My Manager Moved! Manager Mobility and Subordinates' Career Outcomes

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Abstract. How do managers' moves across jobs affect the subordinates they leave behind? Manager mobility disrupts established manager-subordinate relationships, as subordinates must now learn to work with a replacement. We explore how this relational disruption affects subordinates' objective career success – specifically their financial rewards and subsequent promotion chances. We argue that manager mobility may have both positive and negative implications for subordinate outcomes. The loss of an established relationship may reduce subordinates' performance and managers' propensity to reward them; on the other hand, relational disruption may make subordinates more willing and able to seek out valuable opportunities elsewhere in the organization. We also argue that these effects are likely to be greatest for those subordinates who had worked with the previous manager for longer. Using eight years of personnel data from the US offices of a Fortune 500 healthcare company, we show how managers' mobility is associated with a decrease in subordinates' financial rewards, but an increase in their promotion prospects.

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Managers play a central role in shaping subordinates' careers. They provide direction and resources that impact subordinate performance, they allocate financial rewards and they facilitate upward mobility through promotions. Yet, just as subordinates pursue careers by moving jobs, so also will their managers frequently move to another job, either in the same organization or in a different one. Formally, such manager mobility simply leads to the replacement of one manager with another carrying out the same role. Informally, though, it replaces a familiar manager with whom the subordinate has an established relationship with somebody that the subordinate likely will not know. As Granovetter (1992, p. 34) notes, "How a worker and supervisor interact is determined not only by the meaning of these categories in a technical division of labor, but also by the kind of personal relationship they have, which is determined largely by a history of interactions." Managerial mobility disrupts these personal relationships, replacing that history of interactions with an entirely new relationship. What effect does this disruption have on a subordinate's rewards and subsequent mobility?

While much attention has been paid to the direct effects of job mobility on the person who moves (e.g. Bidwell and Mollick 2015, Dreher and Cox Jr. 2000, Keller 2018), we know much less about the indirect effects of mobility, as one person's mobility – in this case the manager's – shapes the careers of those around them.[1] What literature that there is on these indirect effects of mobility, often described as "career interdependence" (Barnett and Miner 1992), has tended to focus on two specific externalities from job mobility. First, research on vacancy chains examines how one person's exit out of a job creates a vacancy that other people can fill (Stewman 1986, White 1970). Second, studies of turnover contagion have highlighted how one person's exit from an organization is often followed by turnover by their colleagues (Felps et al. 2009, Krackhardt and Porter 1986) and subordinates (Ballinger et al. 2010, Li et al. 2019, Shapiro et al. 2016). Much less attention has been paid to effects of job mobility on relational disruption, despite its potential to affect multiple aspects of employees' day-to-day lives. Anderson and

[1] Beyond research on career consequences, some broader research on affect does explore how involuntary mobility affects the attitudes of survivors (Armstrong-Stassen et al. 2004, Shah 2000)

Haas (2020) propose that the loss of coworkers can reshape employees' access to knowledge. We suggest that relational disruption will have more far-reaching consequences when it is a manager that moves jobs, as employees lose an established relationship that shapes how they perform work and secure support, and must build a new relationship with the manager's replacement.

Of course, the challenges of relational disruption can also be encountered when employees themselves move, forcing them to develop relationships with new managers and colleagues. Yet we believe that there are particular advantages to studying the relational disruption wrought by manager mobility. Studying the effects of relational disruption that comes from a manager's move allows us to understand how the dynamics of managers' careers end up affecting their subordinates independent of the actions of those subordinates. Such an approach complements and extends efforts to catalog the external influences that shape careers above and beyond individuals' abilities and efforts (Anderson et al. 2019, e.g. Chattopadhyay and Choudhury 2017, Tilcsik 2014). Moreover, examining relational disruption through the lens of manager mobility allows us to develop a much more precise picture of its effects than we can by studying employee mobility. When employees move jobs, they must master new tasks, learn a new organizational context, build relationships with new colleagues and establish a relationship with a new manager. Because all of these challenges are intertwined, we know little about the specific issues raised by the disruption of the manager-subordinate relationship. When it is the manager that moves, though, these other aspects of the subordinate's job are held constant, providing a more precise lens for understanding the impact of relational disruption.

We explore these disruptive effects of manager mobility by drawing on theories of relational embeddedness. Relational theories propose that trust and mutual understanding between exchange partners evolves over time, improving the quality of their collaboration and also making them more likely to bestow favors on one another (Bidwell and Fernandez-Mateo 2010, Nahapiet and Ghoshal 1998, Uzzi and Lancaster 2003). These theories also suggest that those relational benefits may reduce the partners' propensity to seek out new counterparties (Gargiulo and Benassi 2000, Gargiulo and Ertug 2006). We draw on these ideas to make predictions about how managerial mobility will affect subordinates'

subsequent financial rewards and rates of promotion. We suggest that managerial mobility may reduce financial rewards through two potential pathways – by negatively affecting subordinates' actual performance, and by reducing managers' propensity to provide subordinates with discretionary rewards, a propensity that we describe as "sponsorship". We argue that these reductions in performance and sponsorship may also impede subordinates' promotion. At the same time, though, we suggest that managerial mobility may sometimes be associated with increased promotion rates into other parts of the organization by increasing subordinates' willingness and ability to take such promotions. We also suggest that manager mobility will have greater effects when it disrupts a manager-subordinate relationship of longer duration.

We examine these dynamics using eight years of personnel data from the US offices of a Fortune 500 healthcare company, which we call *Asclepius*. We find that manager mobility is associated with a subsequent decline in subordinates' financial rewards but also increased rates of promotion into other groups. We also find that these effects are stronger for those subordinates who had worked for longer with their prior manager. Supplementary analyses shed light on the mechanisms behind these effects. Comparisons of different performance metrics suggest that our results more strongly reflect changes in managerial sponsorship rather than changes in actual performance. We also show that our effects are not driven by manager time-in-job and that they are largely consistent across different forms of manager mobility (voluntary exit, involuntary exit, promotion, etc.). Together, these analyses increase confidence that our results are attributable to changes in manager-subordinate relationship duration as opposed to the challenges that the new managers face as they seek to master their new positions, particular behaviors adopted by incoming managers, or the reasons underlying a manager's move (e.g. poor performance).

Our study highlights managerial mobility as an important influence on subordinate career outcomes. We also advance a relational approach to understanding career interdependence by articulating how the regular mobility of employees within and across organizations disrupts access to resources and support for those that they work with. We believe that our focus on relational disruption provides a promising lens for understanding the effects of managerial mobility on these workers, substantially

expanding our understanding of career interdependence. We also highlight how the study of managerial mobility provides a new lens for understanding the role of informal manager-subordinate relationships in shaping career outcomes, illuminating the importance of those relationships for subordinates.

THEORY DEVELOPMENT

In this study, we focus on the effects of managerial mobility on subordinates' "objective career success," defined as the level of pay and numbers of promotions that a person achieves (Judge et al. 1995, Ng et al. 2005, Seibert et al. 1999). The dynamics of managers' careers lead them to regularly move jobs both within and between organizations. Such managerial mobility is itself the outcome of diverse individual and organizational dynamics, but it is largely outside the subordinates' control and unlikely to reflect the subordinates' own performance, skills, abilities or motivation. Although a number of studies have explored how the external shock of managerial mobility might affect subordinates' propensity to leave the organization (Ballinger et al. 2010, Li et al. 2019, Shapiro et al. 2016), we know less about how managerial mobility affects the career success of those who remain within the organization. That question is the focus of the current study.

In particular, we develop a relational perspective on the effects of manager mobility, focusing on the way that mobility disrupts the manager-subordinate relationship. In the interests of intellectual parsimony, our theory development abstracts away from a number of other processes by which a change in managers might affect subordinates, such as the way that new managers struggle to master their new role and establish their authority, or the way that a change in managers might motive subordinates to work hard to make a good first impression. We similarly do not build theory on the effects of manager mobility on vacancy chains (Stewman and Konda 1983). We do, though, seek to account for these other pathways by which manager mobility might affect subordinates' careers in our empirical work.

In developing theory on the career effects of manager mobility, we build on prior research that demonstrates the critical role that immediate managers play in shaping career success. In part, managers do so by shaping subordinates' performance, by which we mean the actual contributions that subordinates make to the organization's success. Managers assign and shape tasks; they provide resources; and they

offer coaching and guidance to help get the work done. As a consequence, prior research has found significant relationships between how leaders treat subordinates and objective measures of subordinate performance (Gerstner and Day 1997). This subordinate performance then contributes to career success, as organizations reward higher performers with more pay and promotions (Baker et al. 1994, Cappelli and Conyon 2018, Rosenbaum 1979).

Managers also shape subordinates' career success by providing financial rewards and securing advancement opportunities above and beyond those that the subordinates' actual performance might warrant. Consistent with previous work highlighting managers' ability to reward those subordinates they prefer, we refer to this behavior as "sponsorship" (Seibert et al. 2001, Turner 1960). Managers may, for example, provide favored subordinates with inflated performance ratings (Judge and Ferris 1993), increasing their eligibility for organizational rewards. Managers also often have significant discretion in directly determining raises and performance-related pay (Heneman and Cohen 1988, Markham 1988), and their recommendations for promotion have great weight in mobility processes. As a consequence, workers who receive more support from their managers achieve faster salary progression and are perceived as more promotable (Wayne et al. 1999). We propose that these effects on manager rewards are likely to change when managers move jobs.

Manager Mobility and Relational Disruption

Theories of relational embeddedness (Granovetter 1992, Nahapiet and Ghoshal 1998) suggest that relational disruption will affect how subordinates and managers work together. Those theories emphasize that even within formal relationships such as that between manager and subordinate, interactions are strongly shaped by the nature of the informal relationship, which is built over time and reflects their shared history together. When a subordinate's manager moves, their established relationship with that manager is lost; instead, the subordinate must learn to work with a new manager with whom they lack such a relationship. We suggest that this change in the relational embeddedness of the manager and subordinate reshapes their interactions with implications for rewards and mobility. Although the literature on embeddedness also highlights the importance of structural embeddedness, as dense networks of

relationships around a pair of actors helps to shape how they interact with one another (Coleman 1988, Granovetter 1992), it is less clear how managerial mobility will affect such structural embeddedness. Given the way that formal structures foster relationships within the work team, subordinates' relationships with both prior and new manager are likely to be surrounded by a similarly dense network with shared alters. Any changes to the structural embeddedness of the manager-subordinate relationship are therefore likely to be secondary to the more direct effects that manager mobility will have on relational embeddedness. It is these changes to relational embeddedness that we therefore focus on in this study.

Specifically, the relational embeddedness literature highlights two ways in which actors in new relationships will behave differently to those in more established relationships. First, new relationships are associated with a lower degree of knowledge about and trust between the parties (Nahapiet and Ghoshal 1998, Reagans et al. 2005). Working together allows partners to observe each other's behavior over time and learn about their expectations, strengths and weaknesses (Bidwell and Fernandez-Mateo 2010, Reagans et al. 2005). Even where participants in a new relationship are highly motivated to work well together, a lack of knowledge about one another will inhibit their collaboration (Gerstner and Day 1997, Nahrgang et al. 2009). As participants get to know each other, they are also more likely to establish trust between them. Vanneste et al's (2014) meta-analysis found that trust is associated with longer relationships, and experiments (Kollock 1994), studies of peer relationships among managers (McAllister 1995), and analyses of inter-firm relationship (Larson 1992) have all found higher trust among partners with a longer history of interaction. Participants in a new relationship should therefore have less knowledge about and trust in one another than participants in a more established relationship, affecting how they work together as well as the extent to which they feel caring and concern toward one another (McAllister 1995).

Second, participants in new relationships may be more likely than those in more established relationships to seek out different exchange partners (Gargiulo and Ertug 2006). Relationships tend to become more stable over time as neither party wants to abandon the benefits that the relationship confers (Bermiss and Greenbaum 2016, Seabright et al. 1992). This stability can tip over into "relational inertia"

(Gargiulo and Benassi 2000), as complacency and over-confidence prevent the partners from seeking new, more suitable counter-parties. Actors in a new relationship will lack such relational inertia.

These theories of relational embeddedness therefore suggest that, compared to established relationships, actors in new relationships will on average have less trust in one another, less mutual understanding, and a greater willingness to seek out new exchange partners. Because these differences are likely to affect how managers and subordinates interact, managerial mobility will affect subordinates' careers through its effects on the manager-subordinate relationship.

Of course, subordinates will go on to build relationships with the new manager following manager mobility, but this process is likely to take time. Prior studies find differences in the behavior of managers and subordinates in relationships that have lasted around three months compared to relationships lasting around three years (Duarte et al. 1994, Hassan and Hatmaker 2015, Staats 2012). We might therefore expect the effects of managerial disruption to decline gradually over the course of at least three years, until the relationship with the new manager is as strong as was the relationship with the prior manager. Given that survey evidence on managerial workers found an average job duration of around two years (Bidwell and Mollick 2015), it is also likely that relationship disruption due to managerial mobility will be a common phenomenon. We therefore propose that the relational disruption occasioned by manager mobility will affect subordinates' interactions with their managers, with important implications for their careers.

Manager Mobility and Financial Rewards

Integrating theories of relational embeddedness and managerial behavior, we propose two distinct pathways through which managerial mobility could affect subordinate rewards: by hindering the subordinate's performance; and by decreasing the manager's provision of rewards through sponsorship.

As noted above, performance is usually an important determinant of financial rewards. The reduced trust and mutual understanding found in new manager-subordinate relationships is likely to inhibit that performance. Lower trust hinders effective coordination (Nahapiet and Ghoshal 1998, Uzzi 1996), making it more difficult for subordinates to work with a new manager. Collaboration will also be

hindered by the limited opportunities that a subordinate and their new manager will have had to learn about each other. Subordinates in new relationships are less likely to understand the manager's expectations, making it more difficult for them to satisfy those expectations. Similarly, the new manager's lack of knowledge about the subordinate's needs (Ashford and Cummings 1983) will limit their ability to provide support. Reflecting such challenges, previous work has found that project teams that have had less experience working with their managers demonstrate lower performance (Staats 2012). For each individual subordinate, the introduction of a new manager should therefore lead to reduced performance, leading in turn to lower financial rewards.

The relational disruption caused by manager mobility may also affect subordinate rewards through its effects on manager sponsorship. The trust that develops over time between manager and subordinate has an affective component (Lewicki et al. 2006, Lewis and Weigert 1985, Young and Daniel 2003), leading the manager and subordinate to feel closer to one another the longer that they collaborate (McAllister 1995). Such affect-based trust leads participants to show more care and concern for one another, moving from a relationship based on exchange to one based on communal motives in which managers become more aware of their subordinates' needs and more likely to help them meet their personal goals (McAllister 1995). Such concern for subordinates is likely in turn to lead managers to want to provide greater rewards to their subordinates as they build relationships with them over time. Consistent with such a logic, Sparrowe and Liden (1997) argue that sponsorship evolves over time through a pattern of exchanges between manager and subordinate. Lacking such a past history of exchange, there is likely to be less sponsorship in newly established manager-subordinate relationships.

If longer manager-subordinate relationships lead to increased sponsorship, then disruption of those relationships is also likely to affect subordinates' financial rewards. Managers have substantial discretion over subordinates' rewards both through how they manage the performance appraisal process and how they then award pay raises and bonuses. Where new managers feel less inclined to sponsor subordinates, they are likely to provide less generous assessments of subordinates' performance for a given level of actual performance (Judge and Ferris 1993). Certainly, prior research has found that

performance ratings are positively related to the quality of the manager-subordinate relationship, even controlling for subordinate quality (Duarte et al. 1994), and that subordinates who have worked with a manager for less time receive weaker performance evaluations (Hassan and Hatmaker 2015).[2] The reduced sponsorship found in new manager-subordinate relationships could also lead managers to provide lower financial rewards independent of the performance evaluation process.

The above arguments suggest that the relational disruption occasioned by manager mobility is likely to be associated with reduced financial rewards, both because of its impact on performance and its effects on managerial sponsorship. Although pay cuts are rare in organizations (Baker et al. 1994), both pathways suggest that relational disruption may lead subordinates to be awarded lower pay raises and smaller bonuses than they would if their managers stay in the job. We therefore propose:

H1: Manager mobility is associated with reduced subsequent financial rewards for subordinates.

Manager Mobility and Subsequent Promotions

The second facet of objective career success is promotion, defined as an increase in hierarchical rank (Spilerman and Lunde 1991). Although prior research has largely explored how mobility of more senior employees may facilitate promotions by opening up vacancies (Stewman and Konda 1983, White 1970), we propose that manager mobility may also affect subordinates' promotion prospects through the effects of relational disruption.

In exploring the role of manager-subordinate relationships on promotions, it is important to differentiate between two different kinds of promotion. In a "within group" promotion, a subordinate receives a higher-level title and higher pay grade but continues to report to the same manager. Such a within group promotion could occur, for example, when a subordinate continues to report to the same manager while being promoted from "engineer" to "senior engineer." The current manager is likely to

[2] Unlike Hassan and Hatmaker (2015), Duarte, Goodson and Klich (1994) do not find that subordinates who have longer relationships with their managers receive higher evaluations once relationship quality is controlled for. The difference between the studies may reflect the populations studied: Duarte et al look at telephone operatives with highly measurable performance, while Hassan and Hatmaker look at diverse employees of a government agency. Where performance is more easily measurable, relationship duration may have a smaller impact on evaluations.

have the most influence over such promotions since they continue to oversee the subordinate both before and after the promotion. In a "cross group" promotion, by contrast, the subordinate will report to a different manager after the promotion than they did before the promotion. Sometimes this may be because they are advancing into a job that is at the same level as their manager from their prior role; in other cases, the vacancy that they would move into is in a different organizational unit. Because such cross-group promotions involve going to work for a different manager, the initial manager will have less influence over them. Moreover, cross group promotions may also be affected by any reluctance by the subordinate or manager to sever their relationship. We therefore separately consider the effect of manager mobility on within-group and cross-group promotions.

Manager Mobility and Within-Group Promotions. Any declines in performance and sponsorship occasioned by manager mobility are likely to reduce subordinates' prospects for within-group promotions. Performance is an important determinant of promotion within organizations, both because higher-level jobs tend to require more skills to be performed effectively, and because promotions are often used to reward good performance (Lazear and Rosen 1981, Rosenbaum 1979). If manager mobility is associated with performance declines as argued above, then subordinates' prospects of receiving a within-group promotion should fall.

Similarly, we have proposed that manager mobility reduces sponsorship. Such reductions in sponsorship should also impede within-group promotions, since promotions are a valued reward. Where managers feel more obligated to reward subordinates with whom they have built a strong relationship over time, they will seek to promote them. Disrupting this sponsorship is another way, therefore, in which manager mobility may reduce within-group promotion. We propose:

H2: Manager mobility is associated with reduced likelihood of subsequent within group promotions.

Manager Mobility and Cross-Group Promotions. Although, like within-group promotions, cross-group promotions are another important form of career advancement, managerial mobility may affect such cross-group promotions very differently. In particular, we suggest that manager-mobility is likely to increase the likelihood of cross-group promotion through its effects on relational inertia. By

definition, a cross-group promotion will lead to the loss of the current subordinate-manager relationship, as the subordinate is promoted into a role working for a different manager. The more valuable the current subordinate-manager relationship, the less likely that subordinates are to seek out cross-group promotions, and the less likely their managers are to support them in doing so.

Cross-group promotions in many organizations depend upon subordinates' efforts to identify and pursue internal opportunities that would involve a promotion. In larger organizations, employees must often formally apply to the jobs that they want to progress into (Keller 2018). Even absent such formal applications, upward mobility in large organizations often requires employees to actively network to identify opportunities and ensure that they are considered. The subordinates' current manager is also likely to play a role in supporting the move. Those managers are often notified when a subordinate applies to another job within the organization, and their willingness to support the move can play an important role in the promotion process.

When subordinates have an established relationship with their manager, relational inertia may make them less likely to seek out promotions outside their workgroup, and their manager less likely to support the move. As with other embedded relationships (Gargiulo and Ertug 2006), the shared knowledge and trust that is built up over time becomes a valuable asset for both the subordinate and the manager, who may then seek to maintain that relationship. That desire to maintain the relationship could limit the subordinates' upward mobility in the organization, by making them less likely to pursue promotion opportunities that would lead them to stop working with their current manager. Similarly, their managers may be less likely to encourage or support such moves because they would also be reluctant to disrupt a valuable relationship. Because manager mobility disrupts these relationships, we would expect it to reduce such relational inertia, potentially increasing promotion rates.

Hence, although managerial mobility may lead to reduced subordinate performance, we suggest that it may increase cross-group promotions. The loss of an established relationship can have the effects of reducing relational inertia, making the subordinate more willing to pursue a promotion into a different group and the manager more willing to support them in such an endeavor. We propose:

H3: Manager mobility is associated with increased likelihood of subsequent cross-group promotions.

Moderating Effects of Relation Duration

Our above arguments emphasize that managerial mobility affects subordinates' career success because of the way that it disrupts the manager-subordinate relationship. Those same arguments also imply that the effects of manager mobility ought to depend on the strength of the pre-move relationship between the manager and the subordinate, with the effects of relational disruption being greater when that pre-move relationship was stronger.

Although there are many factors that could affect the strength of the manager-subordinate relationship, the literature on relational embeddedness places particular emphasis on the extent of past interactions between the parties (McAllister 1995, Nahapiet and Ghoshal 1998, Vanneste et al. 2014). As we have noted above, much literature suggests that relationships develop over time, becoming stronger as participants spend more time together. The amount of time that the manager and subordinate have worked together prior to the move is therefore likely to be an important determinant of the strength of the relationship, and hence the effects of managerial mobility.

Given the way that mobility takes people from job to job within organizations, there is likely to be substantial variation in the amount of time that any given manager and subordinate have been working together before the manager moves. Managers will vary in the amount of time that they have been in their role before the move, and subordinates will differ in how long they have worked within the managers' group. We expect that this variation in time spent together will be an important driver of the effects of manager mobility. Because relationships tend to become stronger as participants spend more time together (Kollock 1994, McAllister 1995, Reagans et al. 2005), subordinates should receive more benefits from manager-subordinate relationships that have longer duration. Manager mobility should therefore occasion greater losses for the subordinate when the manager-subordinate relationship had previously been stronger.

These arguments imply that the duration of the manager-subordinate relationship should moderate the impact of manager mobility on financial rewards. When a manager has had a longer

relationship with the subordinate, they are likely to have a stronger effect on performance and sponsorship. The loss of this relationship through manager mobility should therefore lead to a greater decline in financial rewards. We therefore predict that:

H4: The negative effects of manager mobility on subordinate financial rewards will be greater when the manager and subordinate had worked together for a greater amount of time.

The same arguments also apply to our hypotheses about promotion. We suggested that managerial mobility will reduce prospects for within-group promotion because of its effects on subordinate performance and managerial sponsorship. If these effects are greater when managers have worked longer with subordinates, we would expect that:

H5: The negative effects of manager mobility on within-group promotion will be greater when the manager and subordinate had worked together for longer.

We might also expect the same dynamics to apply to cross-group promotions. If relationship duration increases the rewards that subordinates receive from their managers, it is also likely to accentuate relational inertia, as both subordinate and manager are less willing to suffer the relational losses incurred by the subordinate's promotion. The loss of this relationship though manager mobility should lead to greater declines in relational inertia, and hence a greater increase in cross-group promotion. We therefore also predict:

H6: The positive effects of manager mobility on cross-group promotion will be greater when the manager and subordinate had worked together for longer.

Scope Conditions

The arguments developed above articulate how we would expect managerial mobility to affect subordinates within many organizations. It is valuable, though, to articulate some of the scope conditions that underlie our arguments, in order to clarify the kinds of settings where we would be most likely to see the hypothesized effects. These scope conditions follow directly from the way that relational disruption can affect performance, sponsorship and relational inertia.

First, our arguments rely on the assumption that managers play an important role in shaping subordinates' performance through the way that they structure and support the subordinates' work. The

effects of manager mobility may therefore be different in some professional roles, such as those held by academics, doctors and the like, where managers play very little role in the work performed by the subordinates.

Second, we also assume that managers have substantial discretion over the rewards that the subordinate receives both through the way that they evaluate performance and assign pay. Such discretion is a common feature in organizations. It is possible, though, that managers would lack such discretion where workplaces are highly bureaucratized or unionized.

Third, our arguments about promotion are based on the assumption that both managers and their subordinates have some influence on promotions. In some highly bureaucratic organizations, all mobility is decided centrally without reference to the individual involved (e.g. Chattopadhyay and Choudhury 2017, Ferguson and Hasan 2013). We would expect manager mobility to have less impact in those cases. Similarly, where mobility purely occurs along straight job ladders through the effects of vacancy chains (White 1970), manager mobility may largely impact subordinates through the way that it opens up roles for them to move into.

Based on these scope conditions, we would expect our arguments to be most applicable to organizations where managers have direct responsibility for overseeing subordinates, where they have discretion over subordinates' financial rewards, and where both subordinates and managers have some say over mobility decisions. We describe such an organization, and our analyses of its data, below.

METHODS

The Research Site

We tested our hypotheses with eight years of personnel data from a US Fortune 500 Healthcare company, *Asclepius*. Many aspects of how mobility took place within *Asclepius* appear similar to descriptions of other large US corporations (Keller 2018, Pinfield 1995). Here we briefly provide details of mobility and manager-subordinate relationships before moving on to our data and analyses.

Jobs and Mobility at Asclepius. Jobs at Asclepius varied along two dimensions – reporting relationships and job definitions. Each employee worked within a work-unit (defined as the set of people

reporting to a single manager) and had one of around 2,000 job titles. Every year, around 1/3 of the employees in our sample moved jobs. Among those that moved, 17% left the company voluntarily and 14% left the company involuntarily, with the remaining 69% moving internally. Those internal moves tended to be decentralized, being negotiated between the employee and the manager of the unit that they were moving into. In principle, managers were required to internally post every open role at *Asclepius*, allowing any employee to apply for the job and potentially be selected. In practice, many moves took place outside of this process (Keller 2018). Nonetheless, our interviews indicated that *Asclepius* had a very active internal labor market, with employees encouraged to take charge of their careers and network actively to find a new role.

The most common kind of internal mobility was a lateral move to a different job within the same paygrade (35% of moves). Such a lateral move could involve the employee doing similar work in a different organizational unit, or taking on a different kind of job. Promotions, defined as an increase in paygrade (Spilerman and Lunde 1991, Stewman and Konda 1983), were also common, representing a further 30% of moves. These promotions did not take place after a set amount of time in the job. In a small number of cases, promotions took place after as little as 2-3 months after entering the previous job. Most commonly, promotions took place between 1 and 4 years after entering a job, but most job spells did not end in promotion and some people in our data stayed as many as 8 years in their jobs without being promoted. Nearly half of these promotions (44%) were within-group promotions that did not entail a change in reporting relationships: work units often contained people from multiple paygrades (the average was 2) working side by side and reporting to the same manager, so that people could be promoted from a lower paygrade to a higher paygrade within the same work unit. Such within-group promotions included such moves as “Engineer 4” to “Engineer 5” and “Scientist 2” to “Scientist 3.” Nor did most promotions take the form of moving into the former manager’s job, as might happen through a vacancy-chain process. The vast majority of promotions (78%) took place into jobs without managerial responsibilities, as employees advanced through individual contributor roles. Even when people were promoted into managerial jobs, it was often into jobs in different units, reflecting the greater number of

opportunities available in different units as well as a strong culture within *Asclepius* of internal mobility and building diverse experience. Although our data does not allow us to directly identify when a subordinate takes their manager's job, we did examine cases in which a subordinate moves into a role that involves them managing a former coworker, and found that this represented only around 4% of promotions. Employees could also be demoted to jobs with a lower paygrade, although this represented only 4% of moves.

Managers and Career Outcomes at Asclepius. As in most organizations, line managers were very important in shaping career outcomes at *Asclepius*. Beyond their day-to-day direction and support of their subordinates, managers also played a central role in evaluating and rewarding their subordinates. *Asclepius* had an annual performance evaluation system which was the main input into determining employees' rewards. Every November, each employee's direct manager would assign them a numerical performance rating. Although these ratings could then be adjusted in calibration meetings with others who managed similar jobs, it was the direct manager who was the central actor in evaluating performance.

The direct manager was also directly involved in setting financial rewards. Those rewards took three forms at *Asclepius* – merit raises (annual salary increases based on performance), bonuses, and long term incentive (LTI) compensation used to retain critical talent. Although the organization helped to define guidelines and set a limit on the pool for merit raises, how those raises were assigned was down to the individual manager. Managers also set the bonus and LTI that employees received, based on target levels set at the beginning of the year and an assessment of how subordinates performed relative to their goals. Finally, our interviews indicated that managers had substantial discretion over how they staffed their groups, giving them the authority to promote subordinates into vacant roles.

Despite the importance of managers in shaping their careers, we did not find many instances of subordinates following their managers after their managers moved. Among the 5,831 cross-promotions in our sample, only 213 (3.7%) involved subordinates moving to work for a manager that they had worked with previously (note that we do not know how many subordinates moved to join a manager in a different company). Such a lack of internal co-mobility does not seem to stem from specific policies at *Asclepius*,

but rather reflects a culture that places a premium on diversifying experience and building broad networks, as well as the large number of opportunities available for internal mobility. Similarly, it did not appear that managerial mobility led to wholesale exit among subordinates in ways that might bias our analyses. Specifically, only 7% of subordinates in our sample left the firm in the year that their manager moved (versus 8% in years when they did not experience manager mobility) and 10% experienced a promotion in the year that their manager moved (versus 9% in other years). The fact that so many subordinates stay in their roles demonstrates the importance of understanding what happens to subordinates who are left behind.

Data and Sample

Our data covers all workers in the US offices of *Asclepius* between 2009 and 2016, representing 337,722 individual-year observations of 77,325 workers. A variety of restrictions reduce the number of observations in our analyses. We removed observations where: the subordinate entered their current job before 2009, preventing us from calculating job tenure (n=113,634); where subordinates entered their jobs via an acquisition because no information was available on their role prior to the acquisition (n=12,414); where subordinates had not been in their jobs for a substantial majority of the most recent year (at least nine months), so that their performance ratings were likely to reflect both their performance in their previous and current role (n=81,757); where subordinates were not full-time, regular employees (n=1,864); and where data on key variables was missing (n=15,454; this mainly reflected missing information on how people entered their job and on manager performance). In our promotion analysis, we also excluded observations from 2016 because we lacked data on promotions in the following year (n=24,095). Our final sample size for the baseline model was 112,599 (40,722 workers) in the performance analysis and 87,934[3] (35,515 workers) in the promotion analysis.

Dependent Variables

[3] This total excludes 407 observations within specific categories of job spell tenure, business areas and subfunctions from which no promotions took place, as those observations are automatically excluded from the logit model. We also dropped an additional 163 observations with missing data for variables used in the promotion analyses.

We measured objective career success by examining three different types of financial rewards available to workers at *Asclepius*, as well as two different types of promotions.

Merit Raises. As described above, merit raises are annual increases in salary. We measure them in percentage points (i.e. fractional increase * 100) to aid in interpretation. Merit raises at *Asclepius* ranged from zero percent to 15 percent, with a mean of three percent and a standard deviation of one percent (we experimented with winsorizing merit raises at the 99th percentile to avoid any effects of outliers. This had no material effect on our results).

Bonus (log). All workers in our sample were also eligible for annual performance bonuses. The average bonus was 12 percent of salary, but they could range from anywhere from 0 to 175 percent. To address this skew in bonus amounts, we use the log of the bonus awarded as our dependent variable (again, winsorizing the variable at the 99th percentile did not affect our results).

Long-Term Incentives (log). All workers were also eligible to receive long-term incentives (LTI). Unlike bonuses, workers only received a prorated portion of any LTI award each year, losing the remainder if they left the company before the vesting period. LTI bonuses at *Asclepius* ranged from 0 percent to 636 percent of a worker's annual salary, with a mean of 9 percent. We again address this skew by using the log of LTI as our dependent variable (again, winsorizing the variable at the 99th percentile did not affect our results).

Promotion. We identified a worker as having received a promotion if the personnel records indicated that he or she moved into a different job at a higher pay grade from one year to the next. In our theory, we differentiated between promotions that would require a subordinate to begin working with a different manager ("cross-group promotions") and promotions that would potentially allow the subordinate to continue to work with the same manager ("within-group promotions"). We operationalized *cross-group promotions* as a move into a job at a higher paygrade reporting to a different manager in a different organizational unit. *Within-group promotions* are moves into a job at a higher paygrade that allowed the worker to continue to work for the same manager or remain in the same organizational unit.

Our promotion analysis contains 5,831 cross-group promotions and 4,529 within-group promotions.[4]

Independent Variables

Manager Changed. Our key independent variable measures whether a subordinate remaining in the same job experienced a change in manager through manager mobility. Because people move jobs frequently at *Asclepius,* almost any subordinate who stays in their job long enough is likely to experience a change in manager through manager mobility. Moreover, our arguments about the importance of an established relationship suggest that a manager change that took place sufficiently long ago would cease to have an effect on subordinate outcomes. We do not, therefore, look at whether a subordinate had ever experienced a manager change while in the job (as would be common in a difference in differences analysis), but rather whether they had recently experienced a change in manager.

Specifically, we created three dummies to identify the timing of recent changes in manager: *Manager Changed (t)* equals one if a worker's manager changed due to mobility in the current year; *Manager Changed (t-1)* equals one if a worker's manager changed due to mobility in the prior year but not in the current year; and *Manager Changed (t-2)* equals one if a worker's manager changed due to mobility two years ago and stayed the same subsequently. We calculate the dummies in this way as our theory suggests that it is the most recent change that will shape subordinate behavior. We identified 34,359 instances of a manager change in time *t*; 9,911 instances of a manager change in *t-1*; and 3,039 instances of a manager change in *t-2* (the declining numbers reflect the effects of subordinate mobility, manager mobility and right censoring which prevent us from observing many subordinates with the same manager for multiple years; for the same reasons, we had very few observations where managers changed earlier than *t-2* and our results were robust to dropping those observations from the sample).

Moderating Variable

Relationship duration (t-1). We calculated *relationship duration* between the manager and the subordinate as the total number of months the manager and subordinate had worked together at the end of

[4] We are unable to track changes in managers in 13 promotions because of missing manager IDs for the new spell.

each year, based on when each had entered the job. In most cases, we are able to identify the month when each entered the job. In the 7% of cases where this information was not available, we assumed that the job was entered in June. Where a manager and a subordinate worked together across multiple job spells, we totaled the time they spent working together across these multiple job spells.[5] Our measurement of *relationship duration* ranged from 0 to 95 months, with a mean of 17 months and a standard deviation of 14 months. In testing our moderation hypothesis, we include the relationship duration of the manager-subordinate relationship in t-1 to capture the duration of the prior manager's relationship.

Control Variables

We controlled for a number of subordinate characteristics that could affect financial rewards and promotion prospects. *Subordinates' job spell tenure* accounts for the effects of time in job on performance (Sturman 2003) and promotion chances. We include dummy variables for each possible value of job tenure (in months) to account for non-linear effects. We also controlled for a *subordinate's firm tenure* (in months), which can reflect both firm-specific human and social capital, and the time that it has taken the subordinate to reach their specific job. Because prior research has demonstrated that an individual's financial rewards and promotion prospects are shaped by the way they enter their job (Bidwell 2011), we include dummies for each different kind of *subordinate job spell entry mode* – notably whether a subordinate was hired, rehired, promoted, transferred or demoted into their current job. We also included a categorical variable accounting for *subordinates' outside experience* (less than one year, between 1 and 3 years, 3 and 6 years, 6 and 11 years, 11 and 16 years, and more than 16 years) which might also affect performance and mobility prospects[6].

We included an additional set of controls to account for job-level differences that could affect

[5] The possibility of managers and subordinates working together in multiple job spells creates a left-censoring issue as we are unable to observe whether a subordinate worked for a given manager prior to 2009. Fortunately, supplementary analyses suggest that the incidence of such left-censoring is rare. Among workers who stayed throughout our entire observation period (n=19,709), only 7.6% worked with the same manager in multiple job spells. Such left-censoring should also bias our estimates downwards, making it more difficult to find effects.
[6] These are the categories in which *Asclepius* provided this data.

financial rewards and opportunities for advancement. In the promotion analyses, we include dummy variables for each of the 37 *pay grades*, 56 *business areas*, and 153 *subfunctions* present in our data (our financial reward analyses use individual job spell fixed effects instead). We also created a dummy variable indicating *whether subordinate has direct reports* as well as a count of the *number of subordinate direct reports*, as workers in supervisory roles are endowed with different resources to perform their role and are likely to be assessed by different standards.

Some of our analyses also control for *subordinate performance ratings*, to explore effects of manager mobility net of those ratings. The rating system changed during our observation period, moving from a single nine-point scale (mean=5.61, sd=1.03) to a combination of separate ratings for business performance (0 to 4; mean=3.13; sd=0.56) and leadership performance (0 to 4; mean=3.08; sd=0.54) – the prior system was meant to reflect subordinates' overall performance along both of these dimensions without breaking them out separately. This change was gradual, with some groups of workers transitioning earlier than others. To make performance ratings more consistent and comparable across worker-year observations, we first converted the two-item measure into a single 8-point measure by summing its components.[7] We then standardized each performance rating by scale and year (i.e., we transformed the original values to have a mean of zero and a standard deviation of one within the observations that used the same rating scale and were from the same year).[8] To account for any remaining differences across the scales we also included a dummy variable which equals one if the original performance rating was on a 9-point scale.

Our analyses also included controls for manager *financial rewards*, and *job spell entry mode*, calculated in the same way as for subordinates. We also ran models controlling for *manager performance*, in case that performance affected subordinate rewards. We omit those controls in the models presented

[7] To confirm the compatibility of the old and new performance measures, we compared within-person cross-year correlations. We found that the correlation between the first rating on the new system and the last rating with the old system was the same as the correlation between consecutive years' ratings just using the new system.

[8] The mean performance rating in our sample is slightly greater than zero, reflecting the fact that we dropped employees who were new in their jobs.

here because the high correlation with manager pay complicated the interpretation of the coefficients opn those controls; effects on our main variables were unaffected by this change.[9] We also controlled for *manager tenure* (time since the manager was hired) on the basis that managers who had been longer in the firm might be better able to secure rewards for their subordinates. A control for *median firm tenure among work group members* (excluding the focal subordinate) further accounts for any advantages to being in a group with more established colleagues. We also controlled for *year* to account for possible change in opportunities over time. Unfortunately, our data do not include information on the gender, race or age of individual workers (subordinates or managers).

Table 1 provides means, standard deviations, and correlations for our key variables. We present our analyses below. We first examine the effects of managerial mobility on financial rewards, testing our hypotheses before conducting a variety of supplementary analyses to shed more light on the mechanisms. We then go on to examine the effects of managerial mobility on promotions.

EFFECTS OF MANAGERIAL MOBILITY ON FINANCIAL REWARDS

Hypothesis Tests

We begin by testing whether managerial mobility has a negative impact on subordinate rewards (H1). Our dependent variables are the rewards allocated at the end of the current year *(t)*. Our key independent variables are dummies for whether there was a change in manager through manager mobility during that year (*t*) or in a previous year (*t-1 or t-2*). Note that we do not control for subordinate performance ratings as our theory suggested that such performance could partially mediate the effects of manager mobility.

We conduct our analyses using subordinate-job spell fixed effects, which include separate fixed effects for each job that each subordinate holds. In total, we include 57,600 fixed effects, across 40,722

[9] We also ran analyses without controls for manager pay or performance to test whether reductions in manager performance might also be a mechanism by which manager mobility affected subordinates. Although we find a correlation between manager performance and subordinate outcomes, omitting these controls did not materially affect our results.

subordinates in 1,914 different job titles.[10] This specification examines how manager mobility affects rewards within a particular job that a particular subordinate holds. By doing so we are able to fully control for the quality of the subordinate, the characteristics of the job, and the match between the subordinate and the job. In all of our analyses, we cluster the standard errors by individual workers to account for non-independence across errors.

Effects of Managerial Mobility on Financial Rewards. Models 1 through 3 in Table 2 demonstrate support for H1, that managers' mobility is associated with reduced subordinates' financial rewards. *Merit raises* (Model 1), *Bonuses* (Model 2) and *LTI* (Model 3) are all lower in the year that a manager changes (*t*) and the year following the manager change (*t-1*) compared to when the manager does not change. *Merit raises* are also lower two years after a manager change. The effects are moderate. *Bonuses* are around 4% lower and *LTI* is 17% smaller if the manager changed in the prior year compared to no change. *Merit raises* only decline by .06%, although this partly reflects the very small average size of merit raises at 3%.

One possible concern with these analyses is that rewards might be set by the prior manager rather than the new one. As noted above, performance evaluations and pay decisions were set in November, suggesting that the vast majority of decisions were made by the new manager. However, as a robustness check, we examined the effects of moves that happened in the first three months of the year, when the new manager would have been in place long enough that the prior manager would have very little role in establishing performance. These analyses, available from the authors, demonstrate similar effects of such early mobility on rewards.

Moderating Effects of Prior Relationship Duration. We also theorized that the change in financial rewards would be greater when the subordinate had had a longer relationship with the prior

[10] Results were similar using an alternative specification in which we included individual fixed effects and job-title fixed effects, but no individual-job spell fixed effects. Because our individual-job spell fixed effects are nested within subordinates and also nested within job titles, subordinate fixed effects and job title fixed effects are fully collinear with our individual-job spell fixed effects.

manager (Hypothesis 4). We test this by including an interaction between *Manager change (t)* and *relationship duration (t-1).* We use *relationship duration (t-1)* rather than relationship duration with prior manager because only subordinates who have experienced a manager change will have a relationship with a prior manager. By including the interaction of *Manager change (t)* with *relationship duration (t-1),* we are therefore able to test whether manager change has a greater effect when the prior manager-subordinate relationship is longer. Note that the use of a lagged variable reduces our sample size as we cannot include the first year of a given job spell (for this reason, we also do not explore moderating effects of *relationship duration (t-2)*).

The results in Models 4 through 6 of Table 2 demonstrate strong support for our hypothesis. In each case, we see that the effects of manager change on subordinate rewards are more negative when there was a stronger prior relationship between the manager and the subordinate. The effects are also substantial–the coefficients indicate that the effect of increasing prior manager-subordinate relationship duration by an extra year has a roughly similar effect to the average overall effect of manager change.

Although these analyses demonstrate support for our hypotheses regarding the effects of managerial mobility on financial rewards, they still leave open a number of questions about the mechanisms underlying those effects. We therefore conducted a variety of further analyses that attempt to disentangle the effects of performance versus sponsorship, confirm that the effects reflect relational disruption rather than the replacement of an experienced manager with a less experienced manager, and examine contingencies that might modify the effects of managerial mobility.

Exploring Effects of Performance vs Sponsorship

In developing our theory, we identified two reasons why we would expect subordinates' financial rewards to be reduced by managerial mobility: because their performance could decline; or because managers would be less likely to promote their interests through sponsorship. Because we lack data on objective performance for the vast majority of roles at *Asclepius*, it is difficult to fully determine which of these mechanisms drives the effects that we see. We nonetheless conducted supplementary analyses to explore the relative roles of objective performance versus sponsorship in driving our results.

Evidence from performance ratings. First, we examined the effects of manager mobility on subordinates' performance ratings. These ratings are intended to assess subordinates' performance but may also be affected by any positive bias that sponsorship would create. Hence, a negative effect of managerial mobility on performance ratings does not necessarily demonstrate that managerial mobility affects actual performance. Were, however, manager mobility *not* to affect performance ratings, it would strongly point to sponsorship as the primary mechanism driving increases in rewards.

Model 1 of Table 3 examines determinants of the standardized performance rating, using the same fixed effects specification as Table 2. We find that performance ratings are significantly affected by manager mobility. Models 2-4 then show that including performance ratings significantly attenuates the effects of manager mobility on financial rewards. These analyses suggest that changes in performance ratings are an important pathway through which manager mobility affects subordinate rewards. They do not, however, tell us whether manager mobility affects those ratings through changes to subordinates' objective performance or sponsorship-driven changes in managers' perceptions of subordinates.

We also compared the effects of manager mobility on different components of the performance evaluation. During the period covered by our data, *Asclepius* phased in a two-part performance evaluation. One component assessed business results and rated the extent to which the subordinate achieved the goals that they had been set for the year, while the other component assessed their leadership behaviors. Because the rating of business results refers to the achievement of specific goals, this component of the ratings is more closely tied to concrete results than leadership, and should be a more objective measure of performance. We therefore examined whether mobility had different effects on the business and leadership ratings (Models 5 and 6). While mobility reduces both components of performance, its effects on business results were smaller than on leadership, consistent with the effects of manager mobility largely acting through perceptions of subordinates rather than changes in underlying performance. The differences between the two components are not significant, though.

Evidence from commission data. We also examined the effects of manager mobility on subordinates' commission. Where merit raises, bonuses and LTI all reflect subjective evaluations of

employees' contributions, commission amounts are directly determined by employees' sales versus quota. As a consequence, commissions represent an objective measure of subordinate performance that is not influenced by manager perceptions. Although only a small proportion of employees in our sample were in roles that were eligible for commission and commission data was missing for 2016, we reran the fixed effects analyses presented in Table 2 for the employees who were eligible for commission, using both log commission and other financial rewards as dependent variables. The results of these analyses are presented in Table 4.

Model 1 shows that manager mobility is not associated with reductions in commission – indeed, there is actually a marginally significant positive effect of *manager change (t)* on *log commission* (p=0.091). Models 2-4 demonstrate that this positive effect is not an artifact of the restricted sample that we use: we continue to see significant, negative effects of *manager change (t)* on *merit raises* (p=0.05) and *bonuses* (p=0.000) and a negative but not significant effect on *LTI* (p=0.126). These analyses therefore fail to find negative effects of manager mobility on measures that are tied to objective performance but do show negative effects of manager mobility on rewards. It is possible that manager mobility affects aspects of performance unrelated to sales, while failing to affect sales performance. We believe, though, that the most parsimonious explanation for this pattern of results is that manager mobility largely affects subordinate rewards through changes in sponsorship rather than changes in performance.

Overall, these analyses therefore suggest that manager mobility mainly effects rewards through changes to performance ratings, but that those changes in performance ratings are more closely related to changes in sponsorship than changes in the objective performance displayed by the subordinate.

Comparing Effects of Relationship Duration versus Manager Job Tenure

Although we have argued that managerial mobility affects subordinate rewards by disrupting the subordinate-manager relationship, an alternative explanation for our findings is that managers who are new in their job offer lower rewards to their subordinates, perhaps because they are struggling to master their new role, or because they provide fewer rewards and lower performance ratings to emphasize the need for high standards. Subordinates may also behave differently for a new manager, perhaps working

harder to impress them. We therefore ran analyses to try to disentangle the effects of relational disruption from manager time in job.

Specifically, we reran our analyses using the continuous variables of manager-subordinate *relationship duration* and *manager's job tenure* (the time that the manager had been in their current job) instead of the dummies for managerial mobility. Both of these variables are highly correlated with managerial mobility, as a change in manager sets both *relationship duration* and *manager job tenure* to zero; but only *relationship duration* is influenced by the subordinates' own mobility. The two variables are therefore only partially correlated with each other.

As well as ruling out mechanisms related to manager time in job, disentangling manager time in job from effects of relationship duration can also help address concerns about reverse causality: the kinds of processes that make managers leave will have stronger direct effects on manager time in job, since manager time in job only reflects manager mobility while relationship duration also reflects subordinate mobility. If our results reflect the endogenous nature of manager mobility, we should see stronger effects of manager time in job on outcomes than manager-subordinate relationship duration.

Manager job tenure was calculated as the number of months that the subordinate's manager had been in his or her job at the end of the year. It ranged from 0 to 95 months, with a mean of 22 months and a standard deviation of 16 months. Note that the relatively low value of each of these numbers partly reflects right-censoring in our data. Our results were also robust to winsorizing these variables at the 90th percentile (35 months for relationship duration and 44 for manager time in job).

Table 5 presents our analyses of the effects of *relationship duration* and *manager job tenure* on financial rewards. We again use subordinate job spell fixed effects, so that we compare the effects of our independent variables holding constant the same subordinate in the same job. We omit the managerial mobility variables as those are strongly correlated with our key independent variables. Because we need to know when a manager entered the job in order to calculate *manager job tenure*, we drop all observations for which the manager had entered their job before 2009. The number of observations in this table is therefore smaller than Table 2.

We find that *relationship duration* has significant positive effects on all types of rewards – *merit raise, bonus, and LTI* – and *performance.* By contrast, *manager job tenure* only has significant effects on bonus. Overall, these analyses suggest that the effects of managerial mobility are more closely tied to the need for subordinates to re-establish a relationship with a new manager, rather than the challenges of the new manager learning their job, or any increased strictness towards subordinates of new managers. They similarly suggest that the effects are unlikely to reflect underlying group characteristics that lead to higher overall mobility among managers.

Effects of Different Types of Manager Mobility

We also explored how our results varied depending on the type of manager mobility – whether managers were leaving the firm voluntarily or involuntarily, were promoted, demoted, or moving laterally. Examining how our results vary with such mobility is useful for two reasons. First, because different kinds of manager mobility are associated with different underlying causes, testing for differences across mobility types can shed light on whether our results are driven by omitted variables. In particular, declining unit performance could be associated both with an increasing propensity for managers to be fired or demoted, and with declining subsequent rewards for subordinates. Studying whether subordinate outcomes are only driven by "negative" manager mobility (involuntary turnover and demotions) rather than "neutral" (lateral mobility, voluntary mobility and reorganizations) or "positive" manager mobility (promotions) can help us assess how our results might reflect underlying causes of manager mobility.

Second, studying different forms of manager mobility can shed more light on the various mechanisms through which that mobility can affect subordinate outcomes. In developing our theory, we focused on the effects of relational disruption, which should be uniform across the different ways that managers can move. Yet we noted that manager mobility might have other effects, perhaps because of the challenges that the new managers face as they seek to master their new positions, or because of the way that their prior managers take new positions within (or outside of) the organization. Studying the effects of different kinds of moves can therefore add nuance to our results. In particular, whether manager's moves take them to another job within the same organization or a different organization may affect

subordinate rewards and mobility for two reasons beyond immediate relational disruption. First, the broader disruption to the work of the group, above and beyond any effects on the individual subordinate, is likely to be greater when managers leave the organization. When managers are no longer within the organization, they are not available for the new manager to consult. Managers also have less incentive to ensure a smooth transition when they are leaving the organization. Second, when a manager leaves the organization, they are less available to provide ongoing support to former subordinates. While our theory has emphasized that an employees' immediate manager has the most immediate effects on their career advancement, former managers may still be able to offer some support and sponsorship for former subordinates.

Table 6 examines the effects of different kinds of managerial mobility. The specification is the same as Table 2, although we do not report the coefficients on controls in the interests of space. The table demonstrates consistent effects of the different kinds of mobility on rewards, showing that our findings are not driven by a particular form of mobility. For both *merit raises* and *LTI*, every form of mobility in year *t* is significantly associated with declining rewards. Every form of mobility also has a negative association with *bonuses* in year *t*, although the effects of reorganization, promotion and demotion lack significance. There is also evidence that the effects may be greater when the manager leaves the organization, particularly for merit raises and bonuses, [11] suggesting that the greater disruption experienced when a manager moves externally may contribute to the negative effects of mobility.

Additional Sources of Variation in the Degree of Relational Disruption

We also explored whether the effects of managerial mobility on financial rewards varied depending on the prior performance of the subordinate or the manager. We noted above that the effects of relational disruption will vary depending on the strength of the manager-subordinate relationship. There are,

[11] For manager mobility in year t, the effects of involuntary termination are significantly more negative than all forms of internal mobility except demotion. The effects of voluntary termination are significantly more negative than promotions, lateral mobility and reorganizations for merit raises, significantly more negative than promotion and reorganizations for bonuses, and significantly more negative than reorganizations for LTI.

however, many other attributes that may also shape the cost of relational disruption.

First, it is possible that the relational disruption caused by manager mobility is greatest for those subordinates who were previously seen as highest performing. If performance ratings partially reflect manager sponsorship, then, all else equal, those subordinates who received higher performance ratings under their old manager would be likely to have been in receipt of more sponsorship. Those subordinate with higher ratings may therefore have the most to lose from a change in managers.

Second, the effects of relational disruption may vary with the performance of the manager. One possibility is that subordinates suffer more from the loss of higher performing managers because those higher performing managers are better able to coach and support subordinates. It is also possible, though, that higher performing managers are less likely to exhibit favoritism in how they distribute rewards. If that is the case, then relational disruption may be more damaging when lower performing managers leave, as they would be more likely to base their rewards on their relationship with subordinates.

We explore these possibilities in Table 7. As before, we perform job-spell fixed effects regressions, with financial rewards as the dependent variables. In Models 1-3, we interact *manager change (t)* with *subordinate performance (t-1)*, to test whether subordinates who were performing better under the prior manager experience greater penalties from manager mobility. We do not find evidence of consistent effects, and some evidence that higher performing subordinates actually experience lower penalties for *LTI.*

Models 4-6 then explore the effects of *manager performance (t-1)*, to test whether the loss of a high performing manager entails more relationship disruption. We again fail to find consistent effects. There is some evidence that manager mobility has a smaller effect on *merit raise* and *bonus* when prior managers were higher performers, but we do not find similar effects for *LTI.*

Summary of Results for Financial Rewards

Overall, these results demonstrate a strong association between managerial mobility and declines in subordinate financial rewards, with the decline being greater when manager and subordinate had previously worked more closely together. They suggest that these effects are more strongly related to

changes in sponsorship than changes in performance, and reflect changes in the duration of the manager-subordinate relationship rather than the effects of the manager being new to their job. We also find that the effects are associated with many different kinds of manager mobility, and are also little affected by prior subordinate or manager performance.

EFFECTS OF MANAGER MOBILITY ON PROMOTION

Hypothesis Tests

We go on to test the effects of manager mobility on our second set of dependent variables: subordinate promotions. We structure the analysis as a discrete time survival analysis (Allison 2014).[12] Our data are right censored, as many job spells are still ongoing at the time of our study. Hence, rather than studying whether a subordinate is ever promoted out of a job, we examine, for each year for which we have data, whether the subordinate was promoted out of the job in the following year. Once the subordinate leaves our dataset, either because the spell is right censored (as it is for 2016 observations) or they leave the firm, they are excluded from the analysis.

We implement this discrete time survival analysis using logit models, where each observation represents a year that a subordinate is in the job, and the dependent variable is 1 when the subordinate is promoted in the subsequent year (*t+1*) and 0 otherwise. We include dummy variables for every possible value of the number of months that they have been in the job at the beginning of each year to account for the effects of time in job on promotion rates. We present models with and without controls for subordinate performance ratings to separate out any effects of manager change on formal evaluations from changes in relational inertia.

The nature of our dependent variable prevents us from using job-spell fixed effects. Job-spell fixed effects analyses compare outcomes in different years of the same job spell, to predict why those

[12] We use discrete time survival analysis rather than continuous time methods because we have incomplete data on when subordinates got promoted. In some cases, we don't know when in a given year the subordinates were promoted. We do, however, know whether subordinates were promoted within a given year. Discrete time analysis better suits this structure.

outcomes are different. In the case of promotion, a job-spell fixed effect analysis would attempt to predict in which year of the job spell the promotion occurred. By definition, though, promotions must occur at the end of the job spell. Hence, we could never observe a promotion taking place before a manager moves within a job spell. As a consequence, a fixed effects analysis would be biased towards positive effects of manager mobility. Instead, to address concerns that certain areas might have higher promotion rates in general, we include dummies for each of the 56 business areas and 153 subfunctions.

An additional concern for the analyses is subordinates being promoted into their managers' roles. Although the descriptive data suggests that such vacancy chain promotion is rare at Asclepius, we nevertheless account for this possibility in two ways. First, by looking at how manager mobility in year *t* affects mobility in *t+1,* we exclude moves that are simultaneous with the manager's mobility and therefore could take place into the manager's job (we also ensure that we exclude any subordinate promotions that took place before the manager's move). Second, we control for manager mobility in *t+1*. It is possible that new managers would be more likely to leave their jobs, so that manager mobility in *t* would also be associated with mobility in *t+1*. Controlling for manager mobility in *t+1* (the year that the subordinate may or may not be being promoted) excludes such a possibility.

Direct effects of manager mobility. The results of our analysis are presented in Table 8. Models 1 and 2 present determinants of within-group promotions, while Models 3 and 4 presents determinants of cross-group promotions. In Model 1, we find no effect of managerial mobility on within-group promotion, counter to the prediction of H2. Indeed, once we control for subordinate performance ratings in Model 2 we find a small significant *positive* effect on mobility. Taken together, these models suggest that the negative effects of manager mobility on performance ratings are counterbalanced by other processes that may favor mobility. We return to this issue in the discussion.

Model 3 and 4 then test H3, that managerial mobility will be associated with increased cross-group promotion. Consistent with that hypothesis, we find that managerial mobility in both year *t* and year *t-1* is associated with more rapid subsequent cross-group promotion in year *t+1*. This effect is even stronger when we control for subordinate performance ratings (Model 4). These results provide support

for H3. Converting the coefficients into average marginal probabilities evaluated across the entire sample (margins command in STATA), Model 4 indicates that a manager move raises the probability of cross-group promotion in the following year from 6.3% to 7.3%, which represents a 15.9% increase (average effect across all observations). We also confirmed that the effects of managerial mobility on cross-group promotion were significantly different from its effects on within-group promotion[13] (p=0.0112).

One concern about these analyses is that they could reflect people returning to work with their prior manager, rather than a greater willingness to move to work with a different manager. While this happened infrequently in our data (213 instances out of 5,831 cross-promotions), we ran additional analyses where we eliminated the observations in which the subordinate's new job reported to a manager that they had worked with previously. We still found significant (p<.001) effects of manager mobility on the subordinate's promotion likelihood, although the effect size decreased (from *b*=0.174 to *b*=0.135).

Moderating Effects of Prior Relationship Duration. Models 5-8 of Table 8 then test H5 and H6, that the duration of the prior manager-subordinate relationship will moderate the effects of manager mobility. Again, we operationalize the prior manager-subordinate relationship using relationship duration in *t-1*. The number of observations in these models is lower than in Models 1-4 as we drop observations for which this lagged variable is left-censored.

Model 5 demonstrates marginal support (p=0.057) for H5, as the effects of manager mobility on within promotion are more negative when prior relationship duration is longer. This effect is no longer significant when controlling for performance ratings (Model 6). Model 7 and 8 support H6, as we find that manager mobility has a stronger effect on cross-promotion when prior relationship duration is longer.

We therefore find support for our hypotheses about the effects of managerial mobility on cross-promotion. We do not find support, though, for our arguments about within-promotion. We go on to again

[13] Because coefficient comparisons in logit are affected by unexplained variance in the models (Hoetker 2007), we performed these comparisons on linear probability models replicating Models 1 and Models 3. We chose to compare coefficients across models as this allows all of the controls to have different effects on cross-group promotion versus within-group promotion.

present a number of supplementary analyses to test some alternative explanations for our findings regarding cross-promotion.

Effects of Relationship Duration versus Manager Job-Tenure

Table 9 presents analyses in which we examine the effects of relationship duration on cross-promotion versus manager job-tenure. As described above, such analyses allow us to rule out the possibility that manager mobility affects subordinate promotion because it introduces inexperienced managers into the job, rather than because of relational disruption. They can also help to address concerns about endogeneity, as processes that lead to higher manager mobility will have a more direct effect on manager time in job than on the duration of the manager-subordinate relationships.

Table 9 shows that, once we control for the positive effects of relationship duration on performance ratings (Model 2), relationship duration has a significant effect on cross promotion, but manager tenure has no effect. This pattern of findings indicates that the effects of manager mobility are not driven by high levels of mobility within the group overall – as would be suggested if manager tenure were the key driver of cross-promotion – but instead by relational disruption.

Effects of Different Forms of Managerial Mobility

We also examined whether different forms of managerial mobility had different effects on rates of cross-promotion, in order again to understand whether our effects primarily reflected positive, neutral or negative forms of mobility. We find in Table 10 that both positive (promotion) and neutral (reorganizations and lateral moves) manager moves are associated with increased cross-group promotion. We do find higher significance levels for internal manager moves compared to external manager moves, consistent with managers who remain in the organization being better placed to help their former subordinates find other roles (although, as noted above, we were able to rule out subordinates following a prior manager to their new job as a cause of our effects). That said, none of the differences between the effects of different kinds of managerial mobility are statistically significant at the 5% level. Given the diverse reasons underlying each form of mobility, these results suggest that the effects of managerial mobility on subordinate rewards and mobility are not driven by a particular underlying reason for the

manager's move, but that whether managers remain within the organization may help to shape the effects of that mobility.

Summary of Results for Promotions

Overall, these analyses demonstrate that managerial mobility is associated with strong increases in the rate of subordinates subsequently being promoted into different groups, particularly when the manager and subordinate had previously spent more time working together. We do not, though, find that managerial mobility reduces the rate of within-group promotion. Our analyses also confirm that increased in cross-group promotion are associated with changes in manager-subordinate relationship duration rather than time in job and are associated with a range of forms of managerial mobility.

DISCUSSION

Most employees can expect to move jobs regularly through their careers; so can their managers. We argue that managerial mobility will affect subordinates' objective career success through the way that it disrupts the manager-subordinate relationship. Our findings suggest that this disruption may be a double-edged sword for subordinates, as manager mobility associated with declining financial rewards but increased odds of promotion into other groups.

First, we argued that manager mobility could lead to a decline in performance and sponsorship, affecting the financial rewards that subordinates receive. Our results supported this perspective. We found that managerial mobility was associated with significant declines in merit raises and performance-related pay. Although we were not able to fully disentangle the relative contributions of changes in sponsorship and performance in driving this decline, our supplementary analyses suggested that a reduced propensity by new managers to engage in sponsorship, securing greater rewards for their subordinates, likely plays a substantial role in these declines in rewards. We also found that these effects could be surprisingly persistent, as a manager's move two years previously continued to have an effect on subordinate rewards. Although it is likely that two years provided plenty of time for subordinates to begin building relationships with their new managers, it seems that people who have continued to maintain and strengthen a relationship with the same manager throughout that time still receive more rewards.

We found more complex effects of manager mobility on subordinates' subsequent promotion prospects. Subordinates were more likely to receive cross-group promotions following managerial mobility. This is consistent with our arguments that established manager-subordinate relationships may lead to relational inertia, and the disruption of these relationships may therefore facilitate cross-group advancement. Contrary to our hypothesis though, we did not find that manager mobility was associated with reductions in promotions within groups, and in some specifications it was associated with increased promotion rates. This likely reflects the presence of mechanisms other than relational disruptions in shaping subordinate mobility. Supplementary analyses suggested that within-group promotions were associated with lower manager tenure, suggesting either that newer managers are more likely to make changes in their groups or that groups with more mobile managers may also be more likely to have more within-group promotions.

Consistent with our argument that declines in financial rewards and increases in cross-group promotions reflect the disruption of manager-subordinate relationships, we also found that the effects of managerial mobility were moderated by the duration of the manager-subordinate relationship prior to the move: the longer (and therefore more embedded) the relationship being disrupted, the greater the decline in subordinate rewards and the greater the increase in the rate of cross-group promotion. These results indicate that manager mobility has the greatest effects on subordinate careers when the most embedded relationships are disrupted.

Limitations and Future Research

It is important to acknowledge a number of limitations to this study. While studying a single organization allowed us to gather detailed data on jobs, rewards, performance and managerial relationships, it raises the question of how our results might generalize to other settings. As we noted in developing our scope conditions, our arguments are based on the assumptions that managers have significant authority over subordinates' rewards and mobility, and that subordinates help to shape their own mobility. We believe that these characteristics reflect conditions in many large organizations. Nonetheless, our results might be very different in small organizations or organizations with more

centralized reward and mobility practices. We also studied the effects of manager mobility in an organization where moving into managers' roles was not the main route of advancement. Where such vacancy-based mobility was more common, manager mobility would be even more important for promotion, but such vacancy-based processes could make it more difficult to detect the influence of relational disruption. Second, our data had some important omissions. Demographic variables were excluded, preventing us from exploring the specific effects of demographic match between subordinate and manager. We also lack data on values, personality and other dimensions along which subordinate-manager fit might be important (Ashkanasy and O'Connor 1997, Kristof-Brown et al. 2005, Meglino et al. 1989). It would be valuable to explore how such fit moderates the effects of relational disruption.

A third concern regards our ability to establish causality. Managerial mobility was not randomly assigned, raising the possibility that the factors that drive mobility may also affect subordinate outcomes. As a consequence, our analyses are purely correlational. We were able to use a variety of supplementary analyses to support our proposed mechanisms. We found that changes in rewards and cross-group promotion rates were associated with changes in the duration of subordinate-manager relationships rather than the time that managers had spent in their job. These findings support our arguments that the effects of manager mobility reflect relationship disruption. They also suggest that unmeasured sources of manager mobility that place new managers in the job are unlikely to be driving our results, as such sources of mobility should be more closely correlated with manager job-tenure than relationship duration. We also found that our results were robust across a wide variety of different causes of manager mobility, suggesting that they did not simply reflect the consequences of a manager being dismissed, or indeed promoted. That said, we did find some evidence that subordinates whose managers remain with the organization fare better in terms of rewards than their colleagues whose managers exited the firm. We suggest that this may reflect the greater disruption to the relationship and the group when the prior manager leaves the organization altogether.

By focusing on relational embeddedness, we also abstracted away from a variety of alternative mechanisms, such as changes in the broader network of relationships around the subordinate, the way that

managers may adapt their management style when they enter a new group, or the way that subordinate behavior might change as they seek to build relationships with a new manager. It is possible, for example, that subordinates respond to a change in manager by increasing their effort in order to make a good impression. Such behavior might account for the fact that manager mobility was associated with increased sales commissions (albeit only at the $p<0.1$ level). Our results indicate that any such increase in effort is not sufficient to overcome the other, negative effects on rewards associated with manager mobility. Nevertheless, future work that explored these topics, possibly using survey-based methods, has the potential to add valuable nuance to our account, and help us to understand some of the strategies that subordinates might adopt to mitigate the challenges created by relational disruption. Relatedly, we assume in this paper that managers and subordinates did not know one another prior to the manager's move into the job (except where that manager had managed that subordinate previously). Exploring the impact of other kinds of prior ties, such as friendship or co-working ties, is also worth future study.

A further limitation is that we are only able to track the effect of manager mobility on objective career success for subordinates who stayed within the firm. Although this is the substantial majority of subordinates, a number did quit when their managers left, and in analyses not reported here we found that manager mobility was associated with increased voluntary and involuntary exit, particularly when the manager moved to a different job outside the organization. It is possible that some of subordinate moves to other organizations could also have been associated with career advancement, particularly where subordinates were following their managers. We do not, however, have the data to examine whether subordinates do follow managers to new organizations, or the implications of doing so.

Contributions to Theory and Practice

We believe that this study contributes to a variety of literatures. First, it provides new insights into career interdependence. While prior work has examined how individuals' careers can affect one another, that work has tended to focus on two mechanisms – the generation of vacancies (Barnett and Miner 1992, Haveman and Cohen 1994, Stewman and Konda 1983, White 1970) and turnover contagion (Felps et al. 2009, Shapiro et al. 2016). Such research suggests that managerial mobility primarily affects subordinates

by prompting them to take their managers' job or leave the firm. Yet, as we found at *Asclepius*, many subordinates will do neither, but rather remain in their current role, now working with a different manager. We show how the relational disruption caused by the manager's mobility also affects these subordinates who remain behind, shaping their rewards and subsequent mobility. By shifting the focus of studies of career interdependence to the ways that mobility disrupts subordinate-manager relationships, we hope to provide a very different approach to thinking about career interdependence. We believe that there is substantial scope to extend these ideas of relational disruption to explore the study of the reciprocal effects of mobility among other kinds of coworkers (Anderson (2019) has developed important work in this vein, albeit drawing on quite different theoretical perspectives).

We also hope that our study provides broader insight into the nature of the subordinate-manager relationship. Beyond highlighting the important effects that managers' own career mobility can have on their subordinates, our study emphasizes the duration of the manager-subordinate relationship as an important influence on consequential outcomes. Perhaps surprisingly, very little work has examined the impact of relationship duration. Some research has looked at the effects of relationship duration on performance evaluations but has generally failed to parse out the confounding effects of subordinate role tenure (Duarte et al. 1994, Hassan and Hatmaker 2015). Staats (2012) showed that manager-subordinate familiarity improves team performance, but did not examine outcomes for the subordinate. By exploiting a longitudinal research design and detailed data, we are able to establish how relationship duration shapes the rewards that subordinates receive, as well as their mobility.

Our research also highlights how the development of manager-subordinate relationships can be something of a double-edged sword. Although stronger, more embedded relationships between manager and subordinate can increase subordinate rewards, particularly by increasing the sponsorship that the subordinate receives, our theory and results suggest that those same relationships can also lead to relational inertia, inhibiting the subordinates' promotion into other parts of the organization. It is possible that other facets of the manager-subordinate relationship, such as perceived similarity (Turban and Jones 1988), could demonstrate similar tradeoffs in how they shape subordinates' career success.

In developing our understanding of the manager-subordinate relationship, this study also sheds new light on the effects of subordinate mobility; after all, one of the effects of subordinate moves is to disrupt their relationship with their existing manager. The effects of such manager changes are difficult to disentangle from all of the other changes that subordinates face when they move jobs, but by studying the effects of manager mobility we are able to isolate the effects of the changing manager-subordinate relationship. Our results demonstrate that the need to rebuild such relationships is an important challenge that subordinates will face when they themselves move jobs.

Finally, our results also have some practical implications. To the extent that moving managers has knock on effects on subordinates, organizations may want to take account of those effects when making decisions to move managers, and prepare both subordinates and new managers for the challenges of establishing new relationships. Our findings also suggest that subordinates should be cognizant of the costs and benefits of relationships with managers as they plan their own careers. We have shown that subordinates receive more rewards when they stay with a manager, but at the cost of getting promoted into jobs in other areas. It is possible that some subordinates become too comfortable in their relationships with their managers, and may be limiting their own career progression in order to stay with that manager. The costs and benefits of doing so should be carefully evaluated.

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Table 1. Summary Statistics and Correlations (N=112,599)

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 *Subordinate Merit Percent (t)*	2.89	1.00	1									
2 *Subordinate Bonus Amount (ln) (t)*	7.58	3.85	0.25	1								
3 *Subordinate LTI Amount (ln) (t)*	3.49	4.91	0.24	0.16	1							
4 *Cross-Promotion (t+1)*	0.05	0.22	0.09	0.03	0.01	1						
5 *Within-Promotion (t+1)*	0.04	0.20	0.09	0.00	0.00	-0.05	1					
6 *Subordinate Performance Rating (z-score) (t)*	0.06	1.00	0.69	0.20	0.32	0.12	0.13	1				
7 *Subordinate Performance Rating (z-score) (t-1)*	0.02	0.93	0.30	0.15	0.22	0.07	0.06	0.45	1			
8 *Business Performance Rating (z-score) (t)*	0.06	1.01	0.56	0.18	0.26	0.07	0.08	0.79	0.28	1		
9 *Leadership Performance Rating (z-score) (t)*	0.04	1.00	0.57	0.11	0.27	0.09	0.09	0.78	0.35	0.23	1	
10 *Subordinate Performance Rating in 9pt-scale (dummy) (t)*	0.45	0.50	-0.06	-0.12	-0.25	0.07	0.07	0.00	-0.07	.	.	1
11 *Subordinate Commission (ln) (t)*	1.97	4.14	-0.16	-0.91	0.05	-0.02	0.00	-0.08	-0.09	-0.08	-0.02	0.07
12 *Manager Changed (t)*	0.31	0.46	-0.04	0.01	-0.05	0.03	0.00	-0.05	-0.05	-0.04	-0.05	0.02
13 *Manager Changed (t-1)*	0.09	0.28	-0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.06
14 *Manager Changed (t-2)*	0.03	0.16	-0.01	-0.01	0.00	-0.02	-0.01	0.00	0.01	0.00	0.00	-0.07
15 *Manager-Subordinate Relationship Duration (t) (months)*	17.40	13.81	0.04	-0.03	0.07	-0.04	-0.01	0.08	0.08	0.06	0.06	-0.17
16 *Manager-Subordinate Relationship Duration (t-1) (months)*	12.97	12.56	0.02	-0.01	0.05	-0.04	-0.02	0.05	0.10	0.04	0.03	-0.22
17 *Manager's Firm Tenure (months)*	155.77	95.43	0.04	0.04	0.11	-0.01	-0.01	0.04	0.04	0.03	0.03	-0.06
18 *Manager's Job Tenure (months)*	21.89	16.20	0.03	0.02	0.01	-0.03	-0.03	0.03	0.02	0.03	0.03	-0.18
19 *Manager's Performance Rating (z-score) (t-1)*	0.07	0.98	0.08	0.13	0.08	0.01	0.02	0.10	0.13	0.08	0.06	-0.04
20 *Manager's Performance Rating in 9pt-scale (dummy) (t)*	0.28	0.45	-0.04	-0.03	-0.17	0.04	0.04	-0.04	-0.08	-0.01	-0.01	0.69
21 *Manager's Merit Raise (t)*	3.04	0.96	0.11	0.10	0.00	0.01	0.02	0.09	0.04	0.09	0.03	-0.03
22 *Manager's Bonus Amount (ln) (t)*	8.59	4.05	0.18	0.87	0.11	0.03	0.01	0.12	0.12	0.11	0.04	-0.11
23 *Manager's LTI Amount (ln) (t)*	7.36	5.16	0.13	0.21	0.44	0.01	0.01	0.13	0.13	0.10	0.07	-0.19
24 *Manager Moves (t+1)*	0.25	0.43	-0.01	-0.01	0.00	0.09	0.01	0.00	-0.01	0.00	0.00	0.17
25 *Subordinate Firm Tenure (months)*	122.02	95.01	-0.05	0.16	0.15	-0.06	-0.06	0.04	0.10	0.03	0.02	-0.11
26 *Subordinate Job Tenure (months)*	24.68	14.33	-0.01	0.05	0.01	-0.04	-0.02	0.01	0.02	0.02	-0.01	-0.24
27 *Subordinate Pay Grade*	28.04	6.47	0.09	0.37	0.71	-0.04	-0.06	0.08	0.13	0.06	0.05	-0.29
28 *Subordinate Direct Reports (dummy)*	0.23	0.42	0.12	0.25	0.46	0.00	-0.01	0.10	0.13	0.07	0.08	-0.20
29 *Number of Subordinate's Direct Reports*	1.19	6.22	0.04	0.06	0.15	0.00	-0.01	0.03	0.04	0.01	0.03	-0.06
30 *Median Firm Tenure in Teams (months)*	116.37	70.84	0.01	0.20	0.18	-0.04	-0.04	0.06	0.10	0.04	0.03	-0.10
31 *Subordinate Outside Experience*	4.95	1.17	-0.10	-0.04	0.03	-0.10	-0.04	-0.12	-0.11	-0.06	-0.11	-0.05
32 *Year*	2013.84	1.70	0.02	0.00	0.03	-0.09	-0.07	0.02	0.05	0.00	0.01	-0.76

		11	12	13	14	15	16	17	18	19	20	21	22
11	*Subordinate Commission (ln) (t)*	1											
12	*Manager Changed (t)*	-0.02	1										
13	*Manager Changed (t-1)*	-0.01	-0.21	1									
14	*Manager Changed (t-2)*	0.01	-0.11	-0.05	1								
15	*Manager-Subordinate Relationship Duration (t) (months)*	0.04	-0.56	0.02	0.16	1							
16	*Manager-Subordinate Relationship Duration (t-1) (months)*	0.01	-0.08	-0.19	0.08	0.65	1						
17	*Manager's Firm Tenure (months)*	0.00	-0.11	-0.01	0.02	0.17	0.13	1					
18	*Manager's Job Tenure (months)*	-0.04	-0.26	0.03	0.10	0.41	0.26	0.16	1				
19	*Manager's Performance Rating (z-score) (t-1)*	-0.11	-0.08	-0.01	0.00	0.06	0.03	0.03	0.00	1			
20	*Manager's Performance Rating in 9pt-scale (dummy) (t)*	-0.05	0.01	-0.06	-0.07	-0.18	-0.22	-0.06	-0.19	-0.02	1		
21	*Manager's Merit Raise (t)*	-0.12	-0.01	0.01	0.00	0.00	-0.01	-0.05	0.00	0.19	0.00	1	
22	*Manager's Bonus Amount (ln) (t)*	-0.86	0.03	0.00	-0.01	-0.04	-0.01	0.07	0.00	0.14	-0.02	0.18	1
23	*Manager's LTI Amount (ln) (t)*	-0.02	-0.04	-0.01	-0.01	0.03	0.03	0.12	-0.01	0.18	-0.23	0.24	0.26
24	*Manager Moves (t+1)*	0.03	0.00	0.00	-0.01	-0.06	-0.09	-0.04	-0.03	0.00	0.11	-0.01	-0.02
25	*Subordinate Firm Tenure (months)*	-0.12	0.02	0.07	0.06	0.12	0.17	0.21	0.03	0.02	-0.08	0.00	0.16
26	*Subordinate Job Tenure (months)*	-0.06	0.09	0.28	0.28	0.29	0.43	0.07	0.24	0.00	-0.23	-0.01	0.04
27	*Subordinate Pay Grade*	-0.13	-0.04	0.01	0.01	0.03	0.03	0.13	0.00	0.10	-0.21	-0.01	0.31
28	*Subordinate Direct Reports (dummy)*	-0.11	-0.02	0.01	0.00	0.02	0.01	0.10	-0.03	0.06	-0.12	0.00	0.25
29	*Number of Subordinate's Direct Reports*	-0.02	-0.01	0.01	0.01	0.01	0.00	0.04	-0.02	0.01	-0.05	0.00	0.07
30	*Median Firm Tenure in Teams (months)*	-0.16	0.00	0.05	0.04	0.09	0.13	0.29	0.05	0.02	-0.06	-0.01	0.21
31	*Subordinate Outside Experience*	0.06	-0.03	0.01	0.02	0.04	0.03	-0.06	0.04	-0.01	-0.05	-0.03	-0.05
32	*Year*	0.01	0.00	0.09	0.09	0.22	0.29	0.02	0.24	0.01	-0.73	0.03	-0.01

		23	24	25	26	27	28	29	30	31	32
23	*Manager's LTI Amount (ln) (t)*	1									
24	*Manager Moves (t+1)*	0.00	1								
25	*Subordinate Firm Tenure (months)*	0.09	-0.02	1							
26	*Subordinate Job Tenure (months)*	-0.01	-0.07	0.22	1						
27	*Subordinate Pay Grade*	0.53	0.00	0.20	0.02	1					
28	*Subordinate Direct Reports (dummy)*	0.34	0.03	0.15	0.00	0.57	1				
29	*Number of Subordinate's Direct Reports*	0.11	0.01	0.06	0.01	0.20	0.35	1			
30	*Median Firm Tenure in Teams (months)*	0.11	-0.02	0.61	0.17	0.23	0.20	0.09	1		
31	*Subordinate Outside Experience*	0.02	-0.03	-0.34	0.06	0.07	-0.01	-0.01	-0.18	1	
32	*Year*	0.00	-0.22	0.08	0.31	0.01	0.00	0.00	0.04	0.04	1

Table 2. Analysis of Manager Change on Rewards Using Individual-Job Spell Fixed Effects

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Merit Raise	Bonus	LTI	Merit Raise	Bonus	LTI
Manager Changed (t)	-0.063***	-0.040***	-0.168***	-0.003	0.021	0.006
	[0.010]	[0.011]	[0.034]	[0.013]	[0.014]	[0.042]
Manager Changed (t-1)	-0.065***	-0.053***	-0.134**			
	[0.014]	[0.016]	[0.047]			
Manager Changed (t-2)	-0.056**	-0.036	-0.088			
	[0.021]	[0.022]	[0.063]			
Relationship Duration (t-1)				0.002***	0.003***	0.005**
				[0.001]	[0.001]	[0.002]
Manager Changed (t) x Relationship Duration (t-1)				-0.002***	-0.003***	-0.008***
				[0.001]	[0.001]	[0.002]
Manager's Firm Tenure	0.000**	0	0	0.000*	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.053***	0.002	0.115***	0.057***	0.008	0.121***
	[0.005]	[0.005]	[0.015]	[0.006]	[0.006]	[0.017]
Manager's Bonus Amount (ln) (t)	0.020***	0.087***	0.016	0.019***	0.087***	0.015
	[0.003]	[0.008]	[0.011]	[0.004]	[0.009]	[0.013]
Manager's LTI Amount (ln) (t)	0.006***	0.004**	0.029***	0.006***	0.005**	0.029***
	[0.001]	[0.001]	[0.004]	[0.001]	[0.001]	[0.004]
Subordinate Firm Tenure	-0.002	-0.002	-0.002	-0.001	-0.002	0
	[0.001]	[0.003]	[0.006]	[0.001]	[0.003]	[0.005]
Subordinate Direct Reports (dummy)	0.132***	0.114***	0.314***	0.139***	0.109***	0.255**
	[0.019]	[0.028]	[0.084]	[0.023]	[0.032]	[0.097]
Number of Subordinate's Direct Reports	0	-0.001	0.003	-0.001	0	0.005
	[0.001]	[0.000]	[0.003]	[0.002]	[0.001]	[0.005]
Median Firm Tenure in Teams	-0.000*	0	0	0	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	112,599	112,599	112,599	84,848	84,848	84,848
R-squared	0.024	0.031	0.01	0.026	0.033	0.01

Robust clustered standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. Controls for number of months spent in job, outside experience, subordinate's performance rating in 9-pt scale (dummy), and year included. Errors are clustered by individual workers.

Table 3. Effects of Manager Change on Performance Ratings and Rewards Using Individual-Job Spell Fixed Effects – Analyzing the Role of Performance

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Performance	Merit Raise	Bonus	LTI	Business Performance	Leadership Performance
Manager Changed (t)	-0.073***	-0.014+	-0.017	-0.072*	-0.051**	-0.080***
	[0.010]	[0.007]	[0.010]	[0.031]	[0.018]	[0.017]
Manager Changed (t-1)	-0.047***	-0.034**	-0.037*	-0.073+	-0.039+	-0.029
	[0.014]	[0.011]	[0.015]	[0.043]	[0.023]	[0.022]
Manager Changed (t-2)	-0.029	-0.037*	-0.027	-0.05	-0.014	-0.03
	[0.019]	[0.016]	[0.021]	[0.058]	[0.030]	[0.027]
Manager's Firm Tenure	0	0.000**	0	0	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.047***	0.022***	-0.013**	0.054***	0.069***	0.01
	[0.004]	[0.004]	[0.005]	[0.013]	[0.008]	[0.007]
Manager's Bonus Amount (ln) (t)	-0.005*	0.024***	0.089***	0.023*	-0.019***	0
	[0.003]	[0.003]	[0.008]	[0.011]	[0.004]	[0.003]
Manager's LTI Amount (ln) (t)	0.009***	-0.001	0.001	0.017***	0.013***	0.004*
	[0.001]	[0.001]	[0.001]	[0.003]	[0.002]	[0.002]
Subordinate Firm Tenure	-0.003*	0	-0.001	0.002	-0.007	-0.002
	[0.001]	[0.001]	[0.003]	[0.006]	[0.005]	[0.003]
Subordinate Direct Reports (dummy)	0.133***	0.043***	0.070**	0.140+	0.099***	0.117***
	[0.021]	[0.013]	[0.027]	[0.076]	[0.029]	[0.031]
Number of Subordinate's Direct Reports	-0.001	0	0	0.004**	-0.002**	-0.001
	[0.002]	[0.000]	[0.001]	[0.001]	[0.001]	[0.001]
Median Firm Tenure in Teams	0	0	0	0	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Subordinate Performance Rating (t)		0.668***	0.326***	1.304***		
		[0.004]	[0.009]	[0.019]		
Observations	112,599	112,599	112,599	112,599	61,790	61,790
R-squared	0.021	0.459	0.116	0.158	0.016	0.008

Robust clustered standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. Specification and controls same as Table 2. Errors are clustered by individual workers.

Table 4. Analysis of Manager Change on Commissions and Rewards Using Individual-Job Spell Fixed Effects (Subsample Analysis Using Workers Eligible for Commissions)

	Model 1	Model 2	Model 3	Model 4
	Commission	Merit Raise	Bonus	LTI
Manager Changed (t)	0.070+	-0.064*	-0.115***	-0.174
	[0.042]	[0.033]	[0.032]	[0.114]
Manager Changed (t-1)	0.034	-0.083+	-0.066	-0.051
	[0.050]	[0.047]	[0.046]	[0.157]
Manager Changed (t-2)	0.033	-0.086	0.037	-0.202
	[0.052]	[0.064]	[0.071]	[0.214]
Manager's Firm Tenure	0	0	-0.001*	0
	[0.000]	[0.000]	[0.000]	[0.001]
Manager's Merit Raise (t)	0.047***	0.092***	0.023*	0.174***
	[0.010]	[0.011]	[0.009]	[0.035]
Manager's Bonus Amount (ln) (t)	-0.054***	0.001	0.104***	-0.017
	[0.015]	[0.007]	[0.015]	[0.023]
Manager's LTI Amount (ln) (t)	0.013***	0.014***	-0.001	0.064***
	[0.003]	[0.003]	[0.002]	[0.010]
Subordinate Firm Tenure	0.008	-0.005	-0.012	-0.034*
	[0.005]	[0.004]	[0.010]	[0.015]
Subordinate Direct Reports (dummy)	-0.007	-0.013	-0.153	0.072
	[0.146]	[0.065]	[0.140]	[0.308]
Number of Subordinate's Direct Reports	0.050+	0.019*	-0.005	0.036
	[0.027]	[0.008]	[0.007]	[0.030]
Median Firm Tenure in Teams	0	0	0	-0.001
	[0.000]	[0.000]	[0.000]	[0.001]
Observations	22,379	22,379	22,379	22,379
R-squared	0.028	0.05	0.073	0.033

Robust standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. Specification and controls same as Table 2. Errors are clustered by individual workers.

Table 5. Effects of Manager-Subordinate Relationship Duration and Manager Job Tenure on Subordinate Rewards Using Individual-Job Spell Fixed Effects

	Model 1	Model 2	Model 3	Model 4
	Merit Raise	Bonus	LTI	Performance
Relationship Duration (t)	0.002***	0.001*	0.006***	0.002***
	[0.000]	[0.000]	[0.001]	[0.000]
Manager's Job Tenure	0	0.001**	0.001	0
	[0.000]	[0.000]	[0.001]	[0.000]
Manager's Firm Tenure	0	0	0	0
	[0.000]	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.060***	0.007	0.141***	0.054***
	[0.006]	[0.006]	[0.017]	[0.005]
Manager's Bonus Amount (ln) (t)	0.023***	0.089***	0.023+	-0.007*
	[0.004]	[0.008]	[0.013]	[0.003]
Manager's LTI Amount (ln) (t)	0.007***	0.006***	0.027***	0.010***
	[0.001]	[0.002]	[0.004]	[0.001]
Subordinate Firm Tenure	-0.003	-0.006	-0.006	-0.003
	[0.002]	[0.006]	[0.015]	[0.002]
Subordinate Direct Reports (dummy)	0.114***	0.099**	0.267**	0.117***
	[0.023]	[0.034]	[0.099]	[0.025]
Number of Subordinate's Direct Reports	-0.001	0	0.001	-0.002
	[0.001]	[0.000]	[0.002]	[0.001]
Median Firm Tenure in Teams	-0.000+	0	0	0
	[0.000]	[0.000]	[0.000]	[0.000]
Observations	88,229	88,229	88,229	88,229
R-squared	0.028	0.034	0.012	0.022

Robust standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. Specification and controls same as Table 2. Errors are clustered by individual workers.

Table 6. Effects of Prior Manager Exit Reasons on Rewards Using Individual-Job Spell Fixed Effects

	Model 1	Model 2	Model 3
	Merit Raise	Bonus	LTI
Manager Changed by Reorg (t)	-0.058***	-0.019	-0.113**
	[0.012]	[0.013]	[0.040]
Manager Changed by Invol-term (t)	-0.134***	-0.187***	-0.479***
	[0.032]	[0.047]	[0.110]
Manager Changed by Vol-term (t)	-0.117***	-0.089***	-0.260***
	[0.022]	[0.026]	[0.067]
Manager Changed by Promotion (t)	-0.040*	-0.009	-0.128*
	[0.018]	[0.020]	[0.055]
Manager Changed by Lateral (t)	-0.042**	-0.058**	-0.198***
	[0.016]	[0.018]	[0.059]
Manager Changed by Demotion (t)	-0.083*	-0.045	-0.301**
	[0.033]	[0.036]	[0.115]
Manager Changed by Reorg (t-1)	-0.063***	-0.042*	-0.096+
	[0.017]	[0.019]	[0.057]
Manager Changed by Invol-term (t-1)	-0.102*	-0.167**	-0.457**
	[0.048]	[0.059]	[0.167]
Manager Changed by Vol-term (t-1)	-0.058	-0.017	-0.093
	[0.038]	[0.040]	[0.114]
Manager Changed by Promotion (t-1)	-0.022	-0.013	-0.236**
	[0.029]	[0.034]	[0.088]
Manager Changed by Lateral (t-1)	-0.083**	-0.089**	-0.062
	[0.027]	[0.032]	[0.090]
Manager Changed by Demotion (t-1)	-0.112+	-0.064	-0.272
	[0.058]	[0.065]	[0.176]
Manager Changed by Reorg (t-2)	-0.057*	-0.036	-0.089
	[0.025]	[0.027]	[0.078]
Manager Changed by Invol-term (t-2)	-0.064	0.011	-0.19
	[0.092]	[0.146]	[0.280]
Manager Changed by Vol-term (t-2)	-0.156**	-0.198*	-0.129
	[0.057]	[0.086]	[0.177]
Manager Changed by Promotion (t-2)	0.026	-0.005	-0.019
	[0.051]	[0.044]	[0.152]
Manager Changed by Lateral (t-2)	-0.119*	0.009	0.032
	[0.047]	[0.054]	[0.142]
Manager Changed by Demotion (t-2)	0.182*	-0.042	-0.483+
	[0.087]	[0.036]	[0.282]
Manager's Firm Tenure	0.000**	0	0
	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.054***	0.003	0.118***
	[0.005]	[0.005]	[0.015]
Manager's Bonus Amount (ln) (t)	0.021***	0.088***	0.018
	[0.003]	[0.008]	[0.011]
Manager's LTI Amount (ln) (t)	0.006***	0.004***	0.030***
	[0.001]	[0.001]	[0.004]
Observations	112,599	112,599	112,599
R-squared	0.025	0.032	0.011

Robust standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. In addition to controls in Table 2, subordinate's firm tenure, subordinate's direct reports (dummy), subordinate's number of direct reports, and median firm tenure in teams are included. Errors are clustered by individual workers.

Table 7. Moderating Effects of Subordinate's Performance Under Prior Manager and Prior Manager's Performance on Rewards Using Individual-Job Spell Fixed Effects

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Merit Raise	Bonus	LTI	Merit Raise	Bonus	LTI
Manager Changed (t)	-0.030***	-0.007	-0.089***	-0.028***	-0.011	-0.093***
	[0.008]	[0.009]	[0.026]	[0.008]	[0.009]	[0.025]
Subordinate Performance Rating (t-1)	-0.079***	-0.008	-0.138***			
	[0.006]	[0.007]	[0.019]			
Manager Changed (t) x Subordinate Performance Rating (t-1)	0.006	-0.003	0.041+			
	[0.009]	[0.012]	[0.025]			
Manager's Performance Rating (t-1)				0.011+	0.001	0.015
				[0.006]	[0.005]	[0.018]
Manager Changed (t) x Manager's Performance Rating (t-1)				0.015+	0.017*	0.026
				[0.008]	[0.009]	[0.026]
Manager's Firm Tenure	0.000***	0.000+	0	0.000***	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.052***	0.004	0.098***	0.056***	0.006	0.115***
	[0.005]	[0.005]	[0.016]	[0.005]	[0.005]	[0.016]
Manager's Bonus Amount (ln) (t)	0.020***	0.085***	0.016	0.019***	0.087***	0.013
	[0.004]	[0.008]	[0.013]	[0.004]	[0.008]	[0.013]
Manager's LTI Amount (ln) (t)	0.005***	0.004**	0.027***	0.006***	0.004**	0.028***
	[0.001]	[0.001]	[0.004]	[0.001]	[0.001]	[0.004]
Subordinate Firm Tenure	-0.002	-0.003	0	-0.001	-0.002	0.001
	[0.001]	[0.003]	[0.005]	[0.001]	[0.003]	[0.005]
Subordinate Direct Reports (dummy)	0.152***	0.104***	0.311***	0.137***	0.101***	0.273**
	[0.022]	[0.030]	[0.094]	[0.022]	[0.029]	[0.093]
Number of Subordinate's Direct Reports	0	0	0.007	0	0	0.006
	[0.002]	[0.001]	[0.005]	[0.002]	[0.001]	[0.005]
Median Firm Tenure in Teams	0	0	0	-0.000+	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	92,340	92,340	92,340	94,053	94,053	94,053
R-squared	0.03	0.031	0.009	0.025	0.032	0.008

Robust standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Notes: Unit of analysis is the subordinate-year. All models include fixed effects for each job-spell held by each subordinate. Specification and controls same as Table 2. Errors are clustered by individual workers.

Table 8. Determinants of Promotion in the Following Year

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	Within-Promotion		Cross-Promotion		Within-Promotion		Cross-Promotion	
Manager Changed (t)	0.013	0.086*	0.114***	0.174***	0.082	0.134*	0	0.042
	[0.038]	[0.039]	[0.034]	[0.034]	[0.055]	[0.057]	[0.047]	[0.048]
Manager Changed (t-1)	0.072	0.111+	0.112+	0.142*				
	[0.064]	[0.065]	[0.058]	[0.059]				
Manager Changed (t-2)	-0.148	-0.146	-0.029	-0.018				
	[0.121]	[0.123]	[0.118]	[0.119]				
Relationship Duration (t-1)					0	-0.003	-0.002	-0.005*
					[0.002]	[0.002]	[0.002]	[0.002]
Manager Changed (t) x Relationship Duration (t-1)					-0.007+	-0.006	0.006*	0.008*
					[0.004]	[0.004]	[0.003]	[0.003]
Manager's Firm Tenure	0.000**	0.000*	0	0	0	0.000+	0	0
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Manager's Merit Raise (t)	0.038*	-0.008	-0.007	-0.040*	0.033	-0.013	-0.015	-0.048*
	[0.019]	[0.019]	[0.017]	[0.017]	[0.022]	[0.022]	[0.019]	[0.019]
Manager's Bonus Amount (ln) (t)	0.060***	0.066***	0.047***	0.048***	0.063***	0.072***	0.062***	0.065***
	[0.010]	[0.010]	[0.009]	[0.009]	[0.012]	[0.013]	[0.010]	[0.011]
Manager's LTI Amount (ln) (t)	0.045***	0.037***	0.022***	0.014***	0.047***	0.037***	0.023***	0.014*
	[0.004]	[0.005]	[0.004]	[0.004]	[0.005]	[0.005]	[0.005]	[0.005]
Manager Moves (t+1)	-0.188***	-0.202***	0.403***	0.414***	-0.225***	-0.245***	0.395***	0.405***
	[0.036]	[0.037]	[0.030]	[0.030]	[0.042]	[0.044]	[0.034]	[0.035]
Subordinate Firm Tenure	-0.004***	-0.003***	-0.007***	-0.006***	-0.004***	-0.003***	-0.007***	-0.006***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Subordinate Direct Reports (dummy)	0.765***	0.648***	0.385***	0.290***	0.754***	0.635***	0.408***	0.308***
	[0.054]	[0.054]	[0.045]	[0.046]	[0.064]	[0.064]	[0.051]	[0.052]
Number of Subordinate's Direct Reports	0.001	0.003	0.003+	0.004*	0	0.004	0.002	0.005*
	[0.002]	[0.002]	[0.002]	[0.002]	[0.004]	[0.003]	[0.002]	[0.002]
Median Firm Tenure in Teams	-0.001	-0.001	0	0	-0.001+	-0.001+	0.001+	0.001
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Subordinate Job Spell Entry Mode (Promotion)	-0.075	-0.267***	0.146**	0.015	-0.037	-0.185**	0.160**	0.061
	[0.052]	[0.053]	[0.046]	[0.047]	[0.060]	[0.062]	[0.053]	[0.054]
Subordinate Job Spell Entry Mode (Lateral)	0.301***	0.168**	0.596***	0.503***	0.271***	0.194**	0.603***	0.548***
	[0.051]	[0.053]	[0.047]	[0.048]	[0.059]	[0.061]	[0.054]	[0.055]
Subordinate Job Spell Entry Mode (Demotion)	0.458***	0.351***	0.731***	0.668***	0.310**	0.259*	0.672***	0.638***
	[0.089]	[0.092]	[0.082]	[0.083]	[0.112]	[0.115]	[0.097]	[0.098]
Subordinate Job Spell Entry Mode (Rehire)	0.237**	0.138+	0.486***	0.408***	0.242**	0.153+	0.474***	0.399***
	[0.078]	[0.081]	[0.071]	[0.073]	[0.085]	[0.088]	[0.078]	[0.080]
Subordinate Performance Rating (t)		0.767***		0.563***		0.785***		0.582***
		[0.017]		[0.015]		[0.019]		[0.017]
Observations	87,323	87,323	87,934	87,934	64,567	64,567	65,067	65,067

Robust clustered standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Notes: Dependent variable is 1 if worker is promoted in following year t+1, 0 otherwise. Controls for paygrade, business area, sub-function, number of months spent in job, outside experience, subordinate's performance rating in 9-pt scale (dummy), and year included. Models 1-4 use the same observations that meet the sample criteria, but Models 1 and 2 additionally exclude 611 observations within specific categories of job spell tenure, business areas, sub-functions, and pay grades from which no within-group promotions took place and which were therefore automatically excluded from Models 1 and 2. Likewise, Models 5-8 use the same observations that meet the sample criteria, but Models 5 and 6 additional exclude 500 observations for the same reasons that 611 observations were excluded in Models 1 and 2. Errors are clustered by individual workers.

Table 9. Effects of Manager-Subordinate Relationship Duration and Manager Job Tenure on Promotions

	Model 1	Model 2
	Cross-Promotion	
Relationship Duration (t)	-0.002	-0.005**
	[0.002]	[0.002]
Manager's Job Tenure	-0.002	-0.001
	[0.001]	[0.001]
Manager's Firm Tenure	0	0
	[0.000]	[0.000]
Manager's Merit Raise (t)	-0.002	-0.035+
	[0.019]	[0.019]
Manager's Bonus Amount (ln) (t)	0.055***	0.057***
	[0.010]	[0.010]
Manager's LTI Amount (ln) (t)	0.022***	0.014**
	[0.005]	[0.005]
Manager Moves (t+1)	0.403***	0.407***
	[0.033]	[0.034]
Subordinate Firm Tenure	-0.007***	-0.006***
	[0.000]	[0.000]
Subordinate Direct Reports (dummy)	0.392***	0.288***
	[0.051]	[0.052]
Number of Subordinate's Direct Reports	0.005+	0.007*
	[0.003]	[0.003]
Median Firm Tenure in Teams	0.001+	0.001
	[0.000]	[0.000]
Subordinate Job Spell Entry Mode (Promotion)	0.202***	0.088+
	[0.052]	[0.053]
Subordinate Job Spell Entry Mode (Lateral)	0.630***	0.552***
	[0.052]	[0.053]
Subordinate Job Spell Entry Mode (Demotion)	0.771***	0.712***
	[0.095]	[0.096]
Subordinate Job Spell Entry Mode (Rehire)	0.539***	0.474***
	[0.078]	[0.081]
Subordinate Performance Rating (t)		0.573***
		[0.017]
Observations	65,906	65,906

Robust clustered standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Notes: Dependent variable is 1 if worker is promoted in following year, 0 otherwise. Specifications and controls same as Table 8. Errors are clustered by individual workers.

Table 10. Effects of Prior Manager Exit Reasons on Promotion

	Model 1
	Cross-Promotion
Manager Changed by Reorg (t)	0.118**
	[0.041]
Manager Changed by Invol-term (t)	-0.021
	[0.114]
Manager Changed by Vol-term (t)	0.069
	[0.089]
Manager Changed by Promotion (t)	0.212**
	[0.064]
Manager Changed by Lateral (t)	0.128*
	[0.060]
Manager Changed by Demotion (t)	-0.289+
	[0.166]
Manager Changed by Reorg (t-1)	0.103
	[0.074]
Manager Changed by Invol-term (t-1)	-0.147
	[0.239]
Manager Changed by Vol-term (t-1)	0.197
	[0.177]
Manager Changed by Promotion (t-1)	0.311*
	[0.128]
Manager Changed by Lateral (t-1)	0.08
	[0.121]
Manager Changed by Demotion (t-1)	-0.296
	[0.287]
Manager Changed by Reorg (t-2)	0.09
	[0.149]
Manager Changed by Invol-term (t-2)	-0.553
	[0.608]
Manager Changed by Vol-term (t-2)	-0.049
	[0.410]
Manager Changed by Promotion (t-2)	-0.348
	[0.341]
Manager Changed by Lateral (t-2)	-0.065
	[0.253]
Manager Changed by Demotion (t-2)	-0.21
	[0.617]
Manager's Firm Tenure	0
	[0.000]
Manager's Merit Raise (t)	-0.008
	[0.017]
Manager's Bonus Amount (ln) (t)	0.047***
	[0.009]
Manager's LTI Amount (ln) (t)	0.022***
	[0.004]
Manager Moves (t+1)	0.402***
	[0.030]
Observations	87,934

Robust clustered standard errors in brackets; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Notes: Dependent variable is 1 if worker is promoted in following year, 0 otherwise. All controls are same as in Table 8, including subordinate's firm tenure, subordinate's direct reports (dummy), subordinate's number of direct reports, median firm tenure in teams, and subordinate's job spell entry mode which are included in analysis but not reported here. Errors are clustered by individual workers.