw, 2008; Ocasio & Joseph, 2005; Sengul & Gimeno, 2013), which limits the CEO's options in a power contest. For instance, at Daimler-Benz, the power contest was prolonged by the supervisory board's support for retaining the popular and internationally acclaimed divisional head who was the only German whom *Businessweek* ranked among the top 25 business leaders in 1996 (Waller, 2000: 159).

In sum, we suggest that divisional heads can build on two distinct contextual sources of subunit power in a conflict with the CEO. On the one hand, a division's weight in the portfolio, measured as either its revenue or asset share, determines its subunit power (Bardolet, Brown, & Lovallo, 2017). On the other hand, a division's subunit power can stem from its attractiveness for the firm (i.e., its future ability to generate resources), as represented by its location in the growth-share matrix (Hambrick, MacMillan, & Day, 1982; Henderson, 1979). Consequently, we expect that a division's weight and attractiveness in the portfolio moderate the performance effect of the individual power gap between the divisional head and CEO, and hypothesize:

> *Hypothesis 2a(b): The greater (a) the weight and (b) the attractiveness of the divisional head's unit in the firm's portfolio, the stronger the negative performance effect of the divisional head's power relative to that of the CEO.*

4.3. Method

Sample and data

In order to test the hypotheses, we analyzed the data of large, listed US firms, which we retrieved from the Compustat and Worldscope databases. First, we identified all the firms that were included in the S&P 500 index at the end of one or several years between 2004 and 2013, and then collected firm and segment information for them. Next, we retrieved information about these firms' CEOs and divisional heads from the BoardEx database. Since our study focuses on potentially influential divisional heads, and in order to ensure data availability on executive compensation, we considered the head of the firm's largest division only if he or she was also among the five highest-paid executives, as reported to the Securities Exchange Commission (SEC) – which is a

common TMT definition (e.g., Mehran, 1995; Tang et al., 2011).[1] The titles of the executives summarized as divisional heads included, for example, (executive) vice president, division president, and in 12.6 percent of the cases CEO (e.g., EVP & Division CEO). We excluded firms with missing biographical and firm data, thereby reducing the sample size from the initial 1,098 to 827 firm-years, consisting of 385 unique pairs of CEOs and divisional heads in 233 firms.

Measures

Firm performance. As our dependent variable to measure financial performance, we chose *Return on Assets (ROA)*, which is well suited for TMT studies, since it measures the management's effectiveness in deploying the firm's resources (Geletkanycz & Hambrick, 1997). We prefer ROA, instead of market- or equity-based measures, because it is not distorted by investor preferences or the firm's capital structure (Ridge, Aime, & White, 2015). In order to mitigate potential reverse causality in the analysis, we calculated ROA with a one-year time lag in t+1.[2]

Individual power gap. We ensured the robustness of our exploratory variable by calculating the central construct in our analyses – the individual *power gap* between the head of the largest operating division and the CEO – similar to Krause et al. (2015), who developed their power measure based on Zajac and Westphal (1996), as well as Cannella and Shen (2001):

After retrieving information about the salary, ownership, and position tenure for each CEO and divisional head from BoardEx, we standardized these non-binary power scores and added them up with a dummy variable that indicated board membership for each executive. Next, we standardized the resulting multi-item measure to obtain the composite power score for each CEO and divisional head. In order to measure the power distance between the two executives, we afterwards subtracted the CEO's score from the divisional head's.

Division's weight. In order to measure the *weight* of the largest division in the portfolio, we calculated this division's share of the firm's total sales (in t), as reported in the Worldscope segment reporting. Since the division's relative size is an important

[1] Since our study focuses on power differences between CEOs and divisional heads, we excluded 26 observations that had co-CEOs on the corporate level or co-heads on the divisional level.

[2] We also tested a longer lag structure (average ROA t+1 to t+3) to examine the validity of our results over longer time periods. We report the findings of this test in the robustness checks section.

structural feature in the context of our analyses, we do not only use this variable as a moderator to test Hypothesis 2a, but also as a control variable in all our other analyses.

Division's attractiveness. Similar to Henderson (1979) and Hambrick et al. (1982), we measure a division's attractiveness according to its market growth and market share relative to the overall portfolio.

In order to calculate the *market growth* of the largest division – relative to the portfolio – we first retrieved the SIC codes and sales of all US firms in Compustat between 2002 and 2013 and calculated industry munificence for each three-digit SIC code segment between t-2 and t (Karim, Carroll, & Long, 2016; Menz & Barnbeck, 2017). We chose a three-year timeframe in accordance with Hambrick et al. (1982). Based on the divisions in a firm's portfolio, we then calculated the average industry growth for each sample firm and measured the deviation of the largest division relative to the portfolio average.

In order to quantify the largest division's competitive position relative to the rest of the portfolio, we first computed the *market shares* of all divisions in their respective three-digit SIC code segment in t. Next, we calculated the average of the market shares in each portfolio and measured the deviation of the largest division relative to the portfolio average.

Control variables. In order to account for other factors that potentially affect firm performance and are relevant in our analytical context, we considered several control variables, similar to the study of Krause et al. (2015). On the firm level, we included *firm size*, measured as the logarithm of the number of employees in t. We also controlled for the firms' corporate strategy by including their *related diversification degree* as outlined by Palepu (1985). We consider this variable to be highly relevant, since divisional heads may possibly form coalitions with other related divisions. Moreover, since firms report either product or geographic segments to the SEC, we controlled for the underlying logic of the firms' organizational structures by including a dummy variable for *geographic divisions*. In order to account for the composition of the board of directors, we included the share of independent directors in t as *board independence*. In the TMT, Chief Operating Officers (COO) decrease disturbances and are often an ally of the CEO as his or her designated heir apparent (Hambrick & Cannella, 2004; Marcel, 2009). Thus, *COO presence* is likely to mitigate the conflict potential in the TMT, which is why we added a binary control variable in our analyses. On the level of the two executives, we included a dummy variable indicating whether the divisional

head was appointed during the incumbent CEO's tenure (*CEO appointee*) to control for potential friendly ties between the two (Greve & Mitsuhashi, 2007; Ocasio, 1994). We also controlled for *CEO age*, as well as the *age difference* between the two executives, to account for their respective career stages. Finally, we included a binary control variable indicating whether the *CEO headed the largest division* at an earlier stage of his or her career to control for his or her potential network in the division.

Analytical procedures

Since the primary selection variable of our sample is the membership of divisional heads in the TMT (i.e., among the five highest paid executives), our sample potentially suffers from sample-induced endogeneity (Certo, Busenbark, Woo, & Semadeni, 2016). In order to correct for this possible sample selection bias, we applied a two-stage Heckman correction (Heckman, 1979). In the first stage, we calculated the probability of the head of the largest operating division being reported as a TMT member for all S&P 500 firms during the ten-year period. As control variables in this first stage, we chose firms' related diversification degree, the relative size of the largest segment, firm size, firm performance (in t), the binary control for geographic divisions, as well as year dummies. Since the first stage must contain a significant independent variable that is not included in the second-stage models (Certo et al., 2016), we added CEO duality, which was previously found to be associated with the structure of the TMT (Hambrick & Cannella, 2004; Menz & Scheef, 2014). Based on this probit model, we computed the inverse Mills ratio, which we then used as a control in the second stage.

In the main models, we test our hypotheses by using fixed effects linear regression with robust standard errors, controlling for both year- and firm-specific fixed effects. Furthermore, we mean-centered the independent and moderator variables before calculating the interaction terms to reduce multicollinearity risk (Tabachnick & Fidell, 2007).

4.4. Results

Table 4-1 shows the descriptive statistics and correlation matrix of the variables used in the main models. Table 4-2 presents the results of the first-stage probit model, predicting the probability of divisional head TMT presence between 2004 and 2013 (firms are pooled, and year dummies are included). As we anticipated, CEO duality significantly predicts the presence of a divisional head in the TMT, which allows us to

use the inverse Mills ratio as a control variable in the second stage (Certo et al., 2016). The first-stage results also show that large firms with a high degree of related diversification are more likely to have the head of the largest operating division in the TMT. In addition, executives who lead geographic divisions are more likely to be TMT members compared to those who lead product divisions. Surprisingly, the relative size of the largest division significantly reduces the probability of a divisional head being present in the TMT. A possible explanation for this counterintuitive finding is that firms, which report only one segment (i.e., a sales share of the largest division larger than 95 percent of the overall portfolio), usually do not have a dedicated divisional head.

Table 4-1: Descriptive statistics and correlation coefficients

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1 ROA (t+1)	0.104	0.067	1.00												
2 Firm size (log)	3.289	1.277	0.05	1.00											
3 Board independence	0.835	0.094	-0.08 *	0.03	1.00										
4 COO presence	0.175	0.380	0.02	0.00	-0.07 *	1.00									
5 CEO appointee	0.593	0.492	0.07 *	0.04	0.15 ***	0.08 *	1.00								
6 CEO age	56.667	5.379	0.05	0.13 ***	0.11 ***	0.08 *	0.18 ***	1.00							
7 Age difference	4.128	6.684	0.07 *	0.03	0.06	0.10 **	0.21 ***	0.63 ***	1.00						
8 Geographic division	0.150	0.357	0.09 **	0.10 **	-0.07 *	0.14 ***	-0.07 +	-0.03	-0.05	1.00					
9 CEO headed largest division	0.193	0.395	0.01	0.09 *	-0.01	0.08 *	-0.22 ***	-0.11 **	-0.08 *	0.03	1.00				
10 Related diversification	0.658	0.448	-0.16 ***	0.07 *	0.08 *	-0.05	-0.01	-0.06 +	-0.15 ***	0.23 ***	0.02	1.00			
11 Division weight	0.588	0.189	0.12 ***	-0.15 ***	-0.19 ***	-0.07 +	0.01	-0.05	0.12 ***	-0.11 **	-0.02	-0.62 ***	1.00		
12 Power gap	-1.267	0.875	-0.15 ***	-0.24 ***	-0.11 **	-0.09 **	-0.50 ***	-0.37 ***	-0.31 ***	0.09 *	0.13 ***	0.09 **	-0.04	1.00	
13 Market growth[a]	-0.027	2.544	0.02	0.08 *	0.08 *	-0.09 *	-0.05	-0.04	-0.07 +	n/a	0.05	0.04	-0.05	-0.01	1.00
14 Market share[a]	0.651	0.729	-0.12 **	-0.02	-0.11 **	-0.02	0.04	-0.03	0.01	n/a	-0.05	0.19 ***	0.19 ***	0.03	0.04

$N = 827$; [a] $N = 658$

$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table 4-2: Results of probit regression for divisional head TMT presence

Variables	Divisional head TMT presence
Constant	-0.485 ***
	(0.152)
ROA (t)	-0.186
	(0.275)
Firm size (log)	0.075 ***
	(0.016)
Geographic division	0.169 *
	(0.069)
Related diversification	0.146 *
	(0.065)
Division weight	-0.912 ***
	(0.130)
CEO duality	0.173 ***
	(0.046)
x^2	292.07 ***

N = 4'350; robust standard errors in parentheses;
year fixed effects included.
$^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Hypotheses testing

Table 4-3 shows the results of our main models (second stage), with firm performance as the dependent variable. Model 1 includes only the control variables, whereas Model 2 adds the individual power gap measure to test Hypothesis 1. In addition, Model 3 contains the interaction term between the power gap and the largest division's relative size to test Hypothesis 2a. Model 4 adds the moderator variables – industry growth and market share – to test Hypothesis 2b by using a three-way interaction that distinguishes divisions according to the growth-share matrix. Since the two portfolio measures in this test are based on product segments, we excluded firms that reported geographic organizational structures from the analysis shown in Model 4.

Table 4-3: Results of fixed effects regression for ROA (t+1)

	Model 1	Model 2	Model 3	Model 4
Constant	-0.049	-0.058	-0.060	-0.061
	(0.070)	(0.068)	(0.079)	(0.084)
Controls				
Firm size (log)	-0.009	-0.005	-0.007	-0.008
	(0.010)	(0.010)	(0.010)	(0.013)
Board independence	-0.014	-0.015	-0.010	-0.015
	(0.039)	(0.039)	(0.040)	(0.045)
COO presence	-0.004	-0.005	-0.004	-0.008
	(0.005)	(0.006)	(0.005)	(0.006)
CEO appointee	0.000	-0.006	-0.006	-0.004
	(0.005)	(0.006)	(0.006)	(0.006)
CEO age	0.002 *	0.002 *	0.002 *	0.002 *
	(0.001)	(0.001)	(0.001)	(0.001)
Age difference	-0.001	-0.001	-0.001	-0.001 +
	(0.001)	(0.001)	(0.001)	(0.001)
Geographic division	0.036 ***	0.038 ***	0.041 ***	
	(0.010)	(0.011)	(0.011)	
CEO headed largest division	0.012	0.012	0.014 *	0.012
	(0.008)	(0.008)	(0.007)	(0.009)
Related diversification	0.003	0.004	0.001	0.011
	(0.010)	(0.009)	(0.009)	(0.010)
Division weight	-0.051 +	-0.058 *	-0.050 +	-0.058 +
	(0.028)	(0.028)	(0.027)	(0.031)
Inverse mills ratio	0.090 *	0.100 **	0.090 **	0.100 *
	(0.036)	(0.035)	(0.035)	(0.042)
Market growth				0.001
				(0.001)
Market share				-0.003
				(0.004)
Power gap				
Power gap		-0.010 *	-0.008 +	-0.009 **
		(0.005)	(0.004)	(0.003)
Interactions				
Power gap x division weight			-0.038 ***	
			(0.011)	
Power gap x market growth				-0.001 *
				(0.001)
Power gap x market share				-0.004
				(0.004)
Market growth x market share				0.001 *
				(0.001)
Power gap x market growth x market share				-0.006 *
				(0.002)
Firm fixed effects	Incl.	Incl.	Incl.	Incl.
Year fixed effects	Incl.	Incl.	Incl.	Incl.
N	827	827	827	658
R^2	0.126	0.141	0.158	0.165

Unstandardized regression coefficients; standard errors in parentheses.

$^{+}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Hypothesis 1, which posits that a powerful divisional head – relative to the CEO – is negatively related to firm performance, is supported in Model 2 (β = -.010; p < 0.05). Based on this result, a firm's ROA fluctuates by 0.84 percentage points from the average 10.4 percent when the power gap measure assumes values of one standard deviation above or below its mean, while holding all other variables constant.

Hypothesis 2a, stating that the effect of the individual power gap between the two executives on firm performance is moderated by the weight of the largest division in the portfolio, is supported under consideration of the significant interaction term in Model 3 (β = -.038; p < 0.001). Figure 4-1 illustrates that the power gap-performance relationship is predominantly relevant for firms with divisions that account for a large share of overall revenues. These firms benefit from having a strong CEO relative to the divisional head, since their ROA is notably higher than that of firms with relatively powerful divisional heads. At the opposite side of the spectrum, it appears that the power gap's performance effect diminishes if the largest division is small relative to the overall firm.

Hypothesis 2b, which states that the attractiveness of the largest division strengthens the effect of the individual power gap, is partially supported under consideration of the three-way interaction term in Model 4 (β = -.006; p < 0.05). Figure 4-2 shows that the power gap-performance relationship is strongest for the heads of divisions that are characterized by high growth markets *and* high market shares, followed by divisions in the least attractive category with a small market share in a low growth industry. Figure 4-2 also shows that the effect of the power distance between the divisional head and CEO reverses for divisions who lie between the two extremes, thereby indicating that these firms benefit from powerful divisional executives.

Figure 4-1: Interaction effect between power gap and division weight

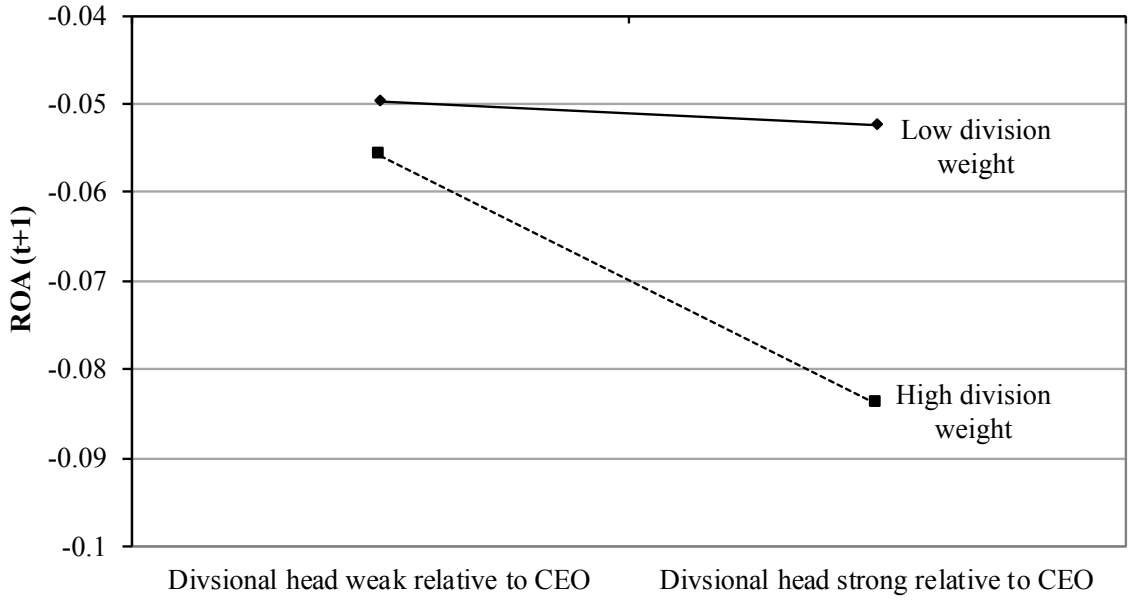
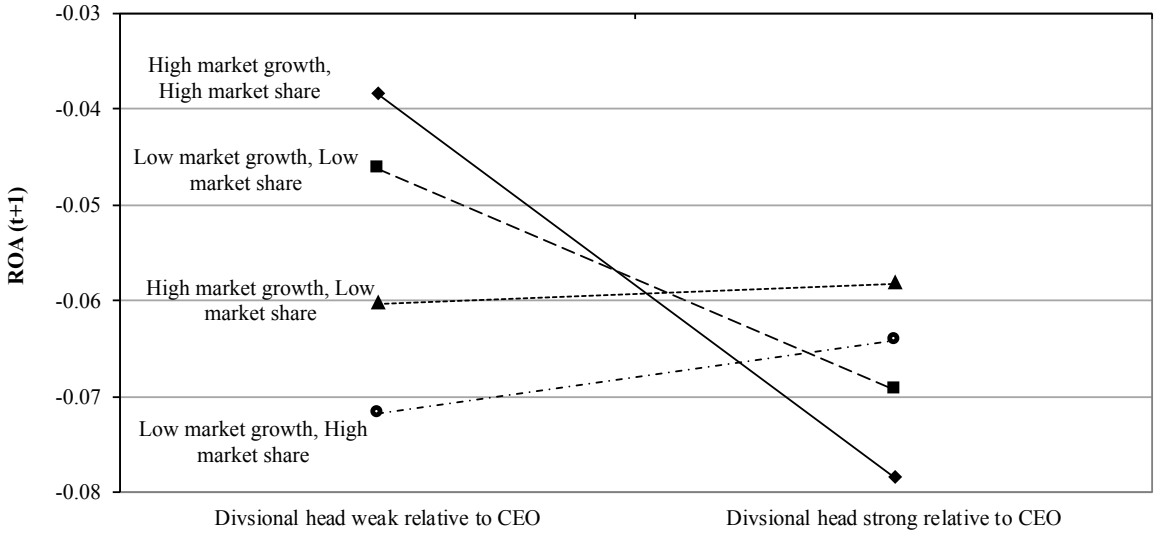


Figure 4-2: Interaction effect between power gap, market growth, and market share



Robustness Checks

Given that previous research showed that certain effects of the CEO's power and relationships only become visible after more than one year (e.g., Tang et al., 2011; Westphal, 1999), we tested whether our findings are robust over a longer period. Therefore, we also tested our main models using a longer time lag, namely the average ROA from t+1 to t+3. Both relationships suggested in Hypothesis 1 and 2a remain significant over this longer timeframe (H1: $p < 0.05$; H2a: $p < 0.01$), thereby indicating that the power contest between the CEO and divisional head does not only affect a firm's short-term, but also its medium-term, financial performance. This finding seems plausible, because the implementation of strategic decisions takes about two years (Miller, Hickson, & Wilson, 2008), thereby implying that the effect of stalled corporate initiatives only becomes visible after this longer period. Interestingly, the relationship predicted in Hypothesis 2b is only significant when using a 1-year time lag, which indicates that CEOs can settle conflicts with heads of either high growth/high share or low growth/low share divisions relatively quickly (e.g., by shutting down or spinning-off poorly performing divisions). An alternative explanation is that operating divisions cycle through the growth-share matrix quickly (Reeves, Moose, & Venema, 2014), thereby providing only small windows of opportunity for the divisional head to challenge the CEO.

Since previous research has identified negative effects of too powerful CEOs (e.g., Eisenhardt & Bourgeois, 1988; Krause et al., 2015), we tested a curvilinear relationship between the individual power gap and firm performance. However, this analysis did not reveal a tipping point in the identified effect of the divisional head-CEO power distance. Furthermore, to test an alternative operationalization of the division's weight in the portfolio, we used assets instead of sales to measure relative size in a follow-up analysis. Supporting the robustness of our findings related to Hypothesis 2a, this test yielded similar, but – due to a reduced sample size – non-significant results.[3]

In addition, we tested the robustness of our findings by using various sets of control variables and subsets of the full sample. First, we varied the control variables by including M&A activity, CEO duality, or the shared firm tenure of the CEO and divisional head, which did not change the results reported in Table 4-3 significantly.

[3] A small change in the set of control variables will increase the significance of the results ($p < 0.1$), despite the reduced sample size.

Second, the test of Hypotheses 1 and 2a using a subset of our sample that excludes geographic divisions, further substantiated the robustness of our findings. Third, the exclusion of firms with operating divisions that account for more than 90 percent of overall revenues, did not change the reported results significantly.

4.5. Discussion

Interpretation of the findings

Overall, we find strong support for our initial hypotheses, thereby revealing adverse performance effects that are associated with relatively powerful divisional heads and identifying subunit power as a contextual contingency. The identified effect in Model 2 indicates that CEOs are challenged by divisional heads who have relatively high individual power, who can enforce their individual (divisional) interests, and, thereby, harm the corporate agenda. Ultimately, this political power contest damages the overall firm performance.

Furthermore, our findings on the moderating effect of a division's weight in the portfolio suggest that, compared to the heads of smaller divisions, the heads of relatively large operating divisions are either more likely to challenge the CEO, or more effective in challenging the incumbent. This indicates that the contextual power of a potential CEO rival is a boundary condition for a power contest to unfold and to take effect, respectively.

Although our findings identify a division's attractiveness as the second contextual contingency of power contests between CEOs and divisional heads, they reveal a more nuanced picture than initially expected based on subunit power. In accordance with Hypothesis 2b, we find that the adverse effect of the power gap is strongest for "star" divisions with high market shares in fast-growing industries. This indicates that the attractiveness of such divisions increases the power of the divisional head relative to the CEO, which may provoke the political conflict between them.

Contradicting our initial hypothesis, the interaction effect is second strongest for divisions in the arguably least attractive category (low industry growth and low market share). At first sight, this finding may perhaps appear surprising, because these executives cannot source power from their division's attractiveness. However, considering Henderson's (1979) recommendation that such divisions should be liquidated, it appears that these divisional heads fight for the survival of their declining

businesses and that they utilize all political means against the CEO, even though the result of the contest is inevitable from the outset. The fact that this effect is only significant in t+1, indicates that such defiant struggles damage firm performance only in the short term and that the CEOs will ultimately prevail.

Our findings also indicate that the heads of divisions located in the remaining two categories (high industry growth and low market share; low industry growth and high market share) are less likely to engage in political contests with the CEO. Their interests appear to be aligned with the corporate's, namely to focus on growing businesses with low market shares in emerging industries or to focus on exploiting the strong competitive positions of businesses in mature markets.

Contributions

Researchers who studied power structures in the dominant coalition, primarily focused on the CEO's individual power relative to the rest of the TMT (Cao et al., 2010; Haleblian & Finkelstein, 1993; Tang et al., 2011), thereby presuming that the CEO is the most powerful TMT member (Daily & Johnson, 1997). By studying the potentially contested relationship between CEOs and divisional heads, this study – to our knowledge – is the first to shed light on the CEO's power relative to an individual TMT member in another role. Our study therefore improves the understanding of the CEO's standing in the dominant coalition and it provides empirical support for the negative performance effects of power contests between the CEO and other individual TMT members, as suggested by Eisenhardt and Bourgeois (1988).

Our results also show that, in the particular context of divisional heads, these negative effects are contingent upon the division's context, thereby informing research on the unity-of-command principle (Fayol, 1949; Gulick & Urwick, 1937). When the division's weight in the portfolio is relatively small, a powerful divisional head appears not to affect overall firm performance. Thus, contrary to the unity-of-command principle (Krause, Semadeni, & Cannella, 2014), these firms can have two powerful leaders on the corporate and divisional levels without damaging overall firm performance. Our analysis of the division's attractiveness to the firm further supports this finding, thereby providing evidence that the unity-of-command principle holds only for divisions that are either very powerful (attractive), or very weak (unattractive). Interestingly, divisions between the two extremes (high industry growth and low market share, or low industry

growth and high market share) even appear to benefit marginally from powerful divisional heads relative to the CEO.

Previous research distinguished between individual and subunit power, which, thus far, were generally considered in isolation (Mitsuhashi & Greve, 2004). Since we connect the two dimensions and explore their joint effect on organizational outcomes, this study complements previous research on sources of managerial power (e.g., Finkelstein, 1992; Pfeffer, 1981, 1992). Our results indicate that individually powerful CEO rivals can build on their subunit's power in a political conflict. This finding generally suggests the need to account for subunit contexts when analyzing power differences between individuals in the dominant coalition.

Finally, our study connects research on TMT power structures with the multimarket firm literature and, thereby, contributes to our understanding of CHQ-subsidiaries relationships (e.g., Gupta, 1987; Joseph & Ocasio, 2012; Roth & Nigh, 1992). In order to mitigate the risk of political conflicts based on misaligned corporate and divisional interests, CEOs should limit the power of executives who lead influential divisions. In this regard, our findings are rather counterintuitive, since one might assume that it requires powerful managers to effectively steer large operating divisions and to free CEOs from operational duties.

Managerial implications

Our study has several practical implications for structuring and staffing the leadership teams of large corporations. Notably, CEOs need to be aware of the political threat originating from powerful TMT members – especially from those who lead important subunits with potentially differing interests. If confronted with powerful divisional heads, CEOs should proactively limit the autonomy of these divisions, for instance, by building their own relationships with the divisions' key stakeholders or by moving decentralized functions to the CHQ. However, sometimes the pairing of powerful divisional heads, influential subunits, and relatively weak CEOs cannot be avoided. Such pairings call upon the board of directors to design incentive schemes for divisional executives that ensure the prioritization of corporate over divisional interests (Lachowitz & Bottger, 2008).

Our study's findings can also help manage a portfolio of operating divisions based on the ("BCG") growth-share matrix – a tool that is widely used by large corporations, such as Dow Chemical or Google (Reeves et al., 2014). By identifying

leadership settings with high conflict potential, our findings enrich BCG's rational generic strategies by a behavioral component and indicate that the suitable profile of a divisional head changes during a division's life cycle. In particular, CEOs should try to maintain a power distance from divisional heads of "star" or "dog" divisions to prevent conflicts. In contrast, "question mark" or "cash cow" divisions appear to benefit from strong divisional leaders. However, since the operating divisions in modern corporations circulate "through the matrix quadrants faster" than in the past (Reeves et al., 2014: 5), aligning the divisional leadership with the organizational and environmental context has become challenging.

Limitations and future research

Despite our analytical rigor and various robustness checks, our study has several limitations. First, we do not examine whether the described power struggles ultimately lead to a CEO succession event whereby the divisional head replaces the incumbent CEO. Previous power studies repeatedly investigated CEO dismissals that were followed by inside succession (e.g., Shen & Cannella, 2002; Zhang, 2006) to proxy a successful power contest in the TMT, as described in the circulation of power model by Ocasio (1994). Generally, these succession studies argue that poor financial performance undermines CEOs' legitimacy and makes them vulnerable to be contested (Ocasio, 1994; Shen & Cannella, 2002). Our results, however, indicate a mediated relationship, with poor performance being the consequence of a power contest. Only later, may poor performance lead to a CEO replacement or dismissal of the contestant if the CEO can attribute the poor performance to the subordinate (Boeker, 1992). We therefore encourage academics to study these relationships in future research.

Second, our study neglects the influence of other actors in the power contest, such as the board of directors or other TMT members. Since previous research identified coalition building as one of the crucial aspects in power struggles (Eisenhardt & Bourgeois, 1988; Ocasio, 1994; Pfeffer, 1981), we hope that future studies will explore the role of these additional actors in a political conflict between the CEO and another member of the dominant coalition. In particular, it is worthwhile analyzing whether power contests are more effective when the demographic or professional background of the CEO rival is similar to those of other TMT members, which may facilitate coalition building against the CEO.

Third, our results indicate an interplay of subunit and individual power in the context of large organizations with multiple operating divisions. In order to substantiate this finding and allow its broader generalization, future research should test whether this interplay can also be found in other contexts, for instance for powerful corporate CEO contestants. Possible research settings, with potentially influential CHQ functions, are the finance functions of serial acquirers, the marketing functions of consumer goods companies, or the R&D functions of biotech firms.

4.6. Conclusion

In conclusion, we analyzed the potentially contested relationship of CEOs with divisional heads and thereby increase our understanding of the CEO's power in the dominant coalition. We particularly identified the negative performance effects associated with powerful divisional heads relative to the CEO, thereby indicating that these divisional executives can effectively prioritize their division's interests over the corporate's. We also connect individual and subunit power, which shows that the direct effect of the individual power gap is contingent upon the division's subunit power. Thus, our results indicate that a division's subunit power can strengthen its leader relative to the CEO and facilitate a challenge to the CEO's authority. Our results also suggest that when subunits are very weak and in danger of liquidation, their leaders engage in political conflicts to fight for the units' survival, despite the lack of subunit power. Taken together, our findings emphasize that CEOs need to prevent divisional leaders from becoming too influential by accumulating their individual power with the power of the "kingdom" they represent.

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Curriculum Vitae

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Education

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Professional Experience

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