STAYING AGILE IN THE SADDLE:
CEO TENURE, TMT CHANGE, AND
ORGANIZATIONAL AMBIDEXTERTY

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ABSTRACT

This study examines how interrelated CEO and TMT changes affect an organization’s ability to simultaneously explore and exploit. Drawing upon the upper echelons perspective, we argue for a curvilinear CEO tenure-ambidexterity relationship. We then propose that the timing of TMT change critically affects this relationship. While TMT change negatively impacts ambidexterity in the early stages of CEO tenure, it has a positive relationship to ambidexterity in the later stages of CEO tenure. We empirically test and find evidence for our arguments based on a preliminary longitudinal sample of 30 European insurance companies between 2000 and 2011. Our main contribution to the ambidexterity literature is the development of a dynamic model revealing the interrelated effects of CEO and TMT changes on firm ambidexterity.

Keywords:
Ambidexterity; chief executive officers; top management team dynamics; panel data analysis
INTRODUCTION

“Because once you decide to become a BlackBerry user, you kind of stay there for life, and let’s not be too penny-wise, pound-foolish when we do get very good absolute margin.” (Co-CEO James Balsillie, April 2008)

“We are on the right track to put these last two quarters behind us.” (CEO Richard Fuld, September 10, 2008)

Both Balsillie and Fuld experienced at Research in Motion and Lehman Brothers respectively, a time when both firms were considered highly innovative or even pioneers and outperforming the competition. Both CEOs, who by the time of their (forced) turnover, had been characterized as long-tenured CEOs having grown “stale in the saddle”, were running firms averse to innovation, being overwhelmed by the competition, and showing strong performance decline. The pattern is so common (e.g., Kodak, the Edison Company, DEC) that it seems worth investigating how can CEOs stay “agile in the saddle” – managing their daily operations, but also continuing to explore new products, markets, and capabilities?

Organizational scholars increasingly apply the concept of ambidexterity – the human ability to use both hands with equal skill – as a metaphor for an organization’s ability to simultaneously explore and exploit (e.g., Gibson & Birkinshaw, 2004; O’Reilly & Tushman, 2008). To become ambidextrous, organizations have to reconcile internal tensions and conflicting demands in their task environments. Research has shown that the top management team (TMT) plays an important role in addressing these tensions and conflicts (e.g., Lubatkin, Simsek, Ling, & Veiga, 2006; Smith & Tushman, 2005). For example, scholars have documented the role of TMT composition (Beckman, 2006) and TMT processes (Jansen, Tempelaar, van den Bosch, & Volberda, 2009) as antecedents to ambidexterity.
While these studies provide rich insights, there are two important dimensions of the TMT-ambidexterity relationship that have received scarce research attention. First, previous studies describe the current state of the TMT, but did not capture how changes to the TMT affect ambidexterity (Raisch & Birkinshaw, 2008). Since the upper echelons perspective shows that TMT change – defined as changes to the composition of the TMT (Hambrick, 2007) – alters the senior team’s demography (Williams & O’Reilly, 1998) and decision-making processes (Hambrick, Cho, & Chen, 1996), analyzing its impact on ambidexterity may be worthwhile.

Second, previous ambidexterity studies generally tended to treat the TMT as a unit of analysis, which did not allow for a more fine-grained analysis of the interrelated impact of the chief executive officer (CEO) and other TMT members on ambidexterity (Cao, Simsek, & Zhang, 2010). This distinction is particularly relevant for the TMT change-ambidexterity relationship, since it is frequently the CEO who drives TMT change (Helmich & Brown, 1972), and his or her propensity to undertake such change was found to vary over the tenure cycle (Kesner & Dalton, 1994). Further research may thus be required into the dynamic interrelations between CEO change, TMT change, and organizational ambidexterity.

In this study, we draw upon prior work from the upper echelons theory (Hambrick & Mason, 1984), which explores the dynamics of CEO tenure (Hambrick & Fukutomi, 1991; Miller, 2001). These studies are particularly insightful for our research objective, as they not only describe temporal changes in CEO behavior, but also their interrelations with TMT changes. Drawing upon these theoretical concepts, we first argue for a curvilinear CEO tenure-ambidexterity relationship. We then introduce TMT change as a moderator of the CEO tenure-ambidexterity relationship. Our arguments imply that TMT change is not only critical for sustaining ambidexterity, but that it is the right timing of TMT change in relation to the CEO’s
tenure that gives rise to or hinders ambidexterity. While TMT change negatively affects ambidexterity in the early stages of CEO tenure, it has a positive relationship to ambidexterity in the later stages of CEO tenure. We find evidence for our arguments from preliminary panel data analyses based on a sample of 30 European insurance companies between 2000 and 2011.¹

Drawing upon our findings, we make two contributions to the ambidexterity literature. First, while prior research has stressed the importance of TMT characteristics for ambidexterity (e.g., Jansen et al., 2009), we provide a dynamic perspective of how the timing of changes to the TMT composition relate to ambidexterity. Second, while ambidexterity theory has generally considered the TMT as a unit (e.g., Lubatkin et al., 2006), we show that CEO and TMT have distinctive, but interrelated effects that need to be orchestrated to enable ambidexterity (see also Cao et al., 2010). Finally, we discuss our study’s practical implications, especially how CEOs can “stay agile in the saddle” by strategically timing TMT changes.

**THEORETICAL BACKGROUND AND HYPOTHESES**

**TMT’s Role for Organizational Ambidexterity**

There is growing evidence that ambidextrous organizations – those that have the ability to simultaneously manage exploration and exploitation – outperform others in the long run (Gibson & Birkinshaw, 2004; He & Wong, 2004; Lubatkin et al., 2006). Exploratory behaviors generate internal variety, create new markets and products, and involve experimentation (March, 1991; Rosenkopf & Nerkar, 2001). Conversely, exploitative behaviors decrease variance, ensure operational efficiency, and involve implementation (Beckman, Haunschild, & Phillips, 2004,

¹ The final sample is comprised of 115 insurers and banks and data collection effort is completed. We report findings for a subsample of 30 firms and 181 firm-year observations in this version of the paper and plan to finish our analysis by the end of January 2015.
2004; March, 1991). Scholars have warned that a one-sided focus on exploitation results in inertia and escalating conservatism (Leonard-Barton, 1992), while too much exploration may deter firms from gaining returns on their knowledge (Levinthal & March, 1993). To become ambidextrous, organizations have to manage the contradictory forces of exploitation and exploration, since both compete for scarce resources and require distinct processes, strategies, and structures (Benner & Tushman, 2003; Gupta, Smith, & Shalley, 2006).

A prominent research stream within this literature conceptualizes leadership characteristics as an important antecedent to ambidexterity (for reviews, see Lavie, Stettner, & Tushman, 2010; Raisch & Birkinshaw, 2008). Cognitive and behavioral inclinations of the senior management team may affect an organization’s proclivity toward exploratory or exploitative actions (Lavie et al., 2010). Smith and Tushman (2005) thus noted that the senior team’s abilities to develop accurate cognitive representations of the opposing activities and engage in paradoxical thinking are vital for effectively managing exploitation and exploration. Extending this view, Lubatkin et al., (2006) describes “behavioral integration” – the synchronization of the senior team’s social and task processes – as an important precursor of ambidexterity. More specifically, the authors argue that the “level of behavioral integration directly influences how its members deal with the contradictory knowledge processes that underpin the attainment of an exploitative and exploratory orientation, such that greater integration enhances the likelihood of jointly pursuing both” (Lubatkin et al., 2006: 647). Moreover, Jansen et al., (2009) empirically show that senior team social integration and contingency rewards are enablers for ambidexterity.

While these studies focused on TMT processes, Beckman (2006) shows that the founding team composition – in particular, members’ prior company affiliations – is an important antecedent of ambidexterity. Firms whose founding teams had both diverse and common prior
company affiliations demonstrated a higher degree of ambidexterity. Several authors argue that heterogeneous senior management teams may be better equipped to attend to the contradictions associated with exploration and exploitation (Boeker, 1997; Virany, Tushman, & Romanelli, 1992). Carmeli and Halevi (2009) found empirical evidence that TMT behavioral complexity is positively related to ambidexterity. Finally, Cao et al., (2010) show that the CEO’s network extensiveness (i.e., a system of relationships CEOs have inside and outside their organizations) positively impacts ambidexterity, particularly when the CEO-TMT interactional interface enables the TMT to process disparate information.

Despite these rich foundations, ambidexterity scholars have repeatedly criticized the limited explanatory power of studies assessing TMT characteristics at a given point in time (Raisch & Birkinshaw, 2008; Simsek, 2009). Ambidexterity has been described as a ‘dynamic capability’ (O’Reilly & Tushman, 2008) that depends on the senior team’s ability to repeatedly and intentionally orchestrate firm assets. It is thus important to investigate how changes to the senior team’s composition and processes affect ambidexterity. Further, scholars have encouraged studies to investigate how interrelated CEO-TMT effects relate to ambidexterity (Cao et al., 2010). In this study, we investigate the dynamic interrelations between CEO tenure, TMT change, and ambidexterity. We draw upon theoretical arguments from the upper echelons literature on CEO tenure dynamics, which provide rich insights on the temporal dynamics of CEO behaviors over different tenure phases and their interrelations to TMT changes.

**CEO Tenure and Organizational Ambidexterity**

A central argument of studies on the dynamics of CEO tenure is the notion of an ‘executive life cycle’ (Hambrick & Fukutomi, 1991), which implies that CEOs vary in their patterns of
behavior and strategic choices throughout different tenure phases. In the early stages of tenure, new CEOs operate with limited repertoires, since their understanding of how the environment functions and how the company should be run are still incomplete (Miller, 2001). As a result, new CEOs strive to learn about their teams, firms, markets, and environments, a process that can be expected to go hand in hand with exploration (Hambrick & Fukotomi, 1991). For example, Miller and Shamsie (2001) showed, in a longitudinal study of the movie industry, that studio chiefs were experimenting with their product lines in their early tenures to learn about their jobs. Consistent with this logic, researchers also found evidence that related proxy variables such as R&D spending (Barker & Mueller, 2002) and firm invention (Wu, Levitas, & Priem, 2005) are greater at firms with short-tenured CEOs if compared to those with long-tenured CEOs. It is understood that CEO behavior varies across different contingencies such as CEO origin, CEO predecessor retained as chairman (Quigley & Hambrick, 2012), but we can expect that new CEOs generally tend to engage in increased exploration activities.

If short-tenured CEOs tend to prioritize explorative activities, one can expect that they engage less in exploitative activities during the same period. The reason is that exploitation and exploration rely upon learning activities that are located at two ends of a continuum (Levinthal & March, 1993), which makes it difficult for individuals to engage in extensive exploitation and exploration at the same time (Gupta et al., 2006: 695). This view also derives support from Ocasio’s (1997) work, which shows that executives’ attentional orientation serves to filter and distort the abundant information in strategic decision-making processes. For example, a CEO with an attentional orientation towards exploration would scan the firm’s environment for exploratory opportunities, focus on comprehending and making sense of explorative demands, and foster the generation of exploratory initiatives. Following Ocasio’s (1997) theory, such a
CEO would be heavily limited in his or her ability to simultaneously dedicate attention to exploitation activities. We thus argue that short-tenured CEOs tend to prioritize exploratory activities, while paying less attention to exploitative activities.

Conversely, with increasing tenure, CEOs tend to select and retain a set of strategies that define how their firm should be configured (Miller, 2001). Tenure can be equated with the validation of the CEO’s past strategic approach, which in turn prevents him or her from experimenting with other ways of doing things (Prahalad & Bettis, 1986). Consequently, in the later stages of their tenure, CEOs are likely to draw strongly upon past experiences (Hambrick & Fukutomi, 1991), which can be related to exploitative activities. As exploitation often leads to early success (Levinthal & March, 1993), the exploitation activities are further reinforced, which leads to an increasing path dependency on exploitation and restricts the search for new competencies (Lavie & Rosenkopf, 2006; Lavie et al., 2010).

Empirical studies provide supportive evidence for these theoretical arguments. For example, Miller and Shamsie (2001) found that movie industry executives with increasing tenure progressively shift their focus towards a set of proven managerial routines. Their growing knowledge and security renders them less pressed to learn by experimenting, but rather to resort to increasing exploitation (Levitt & March, 1988). Long-tenured CEOs thus tend to become complacent and no longer follow market trends; they stick to an obsolete formula and apply it well beyond its utility, which adversely affects firm performance. They get more internally focused, which facilitates exploitation while driving out exploration (Hambrick, Finkelstein, & Mooney, 2005; O’Reilly & Tushman, 2008). Consistent with these arguments, Barker and Mueller (2002) found that R&D spending decreases with CEO tenure and Wu et al., (2005)
found a curvilinear relationship between CEO tenure and firm invention. We thus assume that long-tenured CEOs generally prioritize exploitative over exploratory activities.

Since ambidexterity requires simultaneous exploration and exploitation (Gupta et al., 2006; He & Wong, 2004), neither retaining long-tenured CEOs – which can lead to downward spirals caused by one-sided exploitation (Hambrick & Fukutomi, 1991) – nor frequently replacing them – which implies the risk of getting caught in unrewarding exploration cycles (Volberda & Lewin, 2003) – can be expected to lead to ambidexterity. However, these developments are likely to be continuous (Miller, 2001): exploration gradually decreases, while exploitation gradually increases with CEO tenure. We thus expect that intermediate CEO tenure is related to the strongest orientation towards organizational ambidexterity.

Hypothesis 1: CEO tenure has an inverted U-shaped relationship to organizational ambidexterity.

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While the curvilinear CEO tenure-ambidexterity relationship highlights the central role of the CEO, it may be an incomplete representation of how he or she affects ambidexterity. Upper echelons scholars have stressed the added value of extending the focus to the TMT when exploring the dynamics of CEO tenure (e.g., Shen & Cannella, 2002). For example, Tushman and Rosenkopf (1996) argue that TMT changes have “more profound effects on organization outcomes than simple CEO succession” (1996: 950). Williams and O’Reilly (1998: 99) noted that “once turnover does occur, the heterogeneity of the group will, by definition, change.” Since TMT characteristics were found to affect ambidexterity (e.g., Beckman, 2006), we can expect that changes to TMT composition may as well play an important role for ambidexterity. In this section, we thus introduce TMT change as a moderator of the CEO tenure-ambidexterity
relationship. We argue that the timing of TMT change in relationship to the CEO’s tenure is critical for ambidexterity.

Prior research on CEO tenure dynamics and the related literature on CEO succession claim that TMT changes often occur in close alignment with CEO changes. If new CEOs take office, they are likely to make immediate changes to the TMT composition to clear “executive deadwood” and facilitate strategic reorientation (Kesner & Dalton, 1994). The need for TMT changes may be explained by the fact that CEO changes by themselves fail to introduce sufficient new experience and knowledge to radically alter established understandings and entrenched activity patterns, and power positions (Shen & Cannella, 2002; Virany et al., 1992, Wiersema & Bantel, 1993). For example, Ancona and Chong (1996: 276) argue for a combined CEO and TMT change, suggesting that only if the “clocks at both levels are reset to zero at once,” this provides a powerful mechanism to drive radical strategic change.

As argued above, CEOs may exhibit high levels of exploration and low levels of exploitation in their early stages of tenure. TMT changes in these early stages can be expected to further reinforce the CEO’s inclination towards exploration. The newly appointed members reduce the team’s average tenure, which has been related to increased experimentation and exploration activities (Miller & Shamsie, 2001). Furthermore, TMT change increases the heterogeneity of the senior team’s experiences (Williams & O’Reilly, 1998). Such heterogeneity can create task conflicts that force senior team members to share more varied information (Jehn, Chadwick, & Thatcher, 1997) and engage in greater experimentation (Grinyer & McKiernan, 1990). Finally, the disruptive effects of TMT change are likely to encourage the executive team to challenge established routines and experiment with novel approaches (Lavie et al., 2010). From an ambidexterity perspective, TMT change in the early stages of CEO tenure may thus lead
to a one-sided orientation of both the CEO and the TMT towards exploration, which negatively affects ambidexterity.

Conversely, refraining from discretionary TMT changes – those that the CEO can influence - in the early stages of CEO tenure may have positive effects on ambidexterity. Maintaining stability in TMT composition increases the TMT’s average tenure. Long-tenured TMTs have accumulated firm-specific human capital and develop common sets of experiences, similar attitudes, and shared problem-solving behaviors (Allen & Cohen, 1969). In other words, TMTs that continue with relatively few changes – some may be unavoidable due to causes of force majeure such as death or criminal charges – tend to develop organizational routines that they use to identify, frame and make convergent types of strategic decisions (Prahalad & Bettis, 1986). Routines are self-reinforcing (March & Simon, 1958), they give rise to a “dominant logic” (Prahalad & Bettis, 1986: 485) the longer the TMT members have worked together. Ambidexterity scholars have related the emergence of such organizational routines to exploitative activities (Baum, Li & Usher, 2000). Since exploitation tends to drive out exploration (Levinthal & March, 1993), TMT members who opt for proven responses to environmental changes refrain from exploring new capabilities.

From an ambidexterity lens, the combination of a new CEO with a long-tenured TMT should thus allow for balancing exploration and exploitation “across domains” (Gupta et al., 2006). Short-tenured CEOs with a natural tendency towards exploration are paired with long-tenured TMTs with an inclination towards exploitation. However, balancing across these competing activities entails the inherent risk that the CEO and the TMT may not know how to coordinate the activities and manage the task-oriented conflict induced by such an arrangement of roles and responsibilities. In our study, we follow Smith and Tushman’s (2005) previous work.
suggesting that “team design” reflected in features such as “distinct roles, goals and rewards” is a
decisive antecedent in shaping the CEO and TMT’s ability to engage in paradoxical cognitive
processes and manage strategic contradictions. Accordingly, it is precisely the mismatch of their
tenure that gives rise to cognitive frames and processes that allow both the CEO and the TMT to
effectively handle potential tensions (Smith & Lewis, 2011). We therefore argue that low levels
of TMT change in the early stages of CEO tenure positively affect ambidexterity.

If a CEO refrains from discretionary TMT change, his or her organization eventually
reaches a stage characterized by the simultaneous presence of a long-tenured CEO and a long-
tenured TMT. As argued above, long-tenured CEOs face the increasing risk of getting overly
committed to increasingly outdated paradigms (Miller & Shamsie, 2001), and long-tenured
TMTs tend to exhibit a greater commitment to the status quo and the culture and norms of the
organization (Bantel & Jackson, 1989). Consequently, the combined presence of a long-tenured
CEO and TMT has the potential to decrease task-oriented conflict and the related exploratory
activities. As the orientation at both levels is directed towards exploitation, which can be
expected to mutually reinforce one another, the attentional orientation to exploration vanishes.
Refraining from discretionary TMT changes in the advanced stages of CEO tenure may thus
negatively affect ambidexterity.

Conversely, TMT change in the advanced stages of CEO tenure can prompt TMT members
to consider fresh insights and discuss alternative solutions (Amason & Sapienza, 1997).
Furthermore, new TMT members increase tenure heterogeneity, which has been related to
frictions and relational conflicts that push the TMT towards greater risk-taking and
experimentation (Hambrick et al., 1996). TMT change contributes new skills and shakes up
engrained group processes, which may shift previous TMT attentional orientations toward new
ones. For example, Cho and Hambrick (2006) have shown in the context of airline deregulation how firms that changed their TMT composition – notably their TMT industry tenure – have experienced a shift in managerial attention toward an entrepreneurial orientation (relative to an engineering orientation), which generally goes hand in hand with exploration activities.

From an ambidexterity perspective, we thus expect that new TMT members, who drive the TMT towards greater exploration, challenge or revitalize long-tenured CEOs whose natural inclination is towards exploitation. The tenure mismatch between the CEO and the TMT leads to contradictory orientations and task-related conflicts, which are essential for stimulating ambidextrous behavior (Smith & Lewis, 2011). We know from Arrow and McGrath’s (1995) work on group dynamics that the more past continuity teams have experienced, the stronger the immediate effects of changes to team composition. We thus argue that opposed to what we had argued above for the early stages, TMT changes in the later stages of CEO tenure positively affect ambidexterity.

Hypothesis 2: TMT change moderates the CEO tenure-ambidexterity relationship in such a way that TMT change combined with short-tenured CEOs decreases ambidexterity, while TMT change combined with long-tenured CEOs increases ambidexterity.

**Research Methodology**

**Research Setting and Data Collection**

To test our hypotheses, we composed a sample of insurance firms from the Stoxx Europe TMI Finance Index for the period from 2000 to 2011. Due to the considerable industry dynamics during our observation period (e.g., two global financial and economic crises and subsequent rebounds; important regulatory changes), firms in this industry had to both exploit their incumbent business and explore future growth platforms. The European financial services
industry is thus a suitable context for our study. In addition, a single industry study allows us to ensure comparability among firms (Klarner & Raisch, 2013).

In total, there were 68 financial services companies in the Stoxx Europe TMI Finance Index. While 47 of these companies made up the index in 2000, the remaining 21 companies were added to the index between 2000 and 2011. During our analysis period, the financial services industry has experienced multiple mergers and acquisitions, as well as several delistings. To account for these changes, we constructed a detailed list indicating the “family tree” of each of the firms in our sample for the time period between 2000 and 2011. Due to insufficient data availability (e.g., unavailability of annual reports or missing values in databases), we had to discard 12 firms, leading to a final sample of 56 firms and 392 firm-year observations. The number of firm-year observations was reduced due to missing values resulting from mergers, acquisitions, and delistings. Since we included several lagged variables, we traced all firms back to 2000.

We used different sources to collect our data. First, we used content analysis of press releases on corporate websites to collect data on firm ambidexterity. Second, data on the CEO and TMT members was obtained by studying the TMT composition of each firm and year using annual reports. Third, firm-level controls were obtained through the Thomson Analytics and Capital IQ databases.

**Dependent Variable**

We operationalized exploration and exploitation in accordance with Uotila, Maula, Keil, and Zahra (2009) by quantifying the yearly relative amount of a firm’s exploitative orientation

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2 The final sample is comprised of 115 insurers and banks and data collection effort is completed. We report findings for a subsample of 30 firms and 181 firm-year observations in this version of the paper and plan to finish our analysis by the end of January 2015.
and explorative orientation. We collected textual data in form of press releases available on the corporate websites (Duriau, Reger, & Ndofor, 2000). Each document was analyzed according to the wordlist provided by March (1991). Organizational ambidexterity is operationalized as the interaction between exploration and exploitation (Gibson & Birkinshaw, 2004; He & Wong, 2004). We measure a firm’s ambidexterity in year t as the interaction of exploration i,t and exploitation i,t. This measure is calculated by the arithmetic average of all the exploration-exploitation interactions for the focal (t) period, taking a minimum value of 0 (for firms that have a one-sided focus on either exploration or exploitation) and a maximum of .25 (for firms that show maximum values of both exploration and exploitation).

**Independent Variables**

*CEO tenure* refers to the total number of years a specific individual had held the CEO position within a company (Shen & Canella, 2002). *TMT change* was measured for all individuals that reported directly to the CEO (Tushman & Rosenkopf, 1996). For each year and firm, we used annual reports to identify all the executives who were not on the team in the previous year (the entering executives), and the executives who were listed in the previous year, but not in the current year (the exiting executives). TMT change was measured as the number of entering and exiting executives in a given year. We mean centered CEO tenure and TMT change prior to testing interaction effects to avoid potential multicollinearity (Wu et al., 2005).

**Control Variables**

We included five general classes of control variables to mitigate potential misinterpretations of our findings: Firm performance (Return on Equity), top management team size (measured by counting all top management team members in a given year), firm age (years since founding),
and prior firm ambidexterity. We also controlled for firm size (logarithm of the number of employees) but had to drop this variable due to multicollinearity concerns. We lagged all independent and control variables by one year to avoid simultaneity bias (Weng & Lin, forthcoming).

**Data Analysis**

Since our dataset consists of multiple observations for each firm, we tested our hypotheses using panel data analysis. A Wooldridge test (Wooldridge, 2010) revealed autocorrelation in our data ($p<0.001$). In addition, following Greene (2000), we had to reject the null hypothesis of homoscedasticity ($p<0.001$). We therefore used Prais-Winston regression with a panel-specific autoregressive disturbance structure (the “xtpcse” command in STATA 11), specifying that there is first-order autocorrelation and that the coefficient of the AR(1) process is specific to each panel (“psar1” option) (Marquis & Huang, 2009). We also chose the “pairwise” option in STATA, which includes all available observations with non-missing pairs (StataCorp, 2009).

A possible concern with our analysis and findings is endogeneity, since CEO tenure – the independent variable – may correlate with unobservable factors in the error term (Wooldridge, 2010). In order to address this concern, we tested a two-stage instrumental variable model (2SLS) using the “xtivreg2” command in STATA. We used CEO origin, CEO duality, and mean CEO tenure in the industry as instrumental variables and designated CEO tenure as endogenous variable. Prior research has found that CEO origin relates to CEO tenure (Karaevli, 2007; Zhang, 2008). In addition, CEO duality can influence the tenure of a CEO (Goyal & Park, 2002; Quigley & Hambrick, 2012). Finally, a firm’s decision to maintain or replace the CEO may be influenced by competitors’ tendency to keep their CEOs in office or replace them (Karaevli & Zajac, 2013;
Zhang & Rajagopalan, 2003). Results from the 2SLS model indicated the consistency of OLS ($p = 0.4546$).

We also tested each model for potential multicollinearity by calculating the variance inflation factors (VIF). VIFs ranged between 1.23 and 7.04, which was below the suggested cutoff value and thus not problematic (Neter, Wasserman, & Kutner, 1985).

**RESULTS**

Table 1 presents the descriptive statistics and the correlation matrix. First, we examined Hypothesis 1 regarding the proposed inverted U-shaped relationship between CEO tenure and organizational ambidexterity. Two models were estimated, as shown in Table 2. Model 1 included only the control variables and the main effects, and model 2 also included the squared CEO tenure term. Both models were significant. The results in model 2 support Hypothesis 1 since the coefficient of CEO tenure is positive and significant ($b = 0.0018$, $p < 0.05$) and the coefficient of CEO tenure squared is negative and significant ($b = -0.0001$, $p < 0.01$).

In Hypothesis 2, we argued that top management team change would moderate the curvilinear relationship between CEO tenure and organizational ambidexterity. Model 3 in Table 2 included the control variables, main effects, CEO tenure squared, and the interaction of CEO tenure and TMT change. Model 4 included all these terms, as well as the interaction term of CEO tenure squared and TMT change. Both models were significant. The coefficient of the interaction of CEO tenure squared and TMT change is positive and significant ($b = 0.0001$, $p < 0.10$) in model 4, thus supporting Hypothesis 2.
DISCUSSION

In this study, we revisited the emerging research stream on the role of senior management in attending to contradictory demands of exploration and exploitation (e.g., Cao et al., 2010; Lubatkin et al., 2006; Smith & Tushman, 2005). Contrary to prior studies, our emphasis was on the dynamics of the senior management-ambidexterity relationship. In essence, we investigated how TMT changes at different stages of CEO tenure contribute to or hinder ambidexterity. We find that the CEO tenure-organizational ambidexterity relationship is a dynamic one with TMT change having varying effects on ambidexterity at different stages of CEO tenure. Drawing upon these findings, we continue to discuss our paper’s contributions to the ambidexterity literature, as well as its managerial implications, limitations, and avenues for future research.

Managing Ambidexterity: A Dynamic Perspective

Prior research has stressed the importance of TMT characteristics and processes for organizational ambidexterity (e.g., Beckman, 2006; Lubatkin et al., 2006). In a recent review of the ambidexterity literature, Lavie et al., (2010) criticize the static character of previous studies and argue that shifting our research focus from the rather static notion of balance towards the process of balancing over time could generate important new insights. In this paper, we respond to this call for further research by providing a dynamic perspective of how senior team dynamics relate to ambidexterity. This novel perspective allows us to derive several insights on the dynamics of managing ambidexterity within the corporate team.
First, our results contribute a new dimension to ambidexterity research, revealing the thus far neglected role that the *timing of TMT change* can play in successfully managing exploration-exploitation tensions. Following executive life cycle theory arguments (Hambrick & Fukotomi, 1991; Miller, 2001), we show that ambidexterity varies with CEO tenure and that TMT change critically affects this relationship. While we provide further evidence that long-tenured CEOs generally face the increasing risk of growing “stale in the saddle” (Miller, 1991), which may cause organizations to get caught in a “success trap” that exacerbates exploitation at the cost of exploration (Levinthal & March, 1993), we also reveal that the appropriate timing of deliberate TMT changes may be an important means to break these downward spirals and allow organizations to foster and sustain ambidexterity. Future research can build upon these foundations to explore how different paces, frequencies, and rhythms of change (Klarner & Raisch, 2013) across different organizational levels and dimensions affect ambidexterity.

Second, prior ambidexterity studies increasingly argue that successful organizations do not just strive for balancing exploration and exploitation, but also dynamically shift their relative attention between these poles (Boumgarden, Nickerson, & Zenger, 2012; Lavie et al., 2010). The gradual adaptations allow organizations to ensure continued alignment with changing environmental conditions (Siggelkow, 2002; Simsek, Heavy, Veiga, & Souder, 2009). While prior studies describe such adaptations, they did not explore the drivers and capabilities that enable organizations to enact these shifts in their exploration-exploitation balance (Raisch, Birkinshaw, Probst, & Tushman, 2009). In our study, we show that TMT change is one potential driver for organizations to foster “adaptation capabilities” (Smith & Tushman, 2005). Future research could build upon our findings to explore whether and how organizations can intentionally and strategically time their TMT changes to shift their exploration-exploitation
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balance. Such modification routines (Adler, Goldoftas, & Levine, 1999) support firms’ adaptation to environmental change and could enable them to sustain ambidexterity over time.

Finally, we present an alternative, more positive ambidexterity perspective of CEO tenure. While upper echelons scholars traditionally accentuate the negative effects of CEO tenure such as increasing path dependencies and reduced behavioral repertoires (Hambrick & Fukutomi, 1991; Miller, 1990), we argue that CEOs accumulate valuable organizational knowledge over time. If combined with deliberate TMT changes, which introduce new knowledge for exploration and challenge the status quo, long-tenured CEO’s accumulated organizational knowledge represents the complement that ensures simultaneous exploitation.

Our theoretical arguments are contingent upon the quality and richness of exchanges between the CEO and his or her senior management team. Future research should explore how the CEO-TMT interactional interface (Cao et al., 2010), which includes communication richness (Smith et al., 1994), functional complementarity (Taylor & Greve, 2006) and power decentralization (Finkelstein, 1992), enables the executive team to consider the different knowledge bases when addressing exploration-exploitation tensions.

Managing Ambidexterity: A Multi-Level Perspective

With the notable exception of Cao et al. (2011), prior ambidexterity research has considered the TMT as a unit of analysis (Lubatkin et al., 2006). Scholars criticized this approach since it does not allow for more fine-grained analysis of the interrelated effects of the CEO and other TMT members on ambidexterity (Cao et al., 2001; Raisch et al., 2009). In this paper, we contribute to the emerging multi-level perspective to managing ambidexterity at the
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corporate level by providing several new insights into the dynamics of the CEO-TMT interrelations.

First, we show that CEO and TMT changes are interrelated and reveal how changes to these two distinct types of actors have to be orchestrated to enable ambidexterity. While our findings indicate that CEOs by themselves may be able to temporarily hold the exploitation-exploration tension in mid-tenure, they also show that CEOs must rely upon the TMT’s support to sustain ambidexterity over time. These insights confirm prior arguments that exploitation and exploration are difficult to reconcile “within a single domain” (Gupta et al., 2006: 697) and illustrate how these tensions may be resolved across domains (Raisch & Birkinshaw, 2008). This requires future work to adopt a contingency perspective when exploring TMT characteristics and processes, since their outcomes may vary dependent on the CEO’s background, behaviors, and cognitions.

Second, an emergent perspective in recent ambidexterity research suggests domain separation as an alternative means to address exploration-exploitation tensions (Lavie & Rosenkopf, 2006; Lavie et al., 2010). While this line of work has so far been limited to inter-organizational domains, we provide theoretical arguments and empirical evidence for its usefulness in a top management team context. Domain separation in this context means that the CEO and his or her senior team take different roles with regard to exploration and exploitation at different stages of CEO tenure. Integration across domains is ensured through collaborative behavior and joint decision-making within the senior team. By separating and investigating the distinctive roles of the CEO and the senior management team, we are able to propose an alternative approach to balancing exploration and exploitation at the corporate level. Future
research should take a micro-level approach to explore the differentiation and integration processes at the CEO-TMT interactional interface.

Finally, our work has more general implications for the upper echelons theory. We contribute a novel ambidexterity perspective to the executive succession literature (e.g., Finkelstein & Hambrick, 1990; Karaevli, 2007; Tushman & Rosenkopf, 1996). A core argument in this literature is that CEO change drives first-order learning, but concurrent and extensive TMT change is required to realize more fundamental, second-order learning (Dalton & Keener, 1985; Virany et al., 1992). Consequently, upper echelons scholars suggest that firms tend to align CEO change with discretionary TMT change (Shen & Cannella, 2002). While this solution may be appropriate for extensive exploration, the ambidexterity literature warns firms against overly focusing on one-sided exploration (Gupta et al., 2006; Levinthal & March, 1993). More importantly, the ambidexterity literature found strong empirical evidence that firms that balance exploration and exploitation generally outperform those with a one-sided alignment in the long run (for an overview, see Junni, Sarala, Taras, & Tarba, 2013). Firms that strive for ambidexterity may benefit less from aligning CEO change and TMT change. Such alignment may even be harmful since it implies the risk of reinforcing a one-sided orientation. In this paper, we lay the foundations for an alternative perspective of executive succession, which accentuates the benefits of decoupling CEO and TMT change to foster the senior team’s ability to deal with the contradictory demands of exploration and exploitation.

Practical Implications
The results of our study have particularly important implications for top managers that attempt to achieve ambidexterity within their organizations. “staying agile in the saddle” is particularly challenging for CEOs since it forces them to address multiple challenges simultaneously: First, they need to host and harmonize the conflicting requirements of exploration and exploitation within their senior management teams. Second, they need to withstand the temptations of falling into the trap of increasing alignment with one or the other objective in different stages of their tenure. Finally, they need to identify “early warning signs” that signal that “the time for a course correction has come” (Probst & Raisch, 2005: 100), which allows them to strategically time their discretionary TMT changes to maintain ambidexterity.

Since this is a quite demanding set of expectations towards CEOs, we suggest that boards of directors play a more active and supportive role in managing CEO and TMT changes. This includes boards’ development of a long-term succession plan for TMT members in addition to the CEO. A promising alternative to systematically replacing CEOs at intermediate tenures (Fama, 1980) may be to only renew experienced CEOs’ contracts under the condition of refreshing their senior management teams. The board of directors could even play an active role in suggesting candidates that ensure increasing diversity in experience (Zhang, 2008). Similarly, boards of directors could advice newly appointed CEOs – particularly if they have been recruited from outside the firm – to retain some of the previous top management team’s members. This would ensure adequate tenure diversity right from the start and should allow the TMT to immediately engage in exploitative activities alongside the exploratory activities.

Limitations and Future Research
As most empirical studies, our research has its limitations. First, our findings are preliminary and rely upon a first data analysis effort based on a subsample of 30 firms. We plan to complete our data collection in the spring of 2014 and to present findings for the full sample during the AoM Meetings in August 2014. At that point, we also plan to complement our preliminary analyses with additional robustness checks and post-how analyses to ensure the validity and reliability of our findings.

Second, reliance on a single industry implies that the findings cannot be simply generalized to other industry settings. For example, industry characteristics may effect whether and to what extent different TMT characteristics and processes matter for organizational ambidexterity (Lavie et al., 2010). Furthermore, ambidexterity may not be equally beneficial to firms across industries (Junni et al., 2013; Simsek et al., 2009). Future research should thus test the concept of interrelated CEO and TMT changes in a broader set of industries.

Third, future research might also examine how CEOs, TMTs, and boards of directors can implement and sustain organizational ambidexterity through the strategic timing of CEO and TMT changes. While we introduced the concept of “staying agile in the saddle” and provided evidence of its importance, our discussion of potential solutions to implement it within organizations is limited. It remains to be explored how senior managers and directors may accomplish it. We provided first ideas and pointed towards potentially promising avenues for future research.

**CONCLUSION**

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Prior research on the TMT-ambidexterity relationship has primarily described how the current state of the TMT affects ambidexterity, but did not capture how changes to the TMT alter ambidexterity over time. This study explores how TMT changes at different stages of CEO tenure contribute to or hinder ambidexterity. Our findings show that the CEO tenure-organizational ambidexterity relationship is a dynamic one with TMT changes distinctively affecting ambidexterity along the different stages of CEO tenure. Owing to the evidence that ambidextrous organizations outperform others in the long run, as well as the crucial role played by senior managers in this strategic endeavor, the analysis of how interrelated CEO and TMT changes influence ambidexterity is particularly relevant. We hope that our findings pave the way for future studies in this field towards a more dynamic conception of organizational ambidexterity and its antecedents.
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REFERENCES


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### TABLE 1
**Descriptive Statistics and Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
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<th>Max</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>1 Firm ambidexterity</td>
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<td>-0.11**</td>
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<td></td>
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<td>4 ROE</td>
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<td>5 TMT size</td>
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<td>2.98</td>
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<td>6 Firm age</td>
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<td>61.40</td>
<td>5.00</td>
<td>187.00</td>
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<td>0.32***</td>
<td>-0.03</td>
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</table>

+ $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$
## TABLE 2
CEO Tenure, TMT Turnover, and Firm Ambidexterity

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<td>0.0017*</td>
<td>0.0019**</td>
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<td></td>
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<td>(0.00)</td>
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<td>(0.00)</td>
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<td>(0.01)</td>
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<td>(0.00)</td>
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<tr>
<td>Firm age</td>
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<td>-0.0000</td>
<td>-0.0001</td>
<td>-0.0000</td>
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<td>(0.00)</td>
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<td>84.77***</td>
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</table>

Standard errors in parentheses; two-tailed for all variables.

+p < .10     * p < .05     ** p < .01     *** p < .001