

Marketing Executives' Turnover and Firm Performance

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Abstract

This research takes a disruption-adaptation perspective to understand influence of marketing executives' turnover (MET) on firm performance. The authors draw on marketing (and sales) executive exits at U.S. public firms between 2004 and 2016. MET measures presence (or absence) of annual turnover of one or more executives, accounting for changes (due to exits) to marketing organization's formal representation in the top management. We show that MET hurts firm performance as it disrupts functioning of customer-facing marketing positions that hurts buyer-supplier relationships. Building on Hancock et al.'s (2013) meta-analysis of some 25,000 turnovers, we find that MET's association with firm performance is worsened in firm-level environments characterized by demotions (indicating disagreements between management and executives), and voluntary peer exits (indicating low motivation and self-efficacy). However, MET's disruptive influence on firm performance is attenuated in firms with greater degree of executive transience (indicating premium on stability in systems burdened by executive histories of job-hopping behavior), and debt to assets ratio (indicating disciplining mechanism that signals firm's quality during periods of change such as mergers, takeovers and bankruptcies).

Keywords: marketing executives' turnover, firm performance, disruption, adaptation, dynamic panel

Statement of Intended Contribution

Our research conceptualizes marketing executives' turnover (MET), and tests its influence on firm performance. As we account for exits of top marketing (and sales) executives, we study turnovers in CMO as well as non-CMO roles (e.g., CMO, VP Sales and Marketing, VP Marketing, VP Sales, Director-level positions etc.). We leverage Schepker et al.'s (2017) disruption-adaptation tradeoff to understand how MET throws into disarray buyer-supplier relationships and hurts firm performance. We rely on Hancock et al.'s (2013) meta-analysis to explore firm-level factors that either strengthen (demotions, voluntary nature of turnover), or weaken (time it takes to turnover, executive transience, and firm's debt to assets ratio) MET's impact on firm performance. Relying on Arellano and Bond's (1991) dynamic panel method, we test our theory on an unbalanced panel of 66,408 firm-year observations stretching from 2004 to 2016, involving 4,457 executive exits disclosed by 15,189 U.S. public firms to the SEC. Though marketing literature has delved into questions related to top-level managerial succession (Boyd, Chandy and Cunha 2010 etc.), just one work (Nath and Mahajan 2017) has studied turnover at the top – focusing only on the antecedents of CMO turnover. Moreover, while marketing research has studied salesperson turnover, turnover of top management sales executives has been ignored. This research bridges the gap by subsuming sales-related positions as part of the marketing function. Our work should be of value to for-profit firms since our analysis is a more realistic tracking of actual events - turnover of both CMO and non-CMO marketing executives. Our findings suggest that these top marketing and sales executives are not mere peripheral players, and that their turnover indicates changes to marketing organization's formal representation in the top management. By disregarding firm-level consequences of marketing executives' turnover, marketing practitioners and researchers may have ignored firm performance implications of such significant occurrences.

Main Text

It is widely accepted that voluntary or involuntary departure of personnel, also known as employee turnover, is a problem common to most firms (e.g., Hom et al. 2017; Sunder et al. 2017). This problem is specifically acute in both marketing *and* sales (hereafter, generically, referred to as marketing). Executive search firms such as Spencer Stuart state that CMO's turnover – known to occur more rapidly than CEO's turnover – impacts customer relationships and contributes significantly to firm instability (e.g., Nath and Mahajan 2017). Somewhat relatedly, extant literature has discovered that marketing employee departure specific challenges also abound at the lower level - salesperson turnover has been found to have negative implications for U.S. firms that annually spend \$815 billion on sales incentives and training (e.g., Zoltners, Sinha, and Lorimer 2008). In particular, annual turnover in the firm's top marketing (and sales) organization—or *marketing executives' turnover* (MET)—presents many challenges for firm performance as it hurts firm's buyer-supplier relationships and demand-supply integration due to loss of firm-specific human capital and knowledge (Greiner, Cummings, and Bhambri 2003). As an annual turnover of one or more executives, MET indicates changes (due to exits) to marketing organization's formal representation in the top management. MET weakens top management's relationships with customers as it encompasses exits of marketing organization's top personnel that include marketing's management team disclosed by U.S. public firms to the Securities and Exchange Commission (SEC). Weak relationships trigger a mismatch between what customers want and what the firm chooses to make available in the marketplace (Esper et al. 2010). Examples of such turnovers include not just CMO, but also non-CMO executives: VP Sales and Marketing, VP Marketing, VP Sales, and Director-level positions etc. Even as marketing practitioners and researchers attempt to understand relationship between turnovers and instability or value creation for customers, it appears that marketing (and sales) executive's annual departures and the resultant firm performance consequences continue to

remain a unique but unexplained challenge for most firms (e.g., Aronowitz, Smet, and McGinty 2015; Ji, Guthrie and Messersmith 2014). Presence of multiple top marketing functionaries, as discussed above, alongside a firm's CMO makes the question of MET all the more pertinent.

In fact, marketing and sales related turnovers have been explored separately in marketing literature. On the one hand, poor performance has been found to be an antecedent of CMO turnover (e.g., Nath and Mahajan 2017); on the other hand, it has been theorized that salesperson turnover weakens customer acquisition and retention (e.g., Sunder et al 2017). Yet, to the best of our knowledge, there has been no research on how turnover of marketing (and sales) executives (MET) impacts firm's performance. This is surprising since turnover in general and CEO-level turnover's impact on firm performance has been explored quite extensively in literature (see Giambatista, Rowe and Riaz 2005; Hancock et al. 2013; Hom et al. 2017; Kesner and Sebor 1994; Nath and Mahajan 2017 for details). For instance, research has shown that CEO turnover is disruptive for productivity and financial performance (e.g., Hausknecht, Trevor, and Howard 2009; Heavey, Holwerda and Hausknecht 2013; Hom et al 2017; Park and Shaw 2013; Shaw, Gupta, and Delery 2005). Furthermore, while most studies have explored individual-level turnovers (e.g., Abe 1997; Cao, Maruping and Takeuchi 2006; Nath and Mahajan 2017; Park and Shaw 2013), only a handful have focused on collective, firm- or unit-level changes, such as, executive team departures (e.g., Heavey, Holwerda and Hausknecht 2013), and still fewer have examined the firm performance consequences of top management turnovers (for details see Messersmith et al 2013). In an age when firms are perpetually struggling with customer acquisition and retention, even the literature focused on executive team departures has seen no progress towards understanding firm performance consequences of marketing executives' turnover despite its outsized impact on buyer-supplier relationships and demand-supply integration.

However, it is worthwhile to note that though association between marketing executives' turnover and firm performance has stayed unexplained, marketing research has explored related questions at the (lower) level of salesperson turnover. Researchers have studied - salesperson demographic characteristics and job attitudes to turnover (Lucas et al 1987); long-run profit impact of salesforce turnover (Darmon 1990); sales rep transitions (Shi et al 2017), among others. Some studies in marketing literature have looked at the impact of turnover on firm performance, but this sub-stream of research has been limited to sales rep turnovers (e.g., Richardson 1999; Shi et al 2017). Therefore, given that the question of turnover has been explored from multifaceted perspectives, it is surprising that we still do not know the firm performance consequences of marketing executives' turnover. For select research on (mostly) sales and (some) marketing turnovers see Table 1.

Insert Table 1 about here

Notwithstanding the enthusiasm for top management turnover among both academics and practitioners, extant literature continues to remain unaware of the unique role MET plays in disrupting functioning of customer-facing executive positions related to marketing and sales that hurts buyer-supplier relationships and demand-supply integration (Hult 2011). Such turnover hurts customer focused value creation since it throws in disarray top management's customer knowledge management built on 'shared generation, dissemination, interpretation and application' of customer demand and supply constraints (Esper et al. 2009, p.5). However, until now, any examinations of MET's performance consequences remain unconceptualized. Furthermore, the impact of MET on the marketing organization and the firm as a whole remains empirically untested.

Thus, it remains unclear how a phenomenon that is becoming increasingly prevalent—departure of executives in the top marketing organization—affects the firm. On the one hand, MET could interrupt

smooth customer-related operations and hurt buyer-supplier relationships (Hansen, McDonald and Mitchell 2013) as turnover of top marketing executives disrupts customers' points of contact within the firm. This weakens the internal "voice of the customer" and hampers customer acquisition and retention. Marketers may find that such exits leave in disarray knowledge management and information sharing with customers, and that retaining top marketing executives maintains consistency in marketing actions, strengthens understanding of buyers' needs and improves firm performance. On the other hand, under certain conditions, MET's influence on firm performance may be adaptive as it filters out dysfunctional executives and carves out profitable associations for the firm. For instance, association between such turnovers and firm performance may be less disruptive when the firm is characterized by transience due to executive job hopping behavior.

Therefore, the primary purpose of this paper is to unravel the influence of MET on firm performance. Our secondary goal is to explain whether the aforementioned relationship strengthens or weakens across contexts. Specifically, we lean on Hancock et al.'s (2013) meta-analysis on 24,943 turnovers to identify firm-level moderators. We analyze implications of moderators identified by Hancock et al. (2013), though we adapt (or proxy) these measures to make them firm-level constructs. We separate out Hancock et al.'s (2013) measures into two categories: First, we explore variables that may strengthen the association between MET and firm performance. These include: (a) downward job level changes (changes in hierarchy witnessed through demotions, reflecting marketing executives' disagreements with management), and (b) turnover type (proxied by voluntary nature of turnover). Then, we study variables that could weaken the association between MET and firm performance. These are: (c) time (proxied by number of days it takes to turnover, since at some firm locations turnover may occur sooner); (d) industry (proxied by number of executives with a history of transience, since in some firms/industries executives quit jobs more frequently); and (e) resources (representing organization size;

proxied by firm's debt to assets ratio, as it signals quality from a disciplining mechanism built on access to debt resources normalized for assets).

Our research makes several contributions to theory and practice. *First*, we conceptualize and empirically test marketing executives' turnover (MET). This conceptualization is novel in that it goes beyond just the turnover of CMO - we account for the turnover of top marketing (and sales) executives that may include CMO as well as non-CMO roles (e.g., CMO, VP Sales and Marketing, VP Marketing, VP Sales, Director-level positions etc.). Though marketing literature has delved into questions related to top-level managerial succession (Boyd, Chandy and Cunha 2010; Wang, Saboo and Grewal 2015 etc.), just one work (Nath and Mahajan 2017) has studied turnover at the top – focusing only on the antecedents of CMO turnover. Moreover, while marketing research has studied salesperson turnover, turnover of top management sales executives has been ignored. Our research bridges this gap by subsuming sales-related positions as part of the marketing function.

Second, we are also the first to test the effect of MET, and show how MET throws into disarray buyer-supplier relationships and hurts firm performance measured by its Tobin's q (Chung and Pruitt 1994; Schepker et al. 2017).

Third, along with the introduction of the concept of MET, we also empirically test Schepker et al.'s (2017) disruption-adaptation tradeoff in a marketing context to make sense of debilitating influence of top executives' departures in the marketing organization. However, we also show that under certain conditions marketing executives' turnover could be a blessing. Specifically, we show how firm-level factors serve as contingencies that strengthen or weaken the effect of MET on firm performance. We extend existing marketing literature on turnover that falls short in not only acknowledging its impact on firm performance, but also in explaining the role of firm-level attributes as contingency factors. For

instance, Nath and Mahajan (2017) have only identified drivers of CMO turnover. Our research explores how MET's impact on firm performance is contingent on demotions, voluntary nature of turnover, time it takes to turnover, executive transience, and firm's debt to assets ratio. Some early studies in marketing (e.g., Fisher, Maltz and Jaworski's 1997; Frazier et al 1994; Maltz and Kohli's 1996) explored questions related to overall structural changes. However, the aforementioned contingencies have still not been explored as moderators of the relationship between MET and firm performance.

We rely on Hancock et al.'s (2013) meta-analysis to explore firm-level factors that either strengthen or weaken MET's largely disruptive influence as departure of marketing executives throws into confusion firm's relationships with its customers that impose marketing costs on the firm's performance. The disruptive impact of such turnover worsens in the context of what we term a "demotion climate," influenced by annual number of job changes within an organization that are downward-moving in the hierarchy (see Carson and Carson 2007). Such downward job-level changes could be due to operational reasons or a conflict of interest (e.g., investigation, suspected or determined wrongdoing etc.). Disruption from MET is also magnified by the degree of "ship-jumping" at the focal firm, that is, by the tendency of executives to voluntarily leave the firm (Semadeni et al. 2008). However, there are also conditions that place limits on the disruptive impact of MET. Such turnover may also be accompanied by conditions that weaken negative influence of MET on firm performance, strengthening buyer-supplier engagement and efficiencies in information sharing. *Ceteris paribus*, firms may weaken long-lasting buyer-supplier relationships by housing executives who have been frequently changing jobs, unless the focal-firm improves overall climate by letting them go; therefore, firms with higher executive transience (when a number of executives have a history of job hopping) are likely to see attenuated influence of marketing executives' turnover on firm performance. We also explore how MET's disruptive influence on firm performance may be weaker at organizations with longer average time-to-turnover (i.e.,

organizations may take longer to change an executive according greater stability to buyer-supplier linkages) or greater debt.

Fourth, we test our theory with an unbalanced panel of 66,408 firm-year observations stretching from 2004 to 2016, involving 4,457 executive exits disclosed by 15,189 U.S. public firms to the SEC. Close to 80% of these exits were single executive turnovers per firm-year observation, the rest ranged between 2-6 executive turnovers per firm-year observation. We rely on Arellano and Bond's (1991) dynamic panel method and other robustness checks to analyze our data, finding evidence consistent with our core hypotheses.

Finally, by drawing on a unique dataset of executive changes at U.S. public firms never used before in marketing literature, our academic enquiry bridges the gap with a practitioner perspective in the following ways. First, by studying turnover of not only CMO but also top-level non-CMO marketing (and sales) executives, we map our study in line with actual events in firms. By ignoring top-level non-CMO marketing (and sales) executives, extant research may have neglected firm-level marketing turnover prevalent to most businesses today. Unlike marketing research that has only focused on CMO, the managerial implications of our research are closer to firm reality, and therefore should be intriguing for practitioners. To the best of our knowledge, our research is the first-ever academic confirmation to marketers that CMO is not the only custodian of marketing's seat at the high table, and that a change in formal representation of the broader marketing organization in the top management has consequences for firm performance. Paraphrasing Germann, Ebbes and Grewal (2015), we might now be able to claim that *the marketing executives are not dead!* Our findings suggest that top marketing and sales executives are not mere peripheral players, and that their turnover must be accounted for. By disregarding firm-level consequences of marketing executives' turnover, marketing researchers may have ignored firm performance implications of such significant occurrences. Finally, the takeaway for practitioners is that

marketing organization managers need to strategically consider the impact of MET to minimize damage to firm performance. Our research suggests that this requires a careful balancing act conditional on firm-level disadvantages (demotions and voluntary nature of turnover) and advantages (time to turnover, executive transience, debt to assets ratio).

THEORY AND HYPOTHESES

MET and Firm Performance

In marketing literature (Table 1), research on turnover includes a broad spectrum of studies that relate salesperson demographic characteristics and job attitudes to turnover (Lucas et al 1987), as well as a narrower subset - a single study that explores antecedents of CMO turnover (Nath and Mahajan 2017). Within the broader set of literature, some researchers have given primacy to impact of salesperson turnover on customer satisfaction (e.g. Hurley and Estelami 2007), others have tried to understand influence of salesperson turnover on organizational performance (e.g. Boles et al 2013).

Regardless, marketing literature on turnover emphasizes (a) exits of marketing and sales personnel, though studied separately, and (b) disruption to buyer-supplier relationships. It is somewhat surprising, then, that marketing research specifically investigating turnover has not engaged with a more firm-level phenomenon: the turnover of marketing (and sales) executives. This stream of research has tended to ignore annual changes to top-level of the broader marketing organization, which includes positions not only in marketing but also in sales (Hult 2011), and the subsequent impact on firm performance. To truly understand influence of marketing turnover, it is important to conceptualize it in the context of annual changes in the marketing organization and its impact on buyer-supplier relationships and firm performance.

Early research (e.g., Darmon 1990; Lucas et al 1987; Sager, Futrell and Varadarajan 1989), conceptually pioneered the idea that salesperson turnover was driven by a formal process that could lead to negative impact on profit. Such a turnover could weaken buyer-supplier trust and worsen speed and frequency of both tactical and strategic decision-making. Subsequently, Richardson (1999) estimated the critical opportunity cost associated with the loss in sales encountered as the result of a salesperson's departure.

Later studies focused on salesperson turnover functionality, on association between account manager turnover and poor customer satisfaction (e.g., Madill, Hanes and Riding 2007), and on costs/benefits of salesperson turnover (e.g., Darmon 2008). This literature has largely focused on negative impact of salesperson turnover. However, research has still not accounted for disorder or conditional adjustment due to turnover in top-level marketing organization defined by both marketing (and sales) executives (e.g., Hult 2011). Despite the aforementioned progress, we still do not know the firm performance outcomes of MET.

We draw on a disruption-adaptation tradeoff related to top management turnover to conceptually understand the outcome of MET. Schepker et al.'s (2017, p. 701) theory focuses on post-succession performance of CEO turnover that has been found to be costly in the short-term but has 'no significant direct influence on long-term performance.' Schepker et al.'s (2017) is the first study to integrate the disruption and adaptation perspectives that until recently have evolved separately. Their research has attempted to gain a more holistic understanding of CEO succession by focusing on the distinct temporal foci related to disruption (short-term; costs on the firm) and adaptation (long-term; time for effects to manifest). In line with results of Schepker et al.'s (2017) meta-analysis of 13,578 successions over four decades (1972-2013), we do not hypothesize significant direct influence of MET on long-term performance (nevertheless we present results of long term impact of MET on firm performance in the

robustness check section). While Schepker et al.'s (2017) analysis focuses on CEO turnover, we believe that similar disruption-adaptation processes are relevant to the context of marketing executives' turnover as CMO's turnover is known to occur more rapidly than CEO's turnover. Though we borrow Schepker et al.'s (2017) perspective, we argue that the short-term costs imposed by MET on the firm are themselves conditional on firm-level moderating factors that could either strengthen or weaken (adaptation) the disruptive impact of MET on firm performance.

Top marketing executives, including CMO, already have an outsized association with firm performance both substantively (e.g., Germann, Ebbes and Grewal 2015) and perceptually (e.g., Boyd, Chandy and Cunha 2010). Impact of CMO presence and power on *customer-relationships* and firm's outcomes has also been well established (e.g., Nath and Mahajan 2011). However, top marketing organizations of firms are also represented by *other* marketing (and sales) executives besides CMO, and turnover of these executives is *also* disclosed by U.S. public firms to the SEC. It is expected that such turnovers are of consequence to firm performance as these departures are characterized by significant realignment and confusion in buyer-supplier routine and relationships. MET is characterized by weakened buyer-supplier relationships and demand-supply integration since such turnovers result in loss of firm-specific human capital and knowledge that deteriorates external relationships with customers (Greiner, Cummings, and Bhambri 2003). Resultantly, under condition of MET, the marketing organization's new top-executives have to rapidly forge new relationships, learn new roles and responsibilities and coordinate with the firm's customer-focused assets. As external relationships deteriorate, top-level turnovers bring about fluid participation in customer-related positions, disorganized customer attention patterns and frequent changes in the firm's marketing actions, thereby limiting abilities of marketing managers. Weakened external relationships pose a challenge to demand-supply integration and firm performance, as marketing organization's rapidly changing managers witness buyer-

supplier relationship ambiguity (Cohen, March and, Olsen 1972). While turnover can be adaptive *under the right circumstances*, we argue that the average MET introduces at least some disruption to the marketing organization (e.g., Ballinger and Marcel 2010; Schepker et al 2017; Wiersema and Bantel 1993). This disorder should, *ceteris paribus*, hurt the performance of the firm. Therefore, we hypothesize that:

H₁: MET negatively affects firm performance (Tobin's q).

Contingency Factors

Despite our expectation that MET will be disruptive on average, and thus exhibit a negative effect on firm performance, Schepker et al.'s (2017) model highlights how turnover can be adaptive as well as disruptive. In an extension of Schepker et al.'s (2017) model, we argue that MET's impact on performance is contingent on a set of firm-level contexts meta-analyzed by Hancock et al. (2013) that either aggravate disruption or counter it with adaptive benefits.

We start by studying factors that aggravate disruption. One such influence is the firms "demotions climate" related to executives across the firm in a given year. Some firms may have a higher demotions index (DI) as they witness more (number of) demotions due to higher degree of disagreements between the management and executives. Such a "demotions climate" could result in an environment of downward changes in job-levels. At the level of the firm, disagreements could be due to operational reasons or a consequence of conflict of interest (e.g., investigation, suspected or determined wrongdoing etc.). Defined as an environment of downward social and occupational mobility, a "demotions climate" results in organizations moving people down in hierarchy (Carson and Carson 2007). Such a climate leads to unpleasantness as 'demotees must bear the signifying mark of failure, a mark that stigmatizes them' (Carson and Carson 2007, p. 456).

Working at firms with a more acute “demotions climate” can be challenging since executives under demotion likely face social boycott. In customer-specific cases, this could result in stigmatization from “demotee taint” that generates negative perception about marketers in systems that otherwise lay a premium on successful buyer-supplier relationships. As demotees face lower well-being, under-employment and grief reaction and identity crisis, such an environment also generates disaffection towards the firm’s customer-orientation (Carson and Carson 2007). Overall, a “demotions climate” results in poor marketing employee performance and sub-optimal demand-supply integration and presence of executives facing demotions hurts firm performance. Therefore, we hypothesize that:

H₂: Demotions index strengthens negative effect of MET on firm performance (Tobin’s q).

The other factor from Hancock et al.’s (2013) meta-analysis that may aggravate disruption is the degree of “ship-jumping” at the focal firm represented by tendency of executives to voluntarily leave the firm. For this, we study the influence of marketing executives’ peer group on the association between MET and firm performance. Given the predominant role of social comparison and self-categorization, extant literature has taken a social identity perspective to relate environmental influences to a person’s attitudes and intentions (Sunder et al 2017). Voluntary peer turnover is one such firm-level environmental influence on executives that keeps the latter in a constant state of social comparison. Furthermore, it is also likely that at firms with high voluntary turnover rates, valuable human capital is leaving the firm, reducing the new marketing executives’ ability to leverage existing knowledge.

Voluntary exit index (VEI) is a peer influence mechanism and is measured as a firm-level contingency - ratio of voluntary peer departures relative to total peer departures. Indicative of peer decisions, firm-wide voluntary exits have been found to influence salespeople’s turnover (Sunder et al 2017). Building on extant studies, this research proposes that colleagues’ voluntary departures have an influence on the association between MET and firm performance since managerial perception of peers’

departures hurts executives' motivation. If peers turnover voluntarily, marketing executives may be prone to low motivation and self-efficacy due to the perceived organizational climate that can influence marketing executives' job outcomes (e.g., Sunder et al 2017; Tyagi 1982; Ingram, Lee and Skinner 1989). This encourages executives to discount their current position and explore the external job market. Therefore, we hypothesize that:

H₃: Voluntary exit index strengthens negative effect of MET on firm performance (Tobin's q).

Next, we explore factors that may have adaptive benefits. One such factor has a temporal nature. For instance, as a firm's average time to turnover (ATT) increases, firms take longer to change an executive and marketing executives are able to stay focused on customer needs due to greater stability in buyer-supplier relationships. As a consequence, bilateral norms and ways and means of doing business between the buyer and seller stay unchanged resulting in improved demand-supply integration through better customer attention (Eyuboglu and Buja 2007). This should minimize the debilitating impact of MET on firm performance. (ATT may also serve as a reasonable proxy for location effects since at some firm locations turnover may occur sooner.).

In the literature, questions on temporal contiguity - indicating time-based proximity of events - refer to a causal mechanism explaining why events occur (e.g., Chen and Lurie 2013). A close temporal relation has also been used to explain influence of human behavior and its relation to cause and effect (e.g., Kelley 1973). Since effects have been assumed to occur closely after causes, using time to turnover can be an appropriate variable to measure temporal conditionality to the association between MET and firm performance. In the context of marketing executives' turnover, average time to turnover indicates that such causal action (e.g., turnover) can be a valid marker as a proximate cause to firm performance (Chen and Lurie 2013). For instance, number of days it takes to turnover is the average time a firm (at a given location) takes to change an executive. Fewer number of days to turnover indicates that the

disruptive effect of MET on firm performance may be pronounced as buyer-supplier relationship remain at best tenuous. While temporal contiguity has been shown to moderate the relationship between customer reviews and perceived value (e.g., Chen and Lurie 2013), to the best of our knowledge, extant studies have not used temporal moderators to explain association between turnover and firm performance.

We argue that MET should have a weaker negative effect on firm performance in firms with high average time to turnover than in conditions with low average time to turnover because in conditions with high average time to turnover firms tend to maintain a favorable status quo in buyer-supplier relationships and therefore stay relatively more customer focused (Luo and Homburg 2007). Under high average time to turnover, relatively slower change in executive positions strengthens buyer-supplier relationships weakened by influence of MET on firm performance. High average time to turnover improves bilateral conduct between the seller and the neglected buyer resulting in ‘shared expectations regarding behavior’ that enhances solidarity and harmonization of conflict (Eyuboglu and Buja 2007). Moreover, under conditions of firm-wide low average time to turnover, marketing executives may lose stability in tenure and capacity for customer outreach. Firms willing to endure low average time to turnover lose out to competition due to inaction towards customer needs. High average time to turnover (ATT) seeds association between customer-related positions and firm performance with stability. Such bilateralism aids boundary spanning roles and demand-supply value chain with stronger buyer-supplier relationships. Therefore, we hypothesize that:

H₄: Average time to turnover weakens negative effect of MET on firm performance (Tobin’s q).

The other factor with adaptive benefits relates to the degree of “job-hopping” among firm’s executives – those with a history of quitting jobs. All else equal, the marketing organization looks to count heavily on stability in buyer-supplier relationships by encouraging an overall climate of

permanence in tenure. Yet, some firms (for example those in technology, retail, media, outsourcing) are prone to hiring job-hoppers as executives in these businesses quit jobs more frequently due to rapid changes in technology, policy, mergers and acquisitions, among other factors. Firms with fewer executives having a history of quitting previous jobs frequently help generate a climate of stability that minimizes the negative association between MET and firm performance as profit from ‘current relationships’ is likely more stable than revenues from ‘other alternatives’.

Job-hoppers, with their history of quitting jobs more frequently, make the firm’s prospects bleak - prone to “settle and scoot,” these executives hurt profitability. When a firm has executives with a history of transience it can be expected to discount an environment that encourages stability in relationships. Presence of executives with a history of transience, or a firm’s transience index (TI), has the potential to hurt firm performance as customer-related changes may be undertaken in quick succession. Therefore, when the influence of MET on firm performance is conditional on higher transience index such turnovers should become less disruptive as an overall climate of “settle and scoot” gets diluted when marketers prone to quitting are gone and stability is introduced in buyer-supplier relationship (Eyuboglu and Buja 2007).

Extant literature (e.g., Miller 1987; Miller and Friesen 1983) demonstrates that some firms are better at adapting to an environment of frequent changes. Research reveals that during recessions some firms are capable of turning frequent job change related adversity into advantage (Srinivasan, Rangaswamy and Lilien 2005). Studies also find that firms with executives in a constant state of transience (e.g., Feldman and Brett 1983) tend to underperform as skillsets required to forge relationships and “hit the floor running” stay under-developed. As executives in a state of transience are slow to forge relationships with customers, firms are unable to strategically invest in customer-focused resources or establish superiority over competition. MET’s association with firm performance is less disruptive as the

firm lessens dependence on a system characterized by transience - opportunities are created along the existing demand-supply chain, as executives engage in 'proactive marketing' with current buyers, and execute appropriate product solutions to achieve superior business performance.

We argue that some firms use their transience index (TI) as an adaptive mechanism that conditions association between marketing executives' turnover and firm performance. These firms use the opportunity presented by frequent job changers to focus better on customer needs by strategically allowing turnovers across the demand-supply value chain. Therefore, firms that leverage internal constraints, such as, transience index, develop a marketing organization personnel resource advantage focused on providing a better value proposition to customers. Therefore, we hypothesize that:

H₅: Transience index weakens negative effect of MET on firm performance (Tobin's q).

Finally, we discuss the adaptive moderating effect of financial leverage. A firm's debt index (FDI), or its financial leverage, is the ratio of its debt to assets (Anderson and Mansi 2009) that indicates its financial structure. However, firms may witness changes in the form of mergers, takeovers or bankruptcies, that may alter their financial structure. While a specific analysis of mergers, takeovers or bankruptcies is outside the scope of this paper, we do factor a reasonable proxy common to such shifts - the underlying change in the firm's financial structure that accounts for a firm's debt index (FDI), or its financial leverage, represented by a ratio of debt to assets.

In the literature, there is an acknowledgement that debt may be a cost to the firm and excessive level of debt is unviable (Tan and Peng 2003). This stream of research has explored multiple facets of debt's disadvantages, such as, agency costs of debt (Jensen and Meckling 1976); and restriction in managerial discretion (Jensen 1986). On the other side are theorists who acknowledge that despite its costs, financial leverage buffers a firm's resources core from environmental turbulence as it also

generates information useful for shareholders especially during times of change such as mergers, takeovers and bankruptcies (Tan and Peng 2003). These theorists refer to debt to assets ratio as resource that helps a firm survive both internal and external challenges (e.g., Bourgeois 1981), as it can also be a tax advantage (Modigliani and Miller 1958).

Firms may leverage debt as an effective anti-takeover device (Harris and Raviv 1988). However, we argue that greater debt (relative to assets) serves as a signal of firm's quality during periods of change such as mergers, takeovers and bankruptcies (Ross 1977). Debt serves as a robust disciplining mechanism since it provides transparent access to firm specific information to shareholders. We follow extant literature to assert that probability of default generates information useful for shareholders (Harris and Raviv 1990) that may not have been shared by the firm's managers generally unwilling to share data. Firms that signal quality through debt as a disciplining mechanism are, all else equal, better performing and are known to have access to greater resources through higher leverage as such firms are bound to have relatively inexpensive access to varying types of financing per dollar debt.

When the firm experiences adversity due to marketing executives' turnover, its marketing actions may lose information and focus on buyer-supplier relationships. To generate information useful for shareholders and to maintain stability in existing relationships, the firm may need to focus on transparent processes while re-energizing marketing actions. Under such conditions, firms do well when they depend on (debt related) disciplining mechanisms that generate information useful for shareholders that firm's managers are generally unwilling to share. Therefore, we hypothesize that:

H₆: Firm's debt index weakens negative effect of MET on firm performance (Tobin's q).

DATA AND MEASURES

Data

Identified as a ‘natural pair of functions’, marketing and sales integrate buyer-supplier relationships and consumer-preference curves (Guenzi and Troilo 2006; Karmakar 1996). Even though marketing and sales are distinct, overall marketing operations do subsume demand-supply integration through marketing and sales’ links, wherein customer needs unify both marketing and sales. We follow extant research (e.g., Feng, Morgan and Rego 2017; Guenzi and Troilo 2006; Rinehart, Cooper, and Wagenheim 1989; Rouziès et al 2005) that has focused on integration of marketing and sales to improve understanding of customer needs and relationships. This approach ensures that we include positions and titles in marketing and sales responsible for a firm’s buyer-supplier relationships. To identify a set of marketing and sales titles we follow Wang, Gupta and Grewal (2017) to subsume the sales function within marketing. Wang, Gupta and Grewal (2017) refer to these top executives as “top marketing and sales executives.” We follow extant literature (e.g., Dong, Zhou and Taylor 2008; Feng, Morgan and Rego 2015, p.16; Karmakar 1996) to include marketing and sales related role designations and to identify executives listed by firms as executives and officers. This helps us focus on the turnover of marketing executives across both marketing- and sales-related operations (Hult 2011). Together they represent both the front-end and back-end of customer-related positions, with respective boundary-spanning roles related to demand-side and supply-side responsibilities of a firm’s marketing operations (Karmakar 1996).

Since August 2004, following some high profile scandals (e.g. Enron), the Securities and Exchange Commission (SEC) requires registrants to disclose every director or officer change. The new rule requires firms to report events related to departure of executives or certain officers; election of executives and appointment of certain officers within 4 business days after the occurrence of the event under item 5.02 of Form 8-K. These events cover the scope of fluid participation due to exits - initiated by the individual or the firm - including retirements, dismissals, director resignations, removal for cause

or refusal to stand for re-election due to disagreement known to an executive officer of the company among others. Firms are also required to inform SEC the date of the director officer change; name and title of the executive; and nature and circumstances of the change. In fact, firms have been reporting director or officer changes to SEC even before 2004, however, such disclosure was mostly unsystematic, voluntary or opportunistic that resulted in firms delaying disclosure of negative news (Segal and Segal 2011). Studies on dark side of surprise executive exits and credibility of voluntary disclosures (Fahlenbrach, Low and Stulz 2010; Gu and Li 2007) suggest that under certain circumstances firms may benefit by revealing information. Therefore, SEC filings are an excellent source to track director and officer exits, and, therefore MET, measuring overall marketing executives' exits within the broader marketing organization responsible for demand-supply integration.

We follow Tuli, Bhardwaj and Kohli (2010) to collect data from SEC filings such as 10-Ks (annual report), 8-ks (current report) and DEF14-A (definitive proxy report on board of directors and equity holders). We focus on SEC filings by U.S. public (NYSE, NASDAQ) firms from 2004 to 2016.

We are the first to use Audit Analytics database for marketing research to identify the individual/director name, unique director identifier, role name which provides the title of the selected position to arrive at the total number of exits at a firm per year. We follow guidelines on identification of titles that are also commonly used in extant managerial succession research (Dong, Zhou and Taylor 2008; Feng, Morgan and Rego 2015, p.16; Karmakar 1996; Nath and Mahajan 2017; Wang, Saboo and Grewal 2015), specifically, announcements about executives leaving an existing position take title and role name as that of the existing position. We identify the effective date as the date when the individual's position within the company changes. We used this data to operationalize the MET measure, described in the following section. Just over 15,180 firms reported director officer changes during our period of study.

We augment SEC reports, with other sources such as firm's website and executive LinkedIn profiles. These resources were also used to carry out random checks on the existing dataset. The final executive exit database was coded independently by two academic coders. The face, internal and external validity and reliability tests were carried out by two independently trained coders who analyzed the coded variables. For this, the coders first read and coded 50 marketing titles related exits and then discussed results. The two coders worked in parallel and showed high inter-coder reliability. There was high reliability of 94% of the coded variables in terms of Krippendorff's alpha (Hayes and Krippendorff, 2007). The remaining issues were resolved through discussion leaving us with 96% agreement on the coded dataset. External validity of the coding was carried out through the use of company websites and LinkedIn databases. Finally, we use Compustat Fundamentals Database to calculate dependent variables and lagged firm, industry and year specific financial and control variables.

After merging the above sources of data we are left with an unbalanced panel (Tuli, Bhardwaj and Kohli 2010) of 66,408 firm-year observations for hypothesis testing on 15,189 firms representing 4,457 executive exits between 2004 and 2016. This makes it a 'small T, large N' panel suited for dynamic panel analysis (Roodman 2009). Although the unbalanced nature of the panel means that not all firm-years will be used for the dynamic panel analysis, we keep the larger sample for robustness checks discussed later. The firms in our sample represent 68 Standard Industrial Classification (SIC) two-digit industries (see discussion section Figure 2). The average firm in our sample has \$2.2 billion in annual revenues and \$6.2 billion in assets and \$127 million in net annual income.

Measures

We list measures of independent and control variables and data sources in Table 2 and correlations in Table 3.

Insert Table 2 and Table 3 about here

Marketing executives' turnover: Defined as annual turnover of one or more top marketing (and sales) executives, MET is a firm-level variable directly measurable from company's filings with the SEC. As a team of one or more, these executives are responsible for buyer-supplier relationships. Largely, extant literature (Challagalla, Murtha and Jaworski 2014; Fisher, Maltz and Jaworski 1997; Frazier et al 1994) gives primacy to personnel changes, a directly observable measure, to infer impact of turnover within a firm. We follow dominant extant literature to understand turnover (Challagalla, Murtha and Jaworski 2014; Fisher, Maltz and Jaworski 1997; Frazier et al 1994; Nath and Mahajan 2017) and measure MET from measurable determinants –exits of one or more marketing executives and officers disclosed to SEC by publicly listed firms.

There has been rather limited research in extant marketing literature on executives' exits (for an exception see Nath and Mahajan 2017). Assuming that executive exits are valid measures of turnover, we leverage presence or absence of (one or more) executive departures as a dichotomous variable to create our measure of turnover within a firm's top marketing organization. To assess the relative nature of turnover in the top-level of the marketing organization due to presence or absence of such exits, we create a dichotomous variable of marketing executives' turnover capturing departures (of one or more executives) across marketing – this is our measure of MET, i.e., presence of executives' turnover in the marketing organization of a given firm in a given year. To emphasize turnover as a firm-level phenomenon, we dichotomize presence (vs. absence) of exits.

In generating our measure of MET we focus on three things: (a) that we capture one or more executives' departures reported to SEC; (b) that we identify marketing organization specific (marketing and sales) executive exits; and (c) that we generate an annual measure of turnover in the marketing organization - exits at a given firm in a given year that is agnostic to the number of executives leaving

(Though we account for influence of number of executives exiting in our robustness check, we do not find significant results). Our measure of MET is based on annual changes (due to exits) to marketing organization's formal representation in the top management. We account for departures of one or more marketing executives and officers of the firm – these exits are considered an objective measure of dilution of customer-related personnel's clout on the firm's key policy and resource allocation decisions (Pfeffer and Moore 1980). When the top marketing organization witnesses turnover of one or more personnel, through exits, buyer-supplier relationships get weakened. Furthermore, the 'speed of tactical decision-making process' with respect to the buyer takes a hit; concomitant also are changes in planning procedures, reward and recognition systems resulting in ambiguity regarding buyer's interests (Frazier et al 1994). Such turnovers within the top marketing organization add 'transition costs' to demand-side and supply-side marketing operations since executives have to 'learn it all again' (Challagalla, Murtha and Jaworski 2014, p.16). See robustness check section for a brief discussion on an alternative operationalization of MET that accounts for number of executives exiting.

Two coders independently identified marketing organization related titles that establish a link to marketing, and sales operations following extant literature (Dong, Zhou and Taylor 2008; Feng, Morgan and Rego 2015, p.16; Karmakar 1996). We calculate the changes in MET as the difference in MET at time t and the MET at time $t-1$. We use this measure for the changes-changes model, likewise for other variables explained below.

Tobin's q. For firm i in year t , we measure Tobin's q as the ratio of a firm's market value to the current replacement cost of its assets (Chung and Pruitt 1994):

$$\text{Tobin's } q = (\text{MVE} + \text{PS} + \text{DEBT}) / \text{TA}$$

where MVE is the product of a firm's share price and number of common stock shares outstanding, PS is the value of the preferred stock, DEBT is the sum of the firm's short-term and long-term debt and TA is

total assets of the firm. Tobin's q adjusts for expected market risk, is a forward-looking capital market based measure of the value of a firm that uses the correct risk-adjusted discount rate and thus minimizes distortion. We calculate the changes in Tobin's q as the difference in Tobin's q at time t and the Tobin's q at time t-1. As a capital market-base measure Tobin's q is representative of future term performance and is not dependent on organizational goals (Germann, Ebbes and Grewal 2015).

Demotions Index (DI). For firm i in year t , we define DI as the number of executives demoted. Such changes may be due to operational reasons or as a consequence of conflict of interest (e.g., investigation, suspected or determined wrongdoing etc.) – as reported by firms to the SEC. We calculate the changes in demotions as the difference in DI at time t and the DI at time t-1.

Voluntary Exit Index (VEI). For firm i in year t , we define VEI as the ratio of number of voluntary exits to number of total exits. We calculate the changes in voluntary exits as the difference in VEI at time t and the VEI at time t-1.

Average Time to Turnover (ATT). For firm i in year t , we define ATT as the average time (number of days) it takes a firm to change an executive. We calculate changes in time to turnover as the difference in ATT at time t and the ATT at time t-1.

Transience Index (TI). For firm i in year t , we define TI as the number of executives with a history of multiple (>2) exits across prior firms. We calculate the changes in executive transience as the difference in TI at time t and the TI at time t-1.

Firm's Debt Index (FDI). For firm i in year t , we define FDI as the firm's debt scaled by its assets (Deloof 2003), also known as the debt to assets ratio, thereby adjusting for the firm's assets base. We calculate the changes in financial leverage as the difference in FDI at time t and the FDI at time t-1.

Market concentration. Our measure of market concentration is the sum of the square of all firms' market shares in a given industry (Morgan and Rego 2009). Commonly also known as the Hirschman–Herfindahl index (HHI), market concentration indicates the market structural forces impacting a firm performance. We calculate the changes in HHI as the difference in HHI at time t and the HHI at time $t-1$.

Innovation (I). For firm i in year t , we define I as R&D expenditure scaled by assets (Nath and Mahajan 2008). By deflating the firm's R&D expenditure by its assets we scale our measure to adjust for firm size. We calculate the changes in innovation as the difference in I at time t and the I at time $t-1$.

Differentiation (D). For firm i in year t , we define D as advertising expenditure scaled by assets (Nath and Mahajan 2008). By deflating the firm's advertising expenditure by its assets we scale our measure to adjust for firm size. We calculate the changes in differentiation as the difference in D at time t and the D at time $t-1$.

Return on Assets (ROA). For firm i in year t , we define ROA as the ratio of net income to assets. We calculate the changes in return on assets as the difference in ROA at time t and the ROA at time $t-1$.

Firm Size (FS). For firm i in year t , we define FS as the natural logarithm of number of employees. Alternatively, we also use number of employees for firm i at time t . We calculate the changes in firm size as the difference in FS at time t and the FS at time $t-1$.

Positive Relative Performance (PRP). For firm i in year t , our measure is an adaptation of Han, Mittal and Zhang's (2017) work. To arrive at our measure of relative performance. We start by calculating:

$$\text{Firm's Relative Performance}_{it} = \text{Firm's Performance}_{it} - \text{Benchmark Performance}_{it}$$

for firm i at time t . Here *Firm's Performance* _{it} is its return on assets (ROA_{it}) and

Benchmark Performance _{it} is the median return on assets for that firm's industry (at two digit SIC code)

and year. Positive relative performance is when the Firm's Relative Performance_{it} > 0. We calculate the changes in positive relative performance as the difference in PRP at time t and the PRP at time t-1.

MODEL AND ESTIMATION PROCEDURE

Roodman (2009) recommends dynamic panel generalized method of moments (GMM) estimator when data is characterized by “small T, large N” panel (i.e. few time periods and many observations); fixed effects; heteroscedasticity; autocorrelation within observations; absence of exogenous independent variables (i.e. they are endogenously correlated with prior period or even current period error); and dynamic outcome variables (i.e. such as Tobin's q is “persistent” and influenced by prior period observations). We follow prior literature in this regard (Arellano and Bond 1991; Feng, Morgan and Rego 2015; Rego, Morgan and Fornell 2013; Tuli and Bhardwaj 2009; Tuli, Bhardwaj and Kohli 2010). This literature specifies dynamic GMM as a system of equations that uses its own set of internal instruments, generates sample moments from data and is independent of distributional assumptions. The period of our study matches one embraced by extant research (e.g., Shah, Kumar and Kim 2014). We start with a levels-levels model that has levels of Tobin's q as dependent variable regressed on MET, interaction terms, control variables and lag value of dependent variable.

$$\begin{aligned}
 T_{it} = & \beta_1 MET_{it-1} + \beta_2 DI_{it-1} + \beta_3 VEI_{it-1} + \beta_4 ATT_{it-1} + \beta_5 TI_{it-1} + \beta_6 FDI_{it-1} + \beta_7 MET_{it-1} \times DI_{it-1} + \\
 & \beta_8 MET_{it-1} \times VEI_{it-1} + \beta_9 MET_{it-1} \times ATT_{it-1} + \beta_{10} MET_{it-1} \times TI_{it-1} + \beta_{11} MET_{it-1} \times FDI_{it-1} + \beta_{12} MC_{it-1} \\
 & + \beta_{13} I_{it-1} + \beta_{14} D_{it-1} + \beta_{15} ROA_{it-1} + \beta_{16} FS_{it-1} + \beta_{17} PRP_{it-1} + \beta_{18} T_{it-1} + \text{Industry Effects} + \text{Time} \\
 & \text{Effects} + \tau_i + \zeta_{it} \quad (1a)
 \end{aligned}$$

T_{it} = Tobin's q of firm i for time t,

MET_{it-1} = marketing executives' turnover for firm i at time t-1,

DI_{it-1} = demotions index for firm i at time t-1,

VEI_{it-1} = voluntary exit index for firm i at time $t-1$,

ATT_{it-1} = average time to turnover for firm i at time $t-1$,

TI_{it-1} = transience index for firm i at time $t-1$,

FDI_{it-1} = firm's debt index for firm i at time $t-1$,

MC_{it-1} = market concentration for firm i at time $t-1$,

I_{it-1} = innovation for firm i at time $t-1$,

D_{it-1} = differentiation for firm i at time $t-1$,

ROA_{it-1} = return on assets for firm i at time $t-1$,

FS_{it-1} = firm size for firm i at time $t-1$,

PRP_{it-1} = positive relative performance for firm i at time $t-1$,

T_{it-1} = Tobin's q of firm i at time $t-1$,

τ_i = time invariant unobservable firm fixed-effects,

ζ_{it} = random errors.

In the levels-levels models, we control for observable heterogeneity by including known covariates and partially control for unobservable effects and heteroscedasticity by including time dummies and time-invariant error (Rego, Morgan and Fornell 2013). Moreover, in equation 1a time invariant unobservables are correlated with lagged values of respective dependent variables. Econometrically, the problems due to unobservable effects, endogeneity and heteroscedasticity are solved by first differencing equation 1a by subtracting respective lagged values (Arellano and Bond 1991) thereby removing time invariant unobservable firm fixed effects. Furthermore, to rule out 'simultaneity and dynamic endogeneity' we employ instrumental variables, respectively, using two-period or earlier levels and differenced lagged values of all regressors and industry and time dummies that control for unique industry and time effects and help generate unbiased and efficient estimates (Rego, Morgan and Fornell 2013; Tuli, Bhardwaj and Kohli 2010). We follow Feng, Morgan and Rego (2015, p.9) and Tuli, Bharadwaj, and Kohli (2010) to list industry sector 'dummies in the estimation procedure as IV-style

instruments' for the changes equations since 'system generalized method of moments (GMM) jointly uses levels and changes specifications'. This leaves us with changes-changes models in 2a that predicts that changes in MET affect changes in firm's Tobin's q (Tuli, Bhardwaj and Kohli 2010). For example, $\Delta T_{it} = T_{it} - T_{it-1}$, and likewise for other variables in equations 1a.

$$\begin{aligned} \Delta T_{it} = & \beta_1 \Delta MET_{it-1} + \beta_2 \Delta DI_{it-1} + \beta_3 \Delta VEI_{it-1} + \beta_4 \Delta ATT_{it-1} + \beta_5 \Delta TI_{it-1} + \beta_6 \Delta FDI_{it-1} + \beta_7 \Delta (MET_{it-1} \times \\ & DI_{it-1}) + \beta_8 \Delta (MET_{it-1} \times VEI_{it-1}) + \beta_9 \Delta (MET_{it-1} \times ATT_{it-1}) + \beta_{10} \Delta (MET_{it-1} \times TI_{it-1}) + \\ & \beta_{11} \Delta (MET_{it-1} \times FDI_{it-1}) + \beta_{12} \Delta MC_{it-1} + \beta_{13} \Delta I_{it-1} + \beta_{14} \Delta D_{it-1} + \beta_{15} \Delta ROA_{it-1} + \beta_{16} \Delta FS_{it-1} + \\ & \beta_{17} \Delta PRP_{it-1} + \beta_{18} \Delta T_{it-1} + \text{Industry Effects} + \text{Time Effects} + \tau_i + \zeta_{it} \quad (2a) \end{aligned}$$

We jointly put to use both levels-levels and changes-changes equations as system GMM that takes care of shortcomings of dynamic panel GMM due to decrease in statistical power, instrumentation validity and unbalanced panels (Rego, Morgan and Fornell 2013). We test the model using Wald chi-square test to assess hypothesized associations between MET and Tobin's q. We also checked for second order serial correlation using Arellano and Bond's (1991) test to see if there is insufficient evidence to reject the null of absence of autocorrelation. We tested for the Hansen J-statistic that jointly tests models' fit and instrument over identification. Finally, we test for multicollinearity using variance inflation factors, mean-center variables to help interpretation of respective variable effects and Winsorize data at 1% to minimize the effect of outlier observations.

RESULTS

Main effect

We test the results (not presented here) of the levels-levels model that is not first-differenced and therefore, does not eliminate effects of unobservables, endogeneity and heterogeneity. However, Table 4 presents the results of our hypotheses tests. The AR (II) z score for the full model ($p = 0.47$) confirms

that autocorrelation is not a concern. Meanwhile, the F-test indicates that the model fits the data well. Overall inference is unbiased as the modest number of instruments indicates that overfitting of endogenous variables is not a concern (Roodman 2009). Our models also clear Roodman's recommendation on keeping the Hansen J-statistic not significant to jointly test models' fit and instrument over identification. When we test Angrist and Pischke first stage F-statistics for all our models we find significant results and Anderson-Rubin Wald test confirms that results are robust to the presence of weak instruments. Highest correlation between our variables is 0.67 while variance inflation factors for our variables are below 2.05. We find evidence supporting hypotheses on main effects: H₁ proposes that changes in MET are negatively associated with changes in Tobin's q (-5.72, p<0.01, M5). Changes in MET may hurt firm's performance as it disrupts functioning of customer-facing executive positions related to marketing and sales that hurts buyer-supplier relationships and demand-supply integration. We also tested for reverse causality using Granger causality tests with four lags. Our results confirm that Tobin's q does not Granger-cause MET.

Insert Table 4 about here

Interaction effects

Results in Table 4 (M5) support H₂, H₃, H₅, H₆, however, H₄ is not supported. These results show the conditions under which the disruptive effects of MET are either strengthened or weakened by adaptation. Our results also show that turnover in a firm with "demotions climate" strengthens the negative effect of changes in MET on changes in Tobin's q (H₂, -10.21, p<0.05). This negative interaction confirms the view that a firm-level climate of disagreements with the management and resultant downward social and occupational mobility worsen the negative effect on firm performance. An environment that "facilitates" moving people down in hierarchy results in unpleasantness due to a mark of failure and stigma that impacts executives' performance. Furthermore, degree of "ship-jumping" from

a high voluntary exit index (VEI) also worsens the negative impact of changes in MET on changes in Tobin's q (H₃, -7.92, p<0.05). Voluntary peer exits are a source of firm-level environmental influence to executives' attitudes and intentions as they encourage social comparison and self-categorization and lead incumbent marketing executives to turnover. A climate of voluntary exits signals to its incumbent members opportunities outside the firm thereby hurting the firm's interest. An environment of "ship-jumping" worsens the firm's chances for survival since such peer influence may be in conflict with the performance goals of the firm. Such managerial self-interest destabilizes firm's interests and hurts firm performance.

However, we also explore adaptive conditions that weaken the negative association between MET and firm performance. Though we find that average time to turnover (ATT) does not weaken the negative effect of changes in MET on changes in Tobin's q (H₄, -0.01, n.s.), we note that transience index (TI) weakens the negative effect of changes in MET on changes in Tobin's q (H₅, 2.89, p<0.01). This proves that, MET should have a weaker effect on firm performance in firms that have greater number of executives with a history of transience than in firms with lesser number of executives with a history of transience because in the former marketing executives' turnover ensures that the firm is able to do away with "job-hoppers" and with fleetingness of impermanent marketers. These firms use turnover as an opportunity to focus better on customer needs by strategically letting go frequent job changers.

We also find that firm's debt index (FDI) weakens the negative effect of changes in MET on changes in Tobin's q (H₆, 17.27, p<0.01). This shows that some firms are also capable of leveraging their debt resource advantage as a disciplining mechanism to weaken the debilitating effect of MET. These firms see the threat of default on debt as a tool that systematically provides information to shareholders to attenuate the disadvantage presented by MET. A firm's higher debt index helps signal quality to investors since firms with such additional resources increase space for shareholder decision making. As the firm

witnesses marketing executives' turnover it is able to leverage access to information and additional resource (debt) advantage to strategically invest in actions that establish superiority over competition.

Robustness checks

We undertake several robustness checks on our models.

Of the 4,457 exits that we study from 2004 to 2016, representing 15,189 U.S. public firms, close to 80% were single executive turnovers per firm-year observation, the rest ranged between 2-6 executives' turnovers per firm-year observation. However, we found no empirical evidence supporting our hypotheses when we measured disruption to firm performance from multiple turnovers relative to singular turnovers. Results are available upon request.

Second, following extant literature (Tuli, Bhardwaj and Kohli 2010) we change the number of instruments. We do this by testing the levels equation (not reported here) that has poor Hansen J-statistics and biased standard errors since instruments over fit endogenous variables. We also ensure that the instrument count (Roodman 2009) stays below the number of groups. Moreover, given that we have an unbalanced panel, we substitute zeros for all missing values that help 'resulting columns become orthogonal to the transformed errors that correspond to a set of meaningful moment conditions' (Roodman 2009, p.107). We find that these results echo our key hypotheses.

Third, we also tested our hypotheses replacing Tobin's q by sales (log) (see Web Appendix Table W1). Our core hypotheses stay substantiated.

Fourth, we also test our full model using Feasible Generalized Least Squares (FGLS), an alternative to dynamic GMM. FGLS helps avoid 'dynamic panel bias' (Nickell 1981) when T is not large or when unobservable shocks continue to appear in error terms. Following Gong et al (2017), we allow for AR(1) autocorrelation and heteroskedastic errors. We also test for unanticipated changes in

independent variables (Tuli and Bhardwaj 2009). To measure unanticipated changes under conditions of high autocorrelation we regress MET and all other endogenous variables on their respective lags and use residuals to measure the unexpected changes that are then used as variables in the regression. Our results point to close proximity to our hypotheses (see Web Appendix Table W2).

Fifth, in other sensitivity analyses we do away with the two-step estimation that ‘performs somewhat better than one-step GMM in estimating coefficients with lower bias and standard errors’ (Roodman 2009, p.97). Two-step estimation is efficient and robust to varying patterns of heteroscedasticity and serial correlation. We also tested our models to verify the appropriateness of Windmeijer correction triggered by the robust option. Next, we also carry out orthogonal deviations on the data by subtracting ‘the average of all future available observations’ (Roodman 2009, p.104) that helps avoid data loss in a first-difference model that rests on unbalanced panels. Lagged observations are excluded from the equation, helping them serve as valid instruments and errors stay spherical. We find that the results are substantively aligned with our hypotheses while the Arellano-Bond test for AR(2) in first differences is not significant in all models and the Hansen test of over identified restrictions is also not significant.

Finally, we also test long-term impact of MET on firm performance. Though unhypothesized, we rely on results of Schepker et al.’s (2017) meta-analysis of 13,578 successions over four decades (1972-2013). While we do not hypothesize significant direct influence of MET on long-term performance, nevertheless, we do present results of long term impact of MET on firm performance. When firm performance is forward lagged by two years, we do not find any significant main effect of MET on Tobin’s q , H_1 (-0.73, p =n.s.), though we find support for H_3 (-6.75, p <0.05) and H_5 (4.27, p <0.01), only. This shows that although in the long-term though MET does not appear to impact firm performance,

there is some evidence to prove that the debilitating impact of voluntary exits index (VEI) and attenuating impact of transience index (TI) on marketing executives' turnover continues over time.

DISCUSSION AND IMPLICATIONS

The authors set out to draw an association between marketing executives' turnover (MET) and firm performance. Through H₁-H₆ we empirically test conceptualizations. Table 4 is the summary of results. *Ceteris paribus*, marketing executives' turnover is detrimental to firm performance. Nevertheless, firm-level factors act as contingencies that strengthen (Demotions Index (DI) and Voluntary Exit Index (VEI)) or weaken (Transience Index (TI) and Firm's Debt Index (FDI)) the relationship between marketing executives' turnover and firm performance. The originality of our contribution is further substantiated by our novel analysis on 4,457 exits that we study from 2004 to 2016, representing 15,189 U.S. public firms. Robustness checks further substantiate our findings. Specifically, we test our hypotheses on an alternative outcome—sales (log); we also test our hypotheses while accounting for unanticipated changes in independent variables, autocorrelation and heteroskedastic errors. We rely on Arellano and Bond's (1991) dynamic panel method and other statistical approaches to test the association of MET on firm performance (Gong et al 2017; Tuli and Bhardwaj 2009).

We find broad support for our hypotheses. In summary, we attempt to make sense of role of marketing executives' turnover that could interrupt smooth customer-related operations and hurt firm performance. We find that MET throws into disarray buyer-supplier relationships that imposes marketing costs on the firm's performance. Marketing executives' turnover disengages the firm's top management from market insights and customer's perspective. One reason that such turnover results in discontinuous marketing operations is that former executives' policies and actions may be ignored and new plans could be put in place. Practitioners would agree that discontinuity in marketing operations hurts buyer-supplier relationships as prior commitments are ignored in favor of new plans and policies. Lack of consistency in

relationship with customers has the potential to hurt firm's revenues as buyers look to other suppliers willing to adjust product supply to customer demand. Marketing executives' turnover and resultant weak relationships with buyers hurts managerial participation in the firm's marketing decision-making; and when managers do participate they are often confronted by ill-defined policies, hurriedly laid out plans and poor execution of marketing actions. Turnover in customer-related positions results in disrupted customer 'attention patterns' posing a challenge to demand-supply integration and firm performance.

Our research contributes to this view in at least two ways. First, we encourage both marketers and researchers to acknowledge the presence and turnover of top management marketing (and sales) executives (besides the CMO) in the overall marketing organization. Second, we show that the aforementioned MET driven fluid participation in demand-supply roles can disrupt firm performance. By not reckoning the impact of the aforementioned exits on firm performance researchers may limit their understanding of the impact of such managerial change. By understanding the influence of MET on firm performance we get a holistic perspective on consequences of top management's customer-related turnover; when we acknowledge firm performance impact of turnovers related to not just the CMO but also other top marketing (and sales) executives in the firm, we account for a consequential phenomenon that has not been examined previously.

In general, this research contributes to the broader marketing and sales literature on turnover (e.g., Nath and Mahajan 2017; Shi et al 2017; Sunder et al 2017). However, specifically, we extend Nath and Mahajan's (2017) work by exploring firm performance consequences of marketing executives' turnover. Since we contribute by accounting for presence and turnover of both CMO and non-CMO marketing (and sales) executives, our acknowledgement of presence of non-CMO marketing executives also has consequences for non-turnover related marketing literature that until now has stayed focused on only on CMO (e.g., Boyd, Chandy and Cunha 2010; Germann, Ebbes and Grewal 2015; Nath and Mahajan 2008,

2011). Future researchers will enrich our knowledge by probing questions related to non-CMO marketing executives as well. We also extend the extensive progress made by extant literature in its three decade long explication of antecedents of salesperson turnover (e.g., Lucas et al. 1987; Sunder et al. 2017). We further the related but limited literature that has studied impact of salesperson turnover on firm performance measures such as log (sales) (e.g., Shi et al. 2017). Furthermore, while there have been studies that have conceptually acknowledged that changes to a firm's structure impacts firm performance (Frazier et al 1994), the state of knowledge on the association between marketing executives' turnover and firm performance has stayed both conceptually and empirically untested.

Our research contributes by introducing and empirically testing Schepker et al.'s (2017) disruption-adaptation perspective in a marketing turnover context. We shed light on how marketing executives' turnover may result in disruption costs or adaptation benefits conditional on firm-level factors inspired by Hancock et al.'s (2013) meta-analysis. Hereafter, we encourage marketing researchers to account for the fact that disruption from marketing-related turnover leads to disturbances in buyer-supplier relationships; potential performance gains from such change are undermined by the tentative nature of demand-supply integration. As we empirically leverage Schepker et al.'s disruption-adaptation tradeoff, we lay out firm-level contingencies. Extant literature (Frazier et al 1994) has conceptualized the role of resource constraint, supplier environment volatility and competitive intensity in understanding the relationship between buyer-supplier characteristics and joint decision making. However, we still do not know enough about how firm-level factors empirically moderate the relationship between MET and firm performance.

Furthermore, our finding on the role of a firm-level "demotions climate" is significant since we show that an environment of such downward social and occupational mobility in a marketing context results in customers' stigma and buyer-seller unpleasantness that has consequences for firm performance.

While researchers have studied the debilitating impact of demotions on employee performance (Carson and Carson 2007), to the best of our knowledge, there has been no research on the moderating role of a firm-level “demotions climate” in the context of MET’s association with firm performance. Hereafter, researchers may want to acknowledge that turnover of marketing executives, facing an environment that pushes them down the social and occupational ladder carries marks signifying failure, indicative of worsened firm performance.

Additionally, while marketing researchers have taken a social identity perspective in associating voluntary peer turnover as an influence on salesperson turnover (e.g., Sunder et al. 2017; Tyagi 1982; Ingram, Lee and Skinner 1989), our study extends this stream of research by acknowledging the moderating role of firm-level “ship-jumping” - peer decisions to voluntarily depart relative to total exits. Hereafter, both marketing practitioners and researchers should factor “ship-jumping” signals to understand opportunities outside the firm that may trigger low-motivation, social comparison and self-categorization.

We also show that the firm’s transience index (TI) helps account for a still unexplored idea - that turnover of marketing executives in firms with a high index of past “job-hopping” (executives with a history of quitting jobs more frequently) may make the firm’s prospects less bleak. We know that extant literature has looked at questions related to stability in buyer-supplier relationships (e.g., Eyuboglu and Buja 2007); and adaptation to an environment of frequent changes (e.g., Miller 1987; Miller and Friesen 1983). Nevertheless, through this research, both marketing practitioners and researchers now also know about the influence of a firm-level phenomena that captures executives’ “job-hopping” history. While firms do account for an executive’s professional history and job-hopping behavior (e.g., Fallick, Fleischman and Rebitzer 2006), we contribute to current literature by showing that executives’ history of

transience should also be studied as a collective, firm-level construct that can be leveraged as a means to attenuate the debilitating influence of marketing executives turnover on firm performance.

Besides, we highlight the disciplining role of financial leverage (or debt to assets ratio) during turnover. We contribute to extant literature by empirically testing the attenuating influence of firm's debt index on the negative association between marketing executives' turnover and firm performance. While Hancock et al.'s (2013) meta-analysis on 24,943 turnovers calls for study of organization size as a potential moderator, we extend this stream of literature by showing that the firm's debt can serve as a quality signal as it is an effective anti-takeover device that helps minimize MET-based disruption to firm performance. Hereafter, firms with financial (debt) resources must account for its role as a managerial disciplining mechanism during marketing executives' turnover; as probability of default generates information useful for shareholders, firms may see greater opportunities for better marketing decision making and actions. Such information is specially consequential when marketing actions and related buyer-supplier relationships come under stress due to marketing executives' turnover.

Limitations, Further Research and Conclusion

Our biggest limitation is that we use secondary data to study the negative impact of marketing executives' turnover. Nevertheless, our perspective on disruption-adaptation tradeoff of such turnover could be extended through an in-depth survey of managers responsible for boundary-spanning roles. For example, in future research, a cross-industry survey could research the influence of turnover related to the behaviors and overall marketing organization.

We seek to understand the impact of disruption in buyer-supplier relationships resulting from marketing executives' turnover. While we explore firm-level contingencies, the overarching finding of this research is that changes due to marketing executives' turnover hurt firm performance, since MET magnifies disruption and hurts buyer-supplier relationships.

References

- Abe, Yukiko (1997), "Chief Executive Turnover and Firm Performance in Japan," *Journal of the Japanese and International Economies*, 11(1), 2-26.
- Anderson, Eugene W., Claes Fornell, and Sanal K. Mazvancheryl (2004), "Customer Satisfaction and Shareholder Value," *Journal of Marketing*, 68 (4), 172–85.
- Anderson, Eugene W., and Sattar A. Mansi (2009), "Does Customer Satisfaction Matter to Investors? Findings From the Bond Market," *Journal of Marketing Research*, 46(5), 703-714.
- Arellano, Manuel and Stephen Bond (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *Review of Economic Studies*, 58 (2), 277–97.
- Aronowitz, Steven, Aaron De Smet, and Deirdre McGinty (2015), "Getting Organizational Redesign Right," *McKinsey Quarterly*, June, 1-11.
- Ballinger, Gary A., and Jeremy J. Marcel (2010), "The Use of An Interim CEO During Succession Episodes and Firm Performance," *Strategic Management Journal*, 31(3), 262-283.
- Bartram, Söhnke M (2007), "Corporate Cash Flow and Stock Price Exposures to Foreign Exchange Rate Risk," *Journal of Corporate Finance*, 13(5), 981-994.
- Bharadwaj, Anandhi S., Sundar G. Bharadwaj, and Benn R. Konsynski (1999), "Information Technology Effects on Firm Performance as Measured by Tobin's Q," *Management Science*, 45 (6), 1008–1024.
- Boles, James S., George W. Dudley, Vincent Onyemah, Dominique Rouzies, and William A. Weeks. "Sales Force Turnover and Retention: A Research Agenda," *Journal of Personal Selling & Sales Management*, 32(1), 131-140.
- Bourgeois, L. Jay (1981), "On the Measurement of Organizational Slack," *Academy of Management Review*, 6(1), 29-39.
- Boyd, D. Eric, Rajesh K. Chandy, and Marcus Cunha Jr. (2010), "When Do Chief Marketing Officers Affect Firm Value? A Customer Power Explanation," *Journal of Marketing Research*, 47 (December), 1162-76.
- Cao, Qing, Likoebe M. Maruping, and Riki Takeuchi (2006), "Disentangling the Effects of CEO Turnover and Succession on Organizational Capabilities: A Social Network Perspective," *Organization Science*, 17(5), 563-576.
- Carson, Paula Phillips, and Kerry David Carson (2007), "Demystifying Demotion: A Look At the Psychological and Economic Consequences on The Demotee," *Business Horizons*, 50(6), 455-466.

- Chakravarti, Amitav, and Jinhong Xie (2006), "The Impact of Standards Competition on Consumers: Effectiveness of Product Information and Advertising Formats," *Journal of Marketing Research*, 43(2), 224-236.
- Chakravarty, Anindita, and Rajdeep Grewal (2016), "Analyst Earning Forecasts and Advertising and R&D Budgets: Role of Agency Theoretic Monitoring and Bonding Costs," *Journal of Marketing Research*, 53(4), 580-596.
- Challagalla, Goutam, Brian R. Murtha, and Bernard Jaworski (2014), "Marketing Doctrine: A Principles-Based Approach to Guiding Marketing Decision Making in Firms," *Journal of Marketing*, 78 (4), 4-20.
- Chang, Woojung, and Steven A. Taylor (2016), "The Effectiveness of Customer Participation in New Product Development: A Meta-Analysis." *Journal of Marketing*, 80 (January), 47-64.
- Chen, Zoey, and Nicholas H. Lurie (2013), "Temporal Contiguity and Negativity Bias in The Impact of Online Word of Mouth," *Journal of Marketing Research*, 50(4), 463-476.
- Chung, Kee H. and Stephen W. Pruitt (1994), "A Simple Approximation of Tobin's Q," *Financial Management*, 23 (Autumn), 70-74.
- Cohen, Michael D., James G. March and Johan P. Olsen (1972), "A Garbage Can Model of Organizational Choice," *Administrative Science Quarterly*, 17(1), 1-25.
- Cron, William L., Artur Baldauf, Thomas W. Leigh, and Samuel Grossenbacher (2014), "The Strategic Role of The Sales Force: Perceptions of Senior Sales Executives," *Journal of the Academy of Marketing Science*, 42 (5), 471-489.
- Darmon, René Y. (1990), "Identifying Sources of Turnover Costs: A Segmental Approach," *Journal of Marketing*, 54(2), 46-56.
- Darmon, René Y. (2008), "The Concept of Salesperson Replacement Value: A Sales Force Turnover Management Tool," *Journal of Personal Selling & Sales Management*, 28(3), 211-232.
- Deloof, Marc (2003), "Does Working Capital Management Affect Profitability of Belgian Firms?," *Journal of Business Finance & Accounting*, 30(3-4), 573-588.
- Dong, Beibei, Shaoming Zou, and Charles R. Taylor (2008), "Factors that Influence Multinational Corporations' Control of their Operations in Foreign Markets: An Empirical Investigation," *Journal of International Marketing*, 16(1), 98-119.
- Eisenhardt, Kathleen M (1989), "Agency Theory: An Assessment and Review," *Academy of Management Review*, 14(1), 57-74.
- Ernst, Holger, Wayne D. Hoyer, and Carsten R`ubsamen (2010), "Sales, Marketing, and Research-and-Development Cooperation Across New Product Development Stages: Implications for Success," *Journal of Marketing*, 74 (September), 80-92.

- Esper, Terry L., Alexander E. Ellinger, Theodore P. Stank, Daniel J. Flint, and Mark Moon (2010), "Demand and Supply Integration: A Conceptual Framework of Value Creation Through Knowledge Management," *Journal of the Academy of Marketing Science*, 38(1), 5-18.
- Eyuboglu, Nermin, and Andreas Buja (2007), "Quasi-Darwinian Selection in Marketing Relationships," *Journal of Marketing*, 71(4), 48-62.
- Fahlenbrach, Rüdiger, Angie Low, and René M. Stulz (2010), "The Dark Side of Outside Directors: Do They Quit When They Are Most Needed?" Working Paper No. 15917, National Bureau of Economic Research.
- Fallick, Bruce, Charles A. Fleischman, and James B. Rebitzer (2006), "Job-Hopping in Silicon Valley: Some Evidence Concerning the Microfoundations of A High-Technology Cluster," *The Review of Economics and Statistics*, 88(3), 472-481.
- Feldman, Daniel C., and Jeanne M. Brett (1983), "Coping With New Jobs: A Comparative Study of New Hires and Job Changers," *Academy of Management Journal*, 26(2), 258-272.
- Feng, Hui, Neil A. Morgan, and Lopo L. Rego (2015), "Marketing Department Power and Firm Performance," *Journal of Marketing*, 79 (September), 1–20.
- Feng, Hui, Neil A. Morgan, and Lopo L. Rego (2017), "Firm Capabilities and Growth: The Moderating Role of Market Conditions," *Journal of the Academy of Marketing Science*, 45(1), 76-92.
- Finkelstein, Sydney (1992), "Power in Top Management Teams: Dimensions, Measurement, and Validation," *Academy of Management Journal*, 35 (3), 505–538.
- Fischer, Marc, Peter SH Leeflang, and Peter C. Verhoef (2010), "Drivers of Peak Sales for Pharmaceutical Brands," *Quantitative Marketing and Economics* 8(4), 429-460.
- Fisher, Robert J., Elliot Maltz, and Bernard J. Jaworski (1997), "Enhancing Communication Between Marketing and Engineering: The Moderating Role of Relative Functional Identification," *Journal of Marketing* , 61 (3), 54-70.
- Frazier, Gary L., Bernard J. Jaworski, Ajay K. Kohli, and Barton A. Weitz (1994), "Buyer-Supplier Relational Characteristics and Joint Decision Making," *Marketing Letters*, 5 (3), 259-270.
- Germann, Frank, Ebbes, Peter, and Grewal, Rajdeep (2015), "The Chief Marketing Officer Matters!," *Journal of Marketing*, 79(3), 1-22.
- Giambatista, Robert C., W. Glenn Rowe, and Suhaib Riaz (2005), "Nothing Succeeds Like Succession: A Critical Review of Leader Succession Literature Since 1994," *The Leadership Quarterly*, 16(6), 963-991.

- Gibbons, Robert (2003), "Team Theory, Garbage Cans and Real Organizations: Some History and Prospects of Economic Research on Decision-Making in Organizations," *Industrial and Corporate Change*, 12(4), 753-787.
- Gong, Shiyang, Juanjuan Zhang, Ping Zhao, and Xuping Jiang (2016), "Tweeting As A Marketing Tool—Field Experiment in the TV Industry," *Journal of Marketing Research*, 54(6), 833-850.
- Greiner, Larry, Thomas Cummings, and Arvind Bhambri (2003), "4-D Theory of Strategic Transformation: When New CEOs Succeed and Fail," *Organization Dynamics*, 32(1), 1-16.
- Grewal, Rajdeep, Murali Chandrashekar, and Alka V. Citrin (2010), "Customer Satisfaction Heterogeneity and Shareholder Value," *Journal of Marketing Research*, 47 (August), 612–26.
- Gu, Feng and John Li (2007), "The Credibility of Voluntary Disclosure and Insider Stock Transactions," *Journal of Accounting Research*, 45 (4), 771–810.
- Guenzi, Paolo, and Gabriele Troilo (2006), "Developing Marketing Capabilities for Customer Value Creation Through Marketing–Sales Integration," *Industrial Marketing Management*, 35(8), 974-988.
- Han, Kyuhong, Vikas Mittal, and Yan Zhang (2017), "Relative Strategic Emphasis and Firm Idiosyncratic Risk: The Moderating Role of Relative Performance and Demand Instability," *Journal of Marketing*, 81(4), 25-44.
- Hancock, Julie I., David G. Allen, Frank A. Bosco, Karen R. McDaniel, and Charles A. Pierce (2013), "Meta-Analytic Review of Employee Turnover As A Predictor of Firm Performance," *Journal of Management*, 39 (3), 573-603.
- Hansen, Jared M., Robert E. McDonald, and Ronald K. Mitchell (2013), "Competence Resource Specialization, Causal Ambiguity, and the Creation and Decay of Competitiveness: The Role of Marketing Strategy in New Product Performance and Shareholder Value," *Journal of the Academy of Marketing Science*, 41(3), 300-319.
- Harris, Milton, and Artur Raviv (1988), "Corporate Control Contests and Capital Structure," *Journal of Financial Economics*, 20 (January-March), 55-86.
- Harris, Milton, and Artur Raviv (1990), "Capital Structure and the Informational Role of Debt," *The Journal of Finance*, 45(2), 321-349.
- Hausknecht, John P., Charlie O. Trevor, and Michael J. Howard (2009), "Unit-Level Voluntary Turnover Rates and Customer Service Quality: Implications of Group Cohesiveness, Newcomer Concentration, and Size," *Journal of Applied Psychology*, 94(4), 1068-1075.
- Hayes, Andrew F., and Klaus Krippendorff (2007), "Answering The Call For A Standard Reliability Measure For Coding Data," *Communication Methods and Measures*, 1(1), 77-89.

- Heavey, Angela L., Jacob A. Holwerda, and John P. Hausknecht (2013), "Causes and Consequences of Collective Turnover: A meta-analytic review," *Journal of Applied Psychology*, 98(3), 412-453.
- Hewett, Kelly and William O. Bearden (2001), "Dependence, Trust, and Relational Behavior on the Part of Foreign Subsidiary Marketing Operations: Implications for Managing Global Marketing Operations," *Journal of Marketing*, 65 (October), 51-66.
- Hom, Peter W., Thomas W. Lee, Jason D. Shaw, and John P. Hausknecht (2017), "One Hundred Years of Employee Turnover Theory and Research," *Journal of Applied Psychology*, 102(3), 530-545.
- Homburg, Christian, Ove Jensen, and Alexander Hahn, (2012) "How to Organize Pricing? Vertical Delegation and Horizontal Dispersion of Pricing Authority," *Journal of Marketing* 76 (5), 49-69.
- Hult, G. Tomas M (2011), "Toward A Theory of The Boundary-Spanning Marketing Organization and Insights From 31 Organization Theories," *Journal of the Academy of Marketing Science*, 39 (4), 509-536.
- Hurley, Robert F., and Hooman Estelami (2007), "An Exploratory Study of Employee Turnover Indicators as Predictors of Customer Satisfaction," *Journal of Services Marketing*, 21(3), 186-199.
- Ingram, Thomas N., Keun S. Lee, and Steven J. Skinner (1989), "An Empirical Assessment of Salesperson Motivation, Commitment, and Job Outcomes," *Journal of Personal Selling & Sales Management*, 9(3), 25-33.
- Jensen, Michael C. (1986), "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *The American Economic Review*, 76(2), 323-329.
- Jensen, Michael C., and William H. Meckling (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3(4), 305-360.
- Ji, Yong-Yeon, James P. Guthrie, and Jake G. Messersmith (2014), "The Tortoise and The Hare: The Impact of Employment Instability on Firm Performance," *Human Resource Management Journal*, 24(4), 355-373.
- Johansson, Tobias, and Johan Kask (2013), "On the Promise and Premises of a Darwinian Theory in Research on Business Relationships," *Industrial Marketing Management*, 42(3), 306-315.
- Karmarkar, Uday S. (1996), "Integrative Research in Marketing and Operations Management," *Journal of Marketing Research*, 33(2), 125-133.
- Kelley, Harold H. (1973), "The Processes of Causal Attribution," *American Psychologist*, 28(2), 107-128.
- Kesner, Idalene F., and Terrence C. Sebor (1994), "Executive Succession: Past, Present & Future," *Journal of Management*, 20(2), 327-372.

- Kim, MinChung, and Leigh M. McAlister (2011), "Stock Market Reaction to Unexpected Growth in Marketing Expenditure: Negative for Sales Force, Contingent on Spending Level for Advertising," *Journal of Marketing*, 75(4), 68-85.
- Krasnikov, Alexander and Satish Jayachandran (2008), "The Relative Impact of Marketing, Research-and-Development, and Operations Capabilities on Firm Performance," *Journal of Marketing*, 72 (July), 1-11.
- Kurt, Didem and John Hulland (2013), "Aggressive Marketing Strategy Following Equity Offerings and Firm Value: The Role of Relative Strategic Flexibility," *Journal of Marketing*, 77(5), 57-74.
- Lee, Ju-Yeon, Irina V. Kozlenkova, and Robert W. Palmatier (2015), "Structural Marketing: Using Organizational Structure to Achieve Marketing Objectives," *Journal of the Academy of Marketing Science*, 43 (1), 73-99.
- Lee, Ruby P. and Rajdeep Grewal (2004), "Strategic Responses to New Technologies and Their Impact on Firm Performance," *Journal of Marketing*, 68 (October), 157-71.
- Lucas Jr, George H., A. Parasuraman, Robert A. Davis, and Ben M. Enis (1987), "An Empirical Study of Salesforce Turnover," *Journal of Marketing*, 51(3), 34-59.
- Luo, Xueming and C. B. Bhattacharya (2009), "The Debate over Doing Good: Corporate Social Performance, Strategic Marketing Levers, and Firm-Idiosyncratic Risk," *Journal of Marketing*, 73 (6), 198-213.
- Luo, Xueming, and Christian Homburg (2007), "Neglected Outcomes of Customer Satisfaction," *Journal of Marketing*, 71(April), 133-149.
- Madill, Judith J., George H. Haines Jr, and Allan L. Riding (2007), "Managing Customer Relationships: Account Manager Turnover and Effective Account Management," *Industrial Marketing Management*, 36 (2), 241-248.
- Madrian, Brigitte C., and Dennis F. Shea (2001), "The Power of Suggestion: Inertia in 401 (k) Participation and Savings Behavior," *The Quarterly Journal of Economics*, 116(4), 1149-1187.
- Maltz, Elliot, and Ajay K. Kohl (1996), "Market Intelligence Dissemination Across Functional Boundaries," *Journal of Marketing Research*, 33(1), 47-61.
- Marschak, Jacob, and Roy Radner (1972), *Economic Theory of Teams*, New Haven: Yale University Press.
- McAlister, Leigh, Raji Srinivasan, Niket Jindal and Albert A. Cannella (2016), "Advertising Effectiveness: The Moderating Effect of Firm Strategy," *Journal of Marketing Research*, 53(2), 207-224.
- McAlister, Leigh, Raji Srinivasan, and Min Chung Kim (2007), "Advertising, Research and Development and Systematic Risk of the Firm," *Journal of Marketing*, 71(1), 35-48.

- Messersmith, Jake G., Jeong-Yeon Lee, James P. Guthrie, and Yong-Yeon Ji (2013), "Turnover at the Top: Executive Team Departures and Firm Performance," *Organization Science*, 25(3), 776-793.
- Miller, Danny (1987), "The Structural and Environmental Correlates of Business Strategy," *Strategic Management Journal*, 8(1), 55-76.
- Miller, Danny, and Peter H. Friesen (1983), "Strategy-Making and Environment: The Third Link," *Strategic Management Journal*, 4(3), 221-235.
- Modigliani, Franco, and Merton H. Miller (1958), "The Cost of Capital, Corporation Finance and The Theory of Investment," *The American Economic Review*, 53(3), 433-443.
- Moorman, Christine, and George S. Day, (2016)"Organizing for Marketing Excellence," *Journal of Marketing*, 80 (6), 6-35.
- Morgan, Neil A., Eugene W. Anderson, and Vikas Mittal, (2005) "Understanding Firms' Customer Satisfaction Information Usage," *Journal of Marketing*, 69 (3), 131-151.
- Morgan, Neil A. and Lopo L Rego, (2009), "Brand Portfolio Strategy and Firm Performance," *Journal of Marketing*, 73(1), 59-74.
- Nath, Pravin, and Vijay Mahajan (2017), "Shedding Light on The CMO Revolving Door: A Study of the Antecedents of Chief Marketing Officer Turnover," *The Journal of the Academy of Marketing Science*, 1(45), 93-118.
- Nickell, Stephen (1981), "Biases in Dynamic Models With Fixed Effects," *Econometrica: Journal of the Econometric Society*, 49(6),1417-1426.
- Nwankwo, Sonny, Nana Owusu-Frimpong, and Frances Ekwulugo (2004), "The Effects of Organisational Climate on Market Orientation: Evidence from The Facilities Management Industry," *Journal of Services Marketing*, 18(2), 122-132.
- Obadia, Claude, Irena Vida, and José Pla-Barber (2017), "Differential Effects of Bilateral Norms on SMEs' Export Relationships: A Dynamic Perspective," *Journal of International Marketing* 25(3), 21-41.
- Park, Tae-Youn, and Jason D. Shaw (2013), "Turnover Rates and Organizational Performance: A Meta-Analysis," *Journal of Applied Psychology*, 98(2), 268-309.
- Pfeffer, Jeffrey and William L. Moore (1980), "Power in University Budgeting: A Replication and Extension," *Administrative Science Quarterly*, 25 (4), 637-5.
- Rego, Lopo L., Neil A. Morgan, and Claes Fornell (2013), "Reexamining the Market Share–Customer Satisfaction Relationship," *Journal of Marketing*, 77(5), 1-20.
- Richardson, Robert (1999), "Measuring the Impact of Turnover on Sales," *Journal of Personal Selling and Sales Management*, 19(4), 53-66.

- Rinehart, Lloyd M., M. Bixby Cooper, and George D. Wagenheim (1989), "Furthering the Integration of Marketing and Logistics through Customer Service in the Channel," *Journal of the Academy of Marketing Science*, 17(1), 63-71.
- Roodman, David (2009), "How to Do Xtabond2: An Introduction to Difference and System GMM in Stata," *Stata Journal*, 9 (1), 86–136
- Ross, Stephen A. (1977), "The Determination of Financial Structure: The Incentive-Signalling Approach," *The Bell Journal of Economics*, 8(1), 23-40.
- Rouziès, Dominique, Erin Anderson, Ajay K. Kohli, Ronald E. Michaels, Barton A. Weitz, and Andris A. Zoltners (2005), "Sales and Marketing Integration: A Proposed Framework," *Journal of Personal Selling & Sales Management*, 25(2), 113-122.
- Saboo, Alok R., Anindita Chakravarty, and Rajdeep Grewal (2016), "Organizational Debut on the Public Stage: Marketing Myopia and Initial Public Offerings," *Marketing Science*, 35 (4), 656–75.
- Sager, Jeffrey K., Charles M. Futrell, and Rajan Varadarajan (1989), "Exploring Salesperson Turnover: A Causal Model," *Journal of Business Research*, 18(4), 303-326.
- Sah, Raaj, and Joseph E. Stiglitz (1986), "The Architecture of Economic Systems: Hierarchies and Polyarchies," *American Economic Review*, 76(4), 716-727.
- Schepker, Donald J., Youngsang Kim, Pankaj C. Patel, Sherry MB Thatcher, and Michael C. Champion. "CEO Succession, Strategic Change, and Post-Succession Performance: A Meta-Analysis," *The Leadership Quarterly*, 28(6), 701-720.
- Segal, Dan, and Benjamin Segal (2013), "The Opportunistic Reporting of Material Events and the Apparent Misconception of Investors' Reaction," working paper, School of Accountancy, Singapore Management University.
- Semadeni, Matthew, Albert A. Cannella Jr, Donald R. Fraser, and D. Scott Lee (2008), "Fight or Flight: Managing Stigma in Executive Careers," *Strategic Management Journal*, 29(5), 557-567.
- Shah, Denish, V. Kumar, and Kihyun Hannah Kim (2014), "Managing Customer Profits: The Power of Habits," 51(6), 726-741.
- Shaw, Jason D., Nina Gupta, and John E. Delery (2005), "Alternative Conceptualizations of the Relationship Between Voluntary Turnover and Organizational Performance," *Academy of Management Journal*, 48(1), 50-68.
- Shi, Huanhuan, Shrihari Sridhar, Rajdeep Grewal, and Gary Lilien (2017), "Sales Representative Departures and Customer Reassignment Strategies in Business-to-Business Markets," *Journal of Marketing*, 81(2), 25-44.

- Sorescu, Alina B., and Jelena Spanjol (2008), "Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods," *Journal of Marketing*, 72 (March), 114–132.
- Srinivasan, Raji, Gary L. Lilien, and Shrihari Sridhar (2011), "Should Firms Spend More on Research and Development and Advertising During Recessions?," *Journal of Marketing*, 75(3), 49-65.
- Srinivasan, Raji, Arvind Rangaswamy, and Gary L. Lilien (2005), "Turning Adversity into Advantage: Does Proactive Marketing During A Recession Pay Off?," *International Journal of Research in Marketing*, 22(2), 109-125.
- Srinivasan, Shuba, Koen Pauwels, Jorge Silva-Risso, and Dominique M. Hanssens (2009), "Product Innovations, Advertising, and Stock Returns," *Journal of Marketing*, 73 (1), 24–43.
- Sunder, Sarang, V. Kumar, Ashley Goreczny, and Todd Maurer (2017), "Why Do Salespeople Quit? An Empirical Examination of Own and Peer Effects on Salesperson Turnover Behavior," *Journal of Marketing Research*, 54(3), 381-397.
- Tan, Justin, and Mike W. Peng (2003), "Organizational Slack and Firm Performance During Economic Transitions: Two Studies From An Emerging Economy," *Strategic Management Journal*, 24(13), 1249-1263.
- Tuli, Kapil R., and Sundar G. Bharadwaj (2009), "Customer Satisfaction and Stock Returns Risk," *Journal of Marketing*, 73(6), 184-197.
- Tuli, Kapil R., Sundar G. Bharadwaj, and Ajay K. Kohli (2010), "Ties That Bind: The Impact of Multiple Types of Ties with a Customer on Sales Growth and Sales Volatility," *Journal of Marketing Research*, 47 (February), 36–50.
- Tyagi, Pradeep K. (1982), "Perceived Organizational Climate and the Process of Salesperson Motivation," *Journal of Marketing Research*, 19(2), 240-254.
- Wang, Rui, Aditya Gupta, and Rajdeep Grewal (2017), "Mobility of Top Marketing and Sales Executives in Business-to-Business Markets: A Social Network Perspective." *Journal of Marketing Research*, 54(4), 650-670.
- Wang, Rui, Alok R. Saboo, and Rajdeep Grewal (2015) "A Managerial Capital Perspective on Chief Marketing Officer Succession," *International Journal of Research in Marketing*, 32(2), 164-178.
- Wiersema, Margarethe F., and Karen A. Bantel. "Top Management Team Turnover As An Adaptation Mechanism: The Role of the Environment," *Strategic Management Journal*, 14(7), 485-504.
- Zoltners, Andris A., Prabhakant Sinha, and Sally E. Lorimer (2008), "Sales Force Effectiveness: A Framework for Researchers and Practitioners," *Journal of Personal Selling & Sales Management*, 28(2), 115-131.

Table 1
Select Research on (mostly) Sales and (some) Marketing Turnovers

S.No	Research	Level of Turnover	Impact of Turnover on Firm Performance	Dependent Metric(s)	Main Findings
1	Lucas et al (1987)	Salesperson	No	Salesperson turnover	The findings relate salesperson demographic characteristics and job attitudes to turnover.
2	Sager, Futrell and Varadarajan (1989)	Salespeople	No	Salesperson turnover	First (formal) causal model of the turnover process for salespeople.
3	Darmon (1990)	Sales Force	No	Various salesperson level costs	Long-run profit impact of salesforce turnover.
4	Brown and Peterson (1993)	Salesperson	No	Propensity to leave	Organizational commitment has a negative impact on propensity to leave.
5	Richardson (1999)	Sales rep	Yes	Sales	Estimates the critical opportunity cost associated with the loss in sales encountered as the result of a salesperson's departure.
6	Johnson, Griffeth and Griffin (2000)	Salesperson	No	Turnover frequency and functionality	The study develops a new criterion for turnover functionality.
7	Hurley and Estelami (2007)	Store personnel	No	Customer Satisfaction	Turnover predicts customer satisfaction as effectively as employee satisfaction
8	Madill, Hanes and Riding (2007)	Account manager	No	Customer Satisfaction	In situations where account manager turnover is high, the relationship between the company and the client does not suffer if the account management turnover process is well managed.
9	Darmon (2008)	Salesperson	No	Various salesperson level costs/benefits	Costs (benefits) of salesperson turnover are arrived at on the basis of salesperson replacement value
10	Boles et al (2013)	Salesperson	No	Organizational performance	Sales turnover guided by social network theory and "shocks."
11	Shi et al (2017)	Sales reps	Yes	Sales	Sales rep transitions lead to 13.2%–17.6% losses in annual sales.
12	Sunder et al (2017)	Salesperson	No	Salesperson turnover	In addition to own behaviors, managers need to pay attention to peer behaviors because peer turnover (voluntary and involuntary) greatly increases a salesperson's turnover probability.
13	Nath and Mahajan (2017)	Chief Marketing Officer	No	CMO Turnover	CMO turnover increases if firms' sales growth is poor, while profitability has a similar though smaller effect when a new CEO is appointed.
14	Current research	Top Sales and Marketing Executives	Yes	Tobin's Q (and Sales)	

Table 2
SUMMARY OF MEASURES AND DATA SOURCES

Variable Description	Variable Operationalization	Source
Tobin Q	(Market Value of Equity+ Preferred stock +Debt)/Total Assets	COMPUSTAT, 10-ks
Marketing Executives' Turnover (MET)	1 if marketing executives' turnover occurs, else 0	Mostly 10-ks, Boardex; else Annual reports, LinkedIn
Average Time to Turnover (ATT)	Average time it takes a firm to change an executive	Mostly 10-ks, Boardex; else Annual reports, LinkedIn
Transience Index (TI)	Number of executives with history of multiple (>2) exits (across various firms)	Mostly 10-ks, Boardex; else Annual reports, LinkedIn
Demotions Index (DI)	Number of executives demoted in a given year	Mostly 10-ks, Boardex; else Annual reports, LinkedIn
Voluntary Exit Index (VEI)	Ratio of number of voluntary exits to total exits per year	Mostly 10-ks, Boardex; else Annual reports, LinkedIn
Firm's Debt Index (FDI)	Ratio of debt to equity	COMPUSTAT, 10-ks
Market Concentration (MC)	Herfindahl-Hirschmann index, sum of the square of market shares of all firms	COMPUSTAT, 10-ks
Innovation (I)	Ratio of research and development expense to assets	COMPUSTAT, 10-ks
Differentiation (D)	Ratio of advertising expense to assets	COMPUSTAT, 10-ks
Return on Assets (ROA)	Ratio of net income to assets	COMPUSTAT, 10-ks
Firm Size (FS)	Log number of employees; number of employees	COMPUSTAT, 10-ks
Positive Relative Performance (PRP)	Relative performance is firm's ROA minus reference point (median ROA by industry and year)	COMPUSTAT, 10-ks

Table 3
Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1 Tobin Q	1.0000																		
2 Marketing Executives' Turnover (MET)	-0.0770	1.0000																	
3 Average Time to Turnover (ATT)	-0.0520	0.0545	1.0000																
4 Transience Index (TI)	-0.0620	0.0687	-0.0508	1.0000															
5 Demotions Index (DI)	-0.0410	0.0389	-0.0280	0.1131	1.0000														
6 Voluntary Exit Index (VEI)	0.0180	-0.0056	0.0128	-0.1824	-0.0800	1.0000													
7 Market Concentration (MC)	0.0360	-0.0276	-0.0191	-0.0116	-0.0280	0.0480	1.0000												
8 Innovation (I)	0.0199	-0.0590	-0.0390	-0.0430	-0.0330	0.0150	-0.0160	1.0000											
9 Differentiation (D)	0.0954	-0.0217	-0.0172	-0.0161	-0.0180	0.0840	0.0690	0.1678	1.0000										
10 Return on Assets (ROA)	-0.0931	0.0186	0.0208	0.0153	-0.0144	-0.0800	-0.0186	-0.1640	-0.5403	1.0000									
11 Firm Size (FS)	-0.0480	0.0119	0.0268	0.0149	0.0200	-0.0730	0.0676	-0.0410	-0.0241	0.0370	1.0000								
12 Firm's Debt Index (FDI)	0.0242	-0.0200	-0.0450	-0.0015	-0.0600	0.0500	-0.0100	0.0910	0.0779	-0.1018	-0.0100	1.0000							
13 Positive Relative Performance (PRP)	-0.0219	-0.0539	-0.0472	-0.0257	-0.0250	0.0260	0.0381	-0.0335	-0.1791	0.2783	0.0463	-0.0226	1.0000						
14 MET × ATT	-0.0052	0.6699	0.2289	0.0169	0.0172	-0.0430	-0.0205	-0.0350	-0.0160	0.0141	0.0730	-0.0150	-0.0417	1.0000					
15 MET × TI	-0.0290	0.3726	-0.0700	0.3461	0.0615	0.0360	-0.0153	-0.0024	-0.0114	0.0740	0.0121	-0.0700	-0.0260	0.1714	1.0000				
16 MET × DI	-0.0190	0.2434	0.0860	0.0716	0.3068	-0.0160	-0.0750	-0.0160	-0.0680	0.0350	0.0100	-0.0600	-0.0213	0.1497	0.2382	1.0000			
17 MET × FDI	-0.0100	0.0164	-0.0130	0.0810	-0.0300	-0.0500	0.0200	-0.0600	-0.0540	-0.0123	0.0840	0.0213	-0.0284	0.0460	0.0249	0.0490	1.0000		
18 MET × VEI	0.0400	-0.0132	-0.0730	0.0763	-0.0410	0.0275	0.0700	0.0510	-0.0700	0.0150	0.0300	-0.0300	0.0600	-0.0276	0.2027	-0.0132	-0.0162	1.0000	

Table 4
Marketing Executives' Turnover - Firm Performance Relationship: Arellano-Bond Estimation

Model	M1	M2	M3	M4	M5		
Dependent Variable		Tobin's Q					
Main Effects							
Δ Marketing Executives' Turnover (MET)	-5.65***		-6.02***	-1.88**	-5.72***	H1	
Δ Demotions Index (DI)				7.25	-5.27		
Δ Voluntary Exit Index (VEI)				1.24	0		
Δ Average Time to Turnover (ATT)				1.09***	0.6		
Δ Transience Index (TI)				2.2	1.92		
Δ Firm's Debt Index (FDI)			-0.14	0.28	-1.55**		
Interactions							
Δ (MET × DI)					-10.21**	H2	
Δ (MET × VEI)					-7.92**	H3	
Δ (MET × ATT)					-0.01	H4	
Δ (MET × TI)					2.89**	H5	
Δ (MET × FDI)					17.27***	H6	
Control Variables							
Δ Market Concentration (MC)		10.73	-2.07	-14.95***	-11.38**		
Δ Innovation (I)		-0.21	-0.15	-0.59	-0.12		
Δ Differentiation (D)		0.7	0.82	1.58**	1.84***		
Δ Return on Assets (ROA)		-0.49	-1.74***	-2.61***	-2.15***		
Δ Firm Size (FS)		-0.01	0.18**	0.15	0.13		
Δ Positive Relative Performance (PRP)		-0.08	-0.34	1.09***	0.6		
Δ Lag DV	0.11**	0.21***	-0.05	0.07	0.03		
Constant	2.03***		2.10***	1.29**	2.02***		
Specification Tests							
Number of instruments	16	28	30	38	47		
F-test statistic	93.86	21.92	21.11	11.98	9.2		
Degrees of freedom	10291	10187	10187	9429	9429		
AR(I) test z score	0.00	0	0.00	0.00	0.00		
AR(II) test z score	0.06	0.125	0.014	0.785	0.47		

***p < .01, **p < .05, and *p < .10

Notes: n = 66,408

Web Appendix

Table W1

Marketing Executives' Turnover - Firm Performance Relationship: Arellano-Bond Estimation

Model	M1	M2	M3	M4
Dependent Variable			Log Sales	
Main Effects				
Δ Marketing Executives' Turnover (MET)	-0.0278**	-0.2964**	-0.3434***	-0.2141**
Δ Demotions Index (DI)			0.1432	0.0018
Δ Voluntary Exit Index (VEI)			-0.0019	0.0105
Δ Average Time to Turnover (ATT)			0.0010***	0.0012***
Δ Transience Index (TI)			-0.0629**	-0.1782***
Δ Firm's Debt Index (FDI)		0.0491**	0.0958**	-0.0938
Interactions				
Δ (MET × DI)				0.0344
Δ (MET × VEI)				-1.3891**
Δ (MET × ATT)				-0.0048
Δ (MET × TI)				0.4782***
Δ (MET × FDI)				0.3440**
Control Variables				
Δ Market Concentration (MC)		-3.3130***	-3.1877***	-2.6770***
Δ Innovation (I)		0.0100***	0.0103***	0.0102***
Δ Differentiation (D)		-0.0224***	-0.0138***	-0.0135***
Δ Return on Assets (ROA)		0.0015**	0.0019***	0.0031***
Δ Firm Size (FS)		0.0032***	0.0027***	0.0020***
Δ Positive Relative Performance (PRP)		0.1143***	0.1089***	0.0849***
Δ Lag DV	0.8147***	0.7758***	0.7781***	0.7864***
Constant	1.0212***	1.2838***	1.2301***	1.2383***
Specification Tests				
Number of instruments		111	155	206
F-test statistic	232	2138.57	5572.26	4487.86
Degrees of freedom	10610	10359	9627	9627
AR(I) test z score		0.00	0.00	0.00
AR(II) test z score		0.293	0.936	0.737

***p < .01, **p < .05, and *p < .10

Notes: n = 66,408

Table W2
Marketing Executives' Turnover - Firm Performance Relationship:
FGLS (Gong et al 2017) on Unanticipated Changes in Independent
Variables (Tuli and Bhardwaj 2009)

Model	Full Model
Dependent Variable	Tobin's Q
Main Effects	
Δ Marketing Executives' Turnover (MET)	-0.2056*
Δ Demotions Index (DI)	-0.0263***
Δ Voluntary Exit Index (VEI)	-0.6468
Δ Average Time to Turnover (ATT)	-0.0030
Δ Transience Index (TI)	-0.0998***
Δ Firm's Debt Index (FDI)	-0.1986***
Interactions	
Δ (MET × DI)	0.2248
Δ (MET × VER)	0.7111
Δ (MET × ATT)	0.0026***
Δ (MET × TI)	0.1555***
Δ (MET × FDI)	0.2035***
Control Variables	
Δ Market Concentration (MC)	0.0286
Δ Innovation (I)	0.0397
Δ Differentiation (D)	0.2166***
Δ Return on Assets (ROA)	-0.0550***
Δ Firm Size (FS)	0.0002***
Δ Positive Relative Performance (PRP)	0.0074
Δ Lag DV	0.1368***
Constant	-0.1113***

Post-hoc analysis

We also undertake a post-hoc analysis that accounts for an external shock that may have influenced overall personnel changes or net turnover (exits *and* appointments) across multiple industries. We present this analysis on a subset of data one year before and after the external shock – last financial crisis as defined by the National Bureau of Economic Research (December 2007 – June 2009). Instead of focusing only on exits, this post-hoc analysis broadens the perspective by accounting for overall personnel changes – annual appointments *minus* annual exits - per firm year before and after the financial crisis – assuming that the financial crisis could also have had an impact on personnel changes. In doing so, our goal is to offer firms guidance so that managers can measure firm performance consequences of “net turnover” (annual appointments *minus* annual exits).

Figure W1 shows the average marginal effect of these overall personnel changes – annual appointments *minus* annual exits - on firm performance (Tobin’s q) by industry. As Figure W1 shows, such personnel changes and fluid participation hurts most industries. On average, the negative association is strong for most industries. It is strongest for agricultural production, miscellaneous repair services, services (not elsewhere classified), tobacco and insurance etc. However, there are industries that just manage to scrape through, displaying a weak association between overall personnel changes and firm performance. These include educational services, chemical and allied products and local and suburban transit and interurban highway transportation. However, it is worth noting that overall personnel changes do not help any of the industries outperform the average (1.41) Tobin’s q. Therefore, from a managerial perspective, practitioners can account for the implications specific to their given industry.

Figure W1

Average Marginal Effect of Net Turnover (Annual Appointments minus Annual Exits) on Tobin's q by Industry
 On average, Turnover does not help industries over perform the average (1.41) Tobin's q

