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Stepping Sideways to Step up: Lateral Mobility and Career Advancement Inside Organizations

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Abstract. Although internal labor market theory emphasizes promotions as the main form of mobility within organizations, many internal job moves take people sideways into jobs that are at the same hierarchical level as the one that was left. Despite the prevalence of these lateral moves, however, we have little evidence on what role they play in workers' careers. We argue that lateral mobility can facilitate subsequent career advancement by allowing for the development and demonstration of new skills and can, therefore, help those who would struggle to be promoted from their current job to develop their careers further. We establish empirical evidence on the implications of lateral mobility using eight years of personnel data from a large U.S. healthcare company. Our analyses show that those employees who move laterally are more likely to be subsequently promoted and achieve substantially higher pay growth than a matched sample of employees. We also find that lateral moves are more likely to be undertaken by those who have spent longer in the job but have lower performance than those who are promoted. This pattern of results suggests that lateral mobility provides an important avenue for career growth as people who step sideways in organizations are more likely to subsequently step up.

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1. Introduction

Moving between different jobs within the same firm is an important way in which people can advance their careers (Bidwell and Mollick 2015, Keller 2018). Research on such internal mobility has tended to focus on promotions into more senior roles (Cohen et al. 1998, Feldman and Ng 2007, Dencker 2009, Chattopadhyay and Choudhury 2017). Yet, much internal mobility takes a different form, moving employees "laterally" into roles at the same hierarchical level but in a different organizational unit or with a different functional specialty. Researchers (DiPrete 1987, Gunz 1989, Dohmen et al. 2004, Bidwell and Keller 2014) and practitioners (Benko and Anderson 2011) alike have long noted the prevalence of these lateral moves. We know surprisingly little, however, about the role that they play in modern careers.

Little research, in particular, has examined the benefits for employees associated with lateral moves. Some work has found that participating in organizational rotational programs is associated with pay growth and promotions (Campion et al. 1994, 2023) and that rotations across more similar roles are associated with more rapid advancement (Ferguson and Hasan 2013). Those studies, however, offer little evidence about why rotations benefit careers, and it is not clear that findings about such regular, planned rotations would generalize to the unscripted, one-off lateral moves that are an important part of modern careers. Other studies have compared outcomes for lateral transfers versus newly hired or promoted employees (Bidwell 2011, Benson and Rissing 2020) but do not compare lateral mobility with the direct alternative that confronts employees—simply remaining in the prior job. We believe that exploring this

comparison between moving laterally or remaining in the same role is necessary for understanding careers in modern organizations.

In this paper, we draw on internal labor market theory to develop a learning-based perspective on lateral mobility. Our arguments are founded on the idea that career advancement is usually driven by employees' ability to develop and demonstrate new skills that make them more valuable in the current role and assist them in moving into a more rewarded role in the future. Although lateral mobility does not directly place employees into a job with higher status and rewards, we argue that it can still advance careers as taking on new tasks allows employees to develop and demonstrate new skills for future advancement. Lateral moves that appear to have little career benefit in the present can, therefore, advantage workers in the future.

We test this argument using data from a large healthcare organization. Although we lack random assignment of individuals to lateral mobility, we seek to generate as clear a counterfactual as possible by comparing outcomes from people who move laterally with outcomes from a matched sample of employees working in similar roles and with similar time in job and performance ratings who did not move jobs in that year (i.e., "matched nonmovers"). Our analyses show that employees who move laterally have a higher subsequent chance of promotion after three to four years have elapsed since the move. We also find that this increased advancement is driven by those who make bigger changes in the kinds of tasks that they perform by moving across subfunctions (substantially different kinds of roles within the same function). We also find that lateral mobility is associated with future pay increases, even in the absence of future promotions. Further analyses shed light on the mechanisms. We find that lateral mobility is not associated with increased subsequent performance, suggesting that the benefits may not reflect improved job fit. We also find that employees are more likely to make lateral moves when they have been in the job longer but otherwise lack the attributes associated with promotions, a pattern that is consistent with employees using lateral mobility to advance their careers when they lack opportunities for promotion.

These findings add to our understanding of organizational careers by demonstrating how lateral mobility helps people to advance careers outside of the limited context of formal job rotation programs. Although much literature has highlighted the risks of moving across different kinds of jobs, noting how it can confuse identities and inhibit the development of specialized expertise (Zuckerman et al. 2003, Ferguson and Hasan 2013, Leung 2014), we note that developing and demonstrating new skills often helps to foster career advancement. As a consequence, we find that lateral moves—stepping sideways—can be an important precursor to moving up in careers. Our results also suggest that developing skills through such lateral moves may be a particularly valuable means for advancement for those who might struggle to be promoted from their existing role.

2. Theory Development

Modern organizations usually classify jobs along both vertical and horizontal dimensions. Vertically, jobs are assigned a hierarchical level, frequently known as a "pay grade." These pay grades often define the range of pay for the job (Cappelli and Cascio 1991, Baker et al. 1994a) and are usually associated with different titles (e.g., manager, director) that denote authority and status. Jobs within the same pay grade will also differ horizontally in the specific tasks that they encompass (Cohen 2013, Hasan et al. 2015). Organizations often divide roles up into different functional areas, such as sales, marketing, or finance, that tend to contain similar tasks and draw on similar skills and into specific job titles that group together roles conducting similar tasks. Roles with the same job title may also occur within different organizational units as similar work is carried out in different contexts.

For the purposes of this paper, we define lateral mobility as an open-ended move that takes somebody into a different job that is within the same organization and in the same hierarchical level or pay grade as the role that they left. Because the lateral move results in an individual doing similar work in a different setting or a move to very different job altogether, it should always entail a change in the work performed. We define the moves as "open ended" to differentiate lateral mobility from job rotation, in which employees may be rotated between jobs as part of a planned development program or in order to learn more about the employees (Campion et al. 1994, Ortega 2001). Instead, lateral moves, like promotions or moves to a job in a different organization, represent moves that lack a planned end date.

Like other forms of job mobility, lateral mobility results from a matching process where both the employer and the employee must agree to the move (Logan 1996, Weller et al. 2019). In many large organizations, this matching process is formalized through a job-posting process, in which employees can apply to vacancies that supervisors post internally (Keller 2018), although moves can also take place through more informal negotiations. In each case, the new supervisor must select the employee for the role, although organizations vary in whether the old supervisor must also approve the move. For the new supervisor, such lateral moves fill vacancies with people who are highly familiar with the organization. What is less clear, however, is what the employees might hope to get out of those moves. We seek to address this question, developing how lateral moves may advance employees' careers.

2.1. Career Advancement in Internal Labor Markets

Promotions represent a central measure of objective career success (Seibert et al. 2001, Ng et al. 2005). By taking people into higher-level jobs, promotions provide increased prestige and higher pay (Spilerman and Lunde 1991). Not all employees seek such advancement at all stages of their careers; sometimes, employees may be happy to stay in their current job. Nonetheless, advancement into higher-level jobs is an important goal to many employees and plays an important role in driving lifetime income growth (Baker et al. 1994b).

Although a few organizations may promote employees based purely on the amount of time served in their current role, promotions are usually based on employers' beliefs about which employees will perform best in the higher-level job (Williamson et al. 1975). Such beliefs may be based on two related attributes: the employee's current performance, which is a signal of the overall ability and how the employee has mastered the skills needed for the current job (Lazear and Rosen 1981); and an assessment of whether the employee has the skills needed for the higher-level job (Cascio and Aguinis 2008).

Employees are, therefore, more likely to advance when they can establish their suitability for higher-level jobs, and an important way that they do this is by developing and demonstrating the skills that will be needed in those higher-level jobs. Often, that skill acquisition occurs through on-the-job learning, which makes employees eligible for promotion into jobs requiring related skills (Doeringer and Piore 1971, Quinones et al. 1995, Sturman 2003). Employees may also advance because the employer learns more about their ability to perform the tasks required in the higher-level jobs (Farber and Gibbons 1996, Holmstrom 1999). Those employees that reveal themselves to be more capable at those tasks are then likely to be paid more and promoted.

2.2. Lateral Mobility and Promotion

When people move jobs laterally, they move into roles that require different tasks from the ones that they performed before. We argue that those new tasks then give them the opportunity to demonstrate and develop different skills, leading to increased chances of promotion relative to if they had not moved laterally (our empirical analyses explore evidence for alternative mechanisms as well).

First, we propose that the broader skills acquired from lateral mobility will help employees to meet the demands of higher-level jobs. Higher-level jobs often require broader skills and knowledge because they involve dealing with problems that cannot be solved at lower levels (Garicano 2000). More senior roles often also involve coordinating and integrating the work of others (Thompson 1967, Mintzberg 1973, Watkins 2009), requiring a broad understanding of the work that each of those roles performs. Research on the "Peter Principle" notes that people who are promoted into a higher-level role often fail to perform well because the new job requires different skills from the lower-level role that they left (Watkins 2009, Benson et al. 2019). Where employees have broader skills to start with, the mismatch between their existing skills and the demands of the new role should be lower.

By exposing people to a broader variety of tasks, lateral mobility allows them to develop and demonstrate such a broad set of skills. Although that lateral mobility may not allow the employees to master all of the tasks that will be required in the higher-level job, the increased breadth of their experience should better prepare them for the higher-level roles. Certainly, recent research suggests that employers often value breadth of experience in filling jobs. For example, Merluzzi and Phillips (2016) show that job candidates with less focused experiences receive more job offers and higher signing bonuses from investment banks because their broader skills differentiate them from others with narrower expertise. Within organizations, Fahrenkopf et al. (2020) find that groups that welcome internal transfers from generalists outperform those that are joined by specialist transfers. Moreover, at the executive level, Custódio et al. (2013) find that leaders who have worked in more jobs and companies earn higher wages, and Won and Bidwell (2023) find that candidates who have worked in more functional areas are more likely to be hired into executive roles.

Yet, there may also be costs to lateral mobility when positioning people for future advancement. Because lateral mobility changes the tasks that employees work on, their development of new skills may come in part at the expense of deepening the skills exercised in the prior role by continued practice. Employees may also see their performance decline when they move because of the costs of learning new tasks. Supporting such concerns, Ferguson and Hasan (2013) found that civil servants who had been rotated across more different areas of specialism were slower to receive promotions. Within the context of external hiring, Zuckerman et al. (2003) also raise the possibility that people who move across different fields may be penalized because employers perceive those moves to be a sign of poor performance and because their less focused identity makes them more difficult to evaluate.

We believe that the nature of promotion within organizations means that the benefits of lateral mobility will usually outweigh these costs. Information asymmetries tend to be lower inside organizations (Williamson et al. 1975), reducing the risk of employers misattributing lateral mobility to poor performance. Moreover, although building broader expertise may come at the cost of reduced depth, the dynamics of learning curves may

limit this trade-off. People tend to learn a new task rapidly at first, but performance increases then start to level off as they achieve mastery (Kostiuk and Follmann 1989, Sturman 2003, Donner and Hardy 2015). Once people have spent some time in a given role, remaining in the role longer may, therefore, lead to little further skill development. Moving laterally, by contrast, exposes people to new tasks, allowing them to acquire new skills that will contribute to their advancement. Although this learning may come at the cost of short-term performance, we propose that the broader skills will ultimately make them more eligible for promotion into higher-level roles. Compared with staying in the same job, we propose that moving laterally into a different role is likely to lead to more rapid subsequent advancement.

The baseline prediction that we, therefore, explore in this paper is that compared with those who stay in the same job, people who move laterally will have a higher subsequent chance of promotion.

Although our primary goal is to understand the link between lateral mobility and an employee's promotion prospects, our arguments about skills development through lateral mobility may also have implications for other career-related outcomes of interest to both employees and organization. We, therefore, provide some exploratory analysis of the effects of lateral mobility on two such outcomes—pay and performance—in our empirical analyses.

3. Data

We explore the implications of lateral mobility using eight years of personnel data from a large U.S. healthcare organization. The organization provided us with annual snapshot data that detail employees' jobs, pay, and performance at the end of every year from 2009 to 2016. Such rich data allow us to explore the consequences of lateral mobility in ways that are not possible with public matched employer-employee data sets that do not identify individual moves across jobs. Unfortunately, we were not given data on employees' gender or ethnicity that might allow us to explore how different demographic groups advance within the organization (Barnett et al. 2000). Nonetheless, we were able to use these data to examine the role that lateral mobility played in movers' careers.

3.1. Describing Work and Mobility at the Organization

The organization that we studied encompassed a broad range of different kinds of employees, although most of them were engaged in skilled white-collar work. Within the specific sample that we used in our analyses (that is described here), 33% fell into the Equal Employment Opportunity Commission occupational classification of "1st and mid-level officials and managers," 21% were "professionals," 18% were "operatives (semi-skilled)," 15% were "sales workers," 6% were "technicians," 4% were "office and clerical" workers, 2% were "executives," and 0.5% were "craft workers." These employees were also spread across 20 different states in the United States, with the largest state making up 34% of observations. Twenty-eight percent of the lateral moves in our sample took place across state borders.

Mobility at this organization could take place along three different dimensions. First, mobility could involve a change in hierarchical level (described as a pay grade). Ten percent of workers received a promotion, defined as an increase in pay grade, in a given year. Such promotions were far from automatic and generally only occurred when people were seen as suitable for a role in a higher level. Most promotions happened after around one to four years in the job, but we also see people stay in the same job for up to eight years without being promoted. Moreover, most job spells ended without a promotion but instead, in either a lateral move or an exit from the company. Around 1% of workers experienced a decrease in pay grade (demotion) in a given year. We focus on lateral moves in which employees moved jobs without changing pay grade. Eleven percent of employees moved laterally each year, a level of mobility that is slightly higher than the rate of promotions, highlighting the importance of these moves as a topic of study.

Second, mobility could involve a change in the type of work being done. Jobs were organized into three nested sets of categories. At the highest level, jobs were divided into 18 different functions, such as marketing or finance. Those functions were then subdivided into around 150 "subfunctions," which combined people doing similar work. Hence, the marketing function included such subfunctions as "advertising," "customer information," and "market research," whereas the finance function included such subfunctions as "accounts payable," "internal audit," and "planning and analysis." Within each subfunction, jobs were further divided into around 2,000 separate job titles. Workers could, therefore, move to a job with a new job title in a new subfunction and/or in a new function.

Third, mobility could involve a change in work context. The company was arranged in a set of different nested structures. The most basic was the organizational unit, defined as all of the workers reporting to a particular manager; the largest was the sector, of which there were five in our data. At the intermediate level, employees were grouped into around 60 different "business units," which tended to be organized around a particular set of goods or services provided to customers, often under a distinct brand name (a few of the business units were instead shared service organizations, such as supply chain management).

A particular challenge in identifying lateral moves from administrative data is understanding what constitutes a true "move." Although employees may change their job titles or work context from one year to the next, it is not always clear whether such changes reflect a genuine change in the work that they are doing or reflect a minor reorganization or administrative reclassification of their role. Studying such reclassifications would shed little light on the role of lateral moves in careers. In order to address this concern, we limit our focus to lateral moves that involve more substantial shifts in employees' affiliations—notably moves across subfunctions and/or business units. Such shifts are large enough that they are likely to involve a significant change in tasks. At the same time, they are relatively common within the organization. Every year, around 2.3% of people moved across business units but not subfunctions, 2% moved across subfunctions but not business units, and 1% moved across both, meaning that such lateral moves are a major source of job changes, taking place at a little over half the rate of promotions.

These lateral moves (like other kinds of moves at this employer) took place through a decentralized matching process negotiated by individual hiring managers and employees. In principle, mobility was supposed to take place through a posting process, in which a manager would post a vacant role, employees would apply to the role, and one of them would be selected (Keller 2018). In practice, manager and candidate would often agree to a move without going through this posting process. In neither case, however, would the mobility process involve central coordination by talent managers seeking to develop people by rotating them through jobs (sometimes described as a "chess-master" approach (Cappelli 2008)). The only exception was a small number of formal job rotation programs for recent graduates. To avoid conflating the effects of these rotations with the decentralized lateral moves that are our focus, we dropped anyone who occupied a job identified as a rotational position within one of these programs or made a move that was listed as a rotation in the movement database.

Evidence from internal applications suggests that the rate of lateral mobility reflected decisions by both employees and individual supervisors. The organization gave us data on all applications to vacancies in managerial pay grades during the period of our study (managerial pay grades contain roughly 1/3 of all positions in our sample). We found that attempting to make a lateral move was relatively rare; only 11% of managerial workers made an application that would involve a lateral move across subfunctions or business units in any given year. We also found that applying for such a lateral move was not a guarantee of success as only 32% of those who applied for lateral moves in a given year (and who did not get promoted instead) successfully completed such a move. Whether people moved laterally at this organization appeared, therefore, to reflect both their willingness to seek out lateral mobility opportunities and supervisors' willingness to hire them into those roles.

3.2. Key Variables

In examining the determinants and consequences of mobility, we use the following variables.

3.2.1. Lateral Mobility. We define a lateral move as taking place when a worker changes subfunction and/or business unit from one year to the next without changing pay grade.

3.2.2. Pay Grade. The organization used a set of *Pay grades* to indicate jobs' positions in the hierarchical status ordering. Hence, within the marketing function, a promotion could take an employee from "Manager 1, marketing research" to "Manager 2, marketing research," whereas a further promotion might take that individual to "Director 1, marketing." We, therefore, use these pay grades as our measures of vertical mobility, exploring how mobility affects employees' ability to move into higher pay grades. The matched sample that we use for our analyses contains 14 pay grades.

3.2.3. Log Total Compensation. We also explore the effects of lateral mobility on pay in a number of our analyses. We measure pay as the log of total compensation received in each year. This compensation included salary, bonuses, and long-term incentives. Although pay grades helped to define the range within which pay should fall, pay also varied substantially within pay grades based both on market pressures and on performance-based "merit raises," which tended to range from 0% to 5% per year. We took the logarithm of total pay because the variable was highly skewed.

3.2.4. Performance Ratings. We similarly conduct analyses of the determinants of performance ratings. These ratings were awarded in November of each year based on managers' evaluations. During the early portion of our data, managers evaluated subordinates using an overall performance rating ranging from a low of 0 to a high of 9, with a mean of 5.61 (standard deviation (sd) = 1.03). The company gradually switched to a different rating system, in which managers were required to assign separate ratings for a worker's business results (0–4; mean = 3.13; sd = 0.56) and leadership behaviors (0–4; mean = 3.08; sd = 0.54). This change was gradual, with some groups of workers transitioning earlier than others. Despite the change in rating measures, the substance being measured (business and leadership performance) remained largely unchanged. We created a single composite performance rating from these two different measures. To do so, we first converted the

two-item measure into a single eight-point (8-pt) measure by summing its components. We then standardized each performance rating by scale and year (i.e., we subtracted mean values for each scale and year to account for differences in overall levels of the scale and divided by the standard deviation to account for differences in variance across the scales), and we used this standardized measure as our performance measure. 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 nine-point scale. We also run analyses using each of the separate performance measures as robustness checks.

We also control for a number of variables in our analyses. We control for calendar *Year* as well as for a small number of individual-level variables for which we did not match individuals (see the matching details). We control in particular for characteristics of their prior career. These include *Tenure*, which is the number of years worked at the organization, and *Outside experience*, which is years worked at other organizations (the company provided these data to us as a scale variable, where 1 = less than 1 year, 2 = between 1 and 3 years, 3 = between 3 and 6 years, 4 = between 6 and 11 years, 5 = between 11 and 16 years, and 6 = more than 16 years). We also control for how the job immediately prior to lateral mobility was entered with four variables: *Promoted into prelat job*, *Lateralled into prelat job*, *Demoted into prelat job*, and *Acquired into prelat job* (for those who entered the organization as part of an acquisition). The residual category is those who were hired into their prelateral job. As well as controlling for how the premove job was entered, we also control for interaction between that entry mode and our postmove indicator variable.[1]

4. Lateral Mobility and Career Success

4.1. Analytic Strategy

One challenge in studying the consequences of lateral mobility is constructing an effective counterfactual. Our arguments compare consequences of moving laterally with those of staying in the job. We approximated such a counterfactual in our analysis by comparing outcomes for a lateral mover with a similar matched nonmover who was in the same role as the lateral mover immediately before the move and did not move in that year. As we noted, promotion represents the most direct form of advancement in organizations. Our goal is not, therefore, to compare lateral mobility with promotion but rather, to understand how lateral mobility compares with staying in the job (supplementary analyses in Online Appendix 1 confirm that promotions lead to more rapid advancement than lateral moves). Given that only around 10% of employees were promoted in a given year, this restriction does not mean that we are only comparing lateral movers with people who have stagnated in their role but rather, to the most immediate alternative for employees—not moving.

Specifically, we match each lateral mover to nonmovers who had the same job title,[2] were in the same organizational unit (this is usually the group of people who report to a single manager), had the same performance rating in the year before the mover moved, and had entered that job in the same year but who stayed in their job during the year that the focal individual moved laterally rather than being promoted, being demoted, leaving the firm, or moving laterally themselves. We exclude these other forms of moves in order to get a sharper picture of the effects of lateral mobility. We also exclude from our matched sample of nonmovers people who moved laterally in a subsequent year, providing a clearer comparison of the long-run effects of moving laterally. Note, however, that the nonmovers could be promoted, be demoted, or leave the company in subsequent years, allowing for a clean comparison of those subsequent outcomes between laterals and nonmovers. Our analyses then use fixed effects for each "matched group" of a lateral mover and their matched nonmovers so that our analyses always compare outcomes for the lateral mover with the matched nonmovers.

This matching strategy has two benefits for our analysis. First, comparing our lateral movers with matched nonmovers allows us to make explicit the comparison that we draw. We are interested in the consequences of lateral mobility versus not making such a move. By comparing our lateral movers with their matched nonmovers, we ensure that our comparisons are not affected by the fact that laterals were, by definition, not promoted or demoted in the year that they moved laterally. Moreover, by using fixed effects for each matched group, we ensure that we are always comparing outcomes for our lateral movers against the people who were in the same position as them prior to the move rather than their colleagues in their new role. This allows us to assess how lateral moves compare with the consequences of remaining in the job.

Second, matching on the premove job, performance, and time in job ensures that any subsequent difference in outcome does not reflect the effects of selection into lateral mobility along these observable dimensions. Ruling out these potential influences is important because all of these variables likely affect both who moves laterally and subsequent career outcomes.

This matching strategy has two limitations. First, we are not able to match on all of the observable characteristics along which the lateral movers and matched nonmovers might differ. Exact matching suffers from the "curse of dimensionality," in which each added dimension used for matching substantially reduces the number of observations that can be exactly matched. We, therefore, do not seek to match movers and nonmovers

on prior career histories. We do, however, include controls for these features in our regressions.

Second, this matching technique does not address unobservable differences between lateral movers and matched nonmovers. Such unobservable differences are likely to be important; after all, there must be some reason why the lateral mover moved jobs, whereas the matched nonmovers did not. Some of those reasons may be orthogonal to their chances for subsequent advancement; for example, those who move laterally may well be those with weaker relationships with managers or peers in their current role. Other reasons, however, may include important confounds, such as lateral movers finding it easier to move because they are seen as having higher potential or lateral movers being more likely to seek out opportunities for career advancement because they are more proactive. Our analyses can, therefore, tell us how the outcomes of people who moved laterally differ from observably similar others who remained in their jobs, but they are unable to demonstrate that those effects reflect purely causal effects of that lateral mobility rather than also comprising unobservable differences in who moves laterally.

Our main data set, therefore, comprises the job histories, both before and after the lateral move, of both our "laterals" and their matched nonmovers during our observation period. Because of the way that our data set is constructed, the same person's job history can appear multiple times in the data set either as matches for different laterals or as a lateral in one time period and a match at a different time. Although this is fairly rare (89% of observations are from individuals whose job histories appear just once in the data), we address any biases that it could create by weighting each observation in our analyses by the inverse of the number of times that it appears in the data. Means and correlations for the variables in this matched sample are reported in Table 1.

We analyze the outcomes associated with lateral mobility in these matched data using a difference-in-difference structure. The analyses include all years of data, both those that occurred prior to the lateral's moves and those that take place after. We then include two key dummy variables.

First, we include a dummy variable labeled "*Lateral*," which identifies whether the individual is the one who makes the lateral move rather than one of the matched nonmovers. Note that this dummy will be one for the years prior to the lateral move as well as for the years afterward, allowing us to track that individual both before and after their move.

Second, we include a dummy variable labeled "*Post*" for whether the observation occurred before or after the lateral move. Hence, for example, if an employee moved laterally during 2013, then *post* will take the value of zero for all years before 2013 and a value of one for 2013 and all years afterward for both that lateral *and all of their matched nonmovers*. The interaction of the *post* variable and the *lateral* variable then measures how any differences between the lateral and their matches change after the mobility event. We depict this coding in Figure 1. Note that this coefficient cannot be interpreted as a "treatment" effect because employees were not randomly assigned to lateral mobility. What it reveals instead is how outcomes for lateral movers differ from nonmovers after their move.

Recent studies have noted that difference-in-differences estimation can give misleading results when it relies on comparisons of early- and late-treated units (Goodman-Bacon 2021, Sun and Abraham 2021, Baker et al. 2022). These problems are most severe when data sets contain few "never-treated" observations, and treatment effects are heterogeneous so that the effects of early treatment differ from late treatment (Baker et al. 2022). Neither problem is expected to affect our data. Because of the way that we construct our matched

Table 1. Descriptive Statistics for Matched Sample

	Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1	*Pay grade*	21.191	2.768	1											
2	*Log total compensation*	11.49	0.732	0.94	1										
3	*Lateral*	0.427	0.495	0.14	0.13	1									
4	*Subfunction lateral*	0.293	0.455	0.11	0.1	0.75	1								
5	*Business unit lateral*	0.224	0.417	0.14	0.14	0.62	0.13	1							
6	*State lateral*	0.098	0.297	0.05	0.04	0.38	0.21	0.43	1						
7	*Post*	0.435	0.496	−0.03	0.04	−0.03	−0.04	−0.01	−0.01	1					
8	*Promoted into pre lat job*	0.411	0.492	0.14	0.12	0.02	0.09	−0.01	0.08	−0.07	1				
9	*Lateralled into pre lat job*	0.302	0.459	0.08	0.13	0.08	0.03	0.08	0.02	−0.04	−0.55	1			
10	*Acquired into pre lat job*	0.052	0.222	−0.05	−0.05	−0.03	−0.04	−0.04	−0.06	0.02	−0.2	−0.15	1		
11	*Demoted into pre lat job*	0.06	0.238	−0.14	−0.12	−0.1	−0.06	−0.07	−0.08	0.04	−0.21	−0.17	−0.06	1	
12	*Tenure*	114.235	93.128	0.16	0.23	−0.06	−0.01	−0.04	−0.04	0.17	0.06	0.19	−0.19	0.22	1
13	*Outside experience*	4.803	1.209	−0.03	−0.02	−0.12	−0.12	−0.11	−0.11	0.05	−0.25	0.01	0.14	0.04	−0.37

Notes. $N = 5{,}350$. S.D., standard deviation.

Figure 1. (Color online) Coding of Observations as Laterals and Matched Nonmovers

- The **lateral** and all three **non-movers** were in the same job in Year 2.
- The **lateral** moved to a new job at the same pay grade between Years 2 and 3, while the **non-movers** remained in the same job from Year 2 to 3.

Employee Type	Variable	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Lateral mover	Lateral:	1	1	1	1	1	1	1
	Post:	0	0	1	1	1	1	1
Matched non-mover 1	Lateral:	0	0	0	0	0	0	0
	Post:	0	0	1	1	1	1	1
Matched non-mover 2	Lateral:	0	0	0	0	0	0	0
	Post:	0	0	1	1	1	1	1
Matched non-mover l 3	Lateral:	0	0	0	0	0	0	0
	Post:	0	0	1	1	1	1	1

groups, 58% of our observations represent never-treated observations. In addition, there are no reasons to believe that moving laterally later in our data is systematically different to moving laterally earlier in our data as such timing is likely to reflect the different times that people have entered their jobs rather than diffusion of lateral mobility through a population. To further confirm that our results are not biased by comparisons of early and late treated observations, we present models in which we allow the effects of lateral mobility to vary with time since the lateral move. We also present robustness checks in Online Appendix 2, in which we compare only lateral movers with their matched nonmovers a specific number of years after the move and implement the Callaway and Sant'Anna (2021) estimator. Theses analyses give similar results to our main specification, although some of the significance levels are lower, reflecting their reduced efficiency.

As noted, we include fixed effects for each of the 396 matched groups to restrict the comparison with each lateral and their matched nonmovers. The 5,350 observations in our analysis represent 2,282 observations of laterals and 3,068 observations of their matched nonmovers, reflecting the way that lateral movers could have more than one control. Errors are clustered by both matched group (Abadie and Spiess 2022) and by employee.

4.2. Lateral Mobility and Promotion

Table 2 presents the test of our central hypothesis: that people who move laterally are more likely to be promoted. Specifically, we analyze determinants of the pay grade that employees are in during each year. When we compare people starting from the same job, the pay grade measure represents the cumulative promotions that they have received over time. It provides a more sensitive measure of how people advance than simply estimating annual promotion probabilities as slight differences in those probabilities can accumulate over time into significant differences in pay grades.[3]

Models 1 and 2 in Table 2 estimate a simple difference-in-differences model of the determinants of pay grade. Model 1 includes no control variables and no match group fixed effects for reference. Our main model is Model 2, which includes our control variables and matched group fixed effects. When we include both our controls and fixed effect, the R^2 increases to 0.97 (0.85 of this increase in R^2 reflects the effects of matched group fixed effects; because everybody in a matched group was at the same pay grade in the year before the lateral move, most of the variance in pay grades is between matched groups). The coefficient on "*Post* × *Lateral*" in Model 2 represents the relative rate of progress of lateral movers versus their matched nonmovers in the years after the lateral move. Although the coefficient has a positive sign, consistent with lateral movers receiving faster subsequent promotions, the coefficient is not significant ($p = 0.14$), preventing us from confidently distinguishing it from no effect.

Model 3 in Table 2 then interacts the *Lateral* dummy with separate dummies for each number of years after the move. This specification allows for the effects of lateral mobility to evolve over time, aiding more precise inferences (Baker et al. 2022). We find that lateral mobility does lead to significant pay grade advantages but only after enough time has elapsed since the move. Specifically, lateral mobility has an increasing effect on subsequent advancement, with the effect being most significant in year 3 ($p < 0.024$) and in year 4 ($p < 0.036$) after the move. The effects are also substantial, representing around one fifth of a pay grade. Because only around 10% of people are promoted in a given year, this is a substantial effect. The way that advantages accrue only gradually to lateral movers is consistent with lateral mobility helping employees to develop new skills.[4]

Table 2. Determinants of Pay Grade

Model	1	2	3	4
Dependent variable	*Pay grade*	*Pay grade*	*Pay grade*	*Pay grade*
Post	−0.274	−0.263***		−0.260***
	[0.242]	[0.0462]		[0.0446]
Lateral	0.494***	0.0151	0.0179	
	[0.139]	[0.0240]	[0.0239]	
Post × lateral	0.421*	0.056		
	[0.196]	[0.0392]		
Business unit lateral				0.0385
				[0.0331]
Post × Business unit lateral				−0.0349
				[0.0423]
Subfunction lateral				−0.019
				[0.0280]
Post × Subfunction lateral				0.124**
				[0.0445]
1 year post			−0.252***	
			[0.0425]	
2 years post			−0.273***	
			[0.0645]	
3 years post			−0.427***	
			[0.0802]	
4 years post			−0.495***	
			[0.102]	
5 years post			−0.609***	
			[0.128]	
6 years post			−0.628***	
			[0.181]	
7 years post			−1.002***	
			[0.203]	
1 year post × lateral			−0.01	
			[0.0239]	
2 years post × lateral			−0.0324	
			[0.0479]	
3 years post × lateral			0.148*	
			[0.0674]	
4 years post × lateral			0.179*	
			[0.0854]	
5 years post × lateral			0.228+	
			[0.121]	
6 years post × lateral			0.2	
			[0.185]	
7 years post × lateral			0.818*	
			[0.360]	
Promoted into prelat job		−0.430***	−0.411***	−0.428***
		[0.0509]	[0.0497]	[0.0503]
Post × promoted prelat		0.444***	0.435***	0.431***
		[0.0561]	[0.0552]	[0.0560]
Lateralled into prelat job		0.145**	0.160***	0.146**
		[0.0459]	[0.0452]	[0.0454]

Table 2. (Continued)

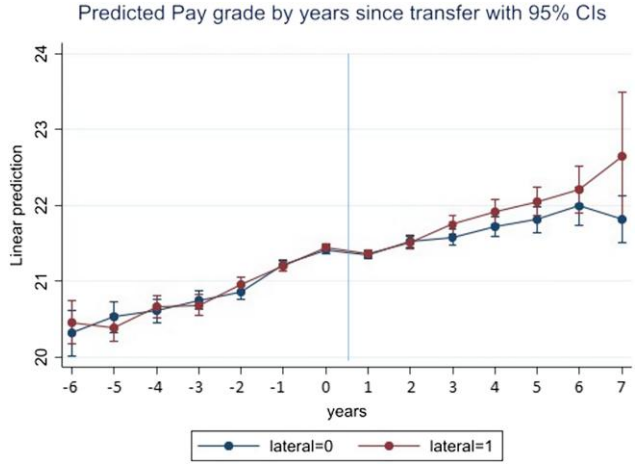
Model	1	2	3	4
Dependent variable	*Pay grade*	*Pay grade*	*Pay grade*	*Pay grade*
Post × lateralled prelat		−0.167**	−0.171**	−0.173**
		[0.0553]	[0.0540]	[0.0547]
Acquired into prelat job		−0.025	−0.0367	−0.0281
		[0.0591]	[0.0595]	[0.0577]
Post × Acquired prelat		0.0995+	0.0799	0.0928+
		[0.0545]	[0.0540]	[0.0544]
Demoted into prelat job		0.646***	0.651***	0.644***
		[0.0861]	[0.0855]	[0.0866]
Post × Demoted prelat		−0.646***	−0.616***	−0.653***
		[0.0806]	[0.0823]	[0.0776]
Tenure		0.000451*	0.000484*	0.000449*
		[0.000211]	[0.000213]	[0.000211]
Outside Experience		0.00768	0.00785	0.00711
		[0.0137]	[0.0137]	[0.0139]
Year dummies		Yes	Yes	Yes
Match group fixed effects		Yes	Yes	Yes
Observations	5,350	5,350	5,350	5,350
R^2	0.017	0.968	0.968	0.968

Notes. The table shows a matched sample of workers moving laterally across subfunctions or business units and matched nonmovers who stayed in their job during that year. "Lateral" indicates that the worker has undergone or will undergo a transfer across subfunctions or business unit. "Post" indicates that observation occurs after the lateral move either (a) for the mover or (b) for the mover who the matched non-mover is matched against. Errors are clustered by match group and individual.

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

Figure 2 graphs out the predicted pay grades for lateral movers and matched nonmovers by year since transfer. We also include each separate value of years pretransfer for this figure to show how the divergence posttransfer compares with the differences seen pretransfer (the exact model used for the graph is found in Online Appendix 3). The graph demonstrates closely aligned trajectories for the laterals and nonmovers pretransfer followed by gradual divergence posttransfer (Figure 2).[5]

Figure 2. (Color online) Predicted Pay Grade by Years Since Transfer: Lateral vs. Nonlateral



Notes. Coefficients were calculated from Model 1 in Online Appendix 3. The figure was drawn using the Margins command. The lateral moves occur between years 0 and 1. CI, confidence interval.

Model 4 in Table 2 then explores differences between different kinds of lateral moves. We defined those lateral moves as moves that take people into either a new subfunction or a new business unit. In Model 4, we include a separate variable for each kind of move. The model shows significant effects for lateral moves across subfunctions but not across business units.[6] This difference between the effects of moving subfunctions versus business units could reflect the greater scope for learning when moving to a job that requires more distinct tasks than the prior job. Consistent with such an account, we used topic modeling of job postings to assess skills differences between different jobs and found that the skill differences between jobs in different subfunctions were greater than the skill differences between jobs in different business units (see Online Appendix 4).

In additional analyses presented in Online Appendix 5, we also explored whether our effects might reflect geographic mobility—specifically moves between states—but find little evidence of such geographic effects. We also examined whether our effects might reflect survivor bias (Online Appendix 6). Although lateral mobility is associated with higher rates of external mobility, restricting our sample to those employees

who stayed throughout our observation window did not materially affect our coefficients.

We also explored whether lateral movers were shifting to subfunctions with improved career prospects. Online Appendix 7 describes analyses in which we measured differences in promotion rates across subfunctions and business units. We find some evidence that lateral moves take employees into subfunctions with greater promotion prospects than the ones that they were in before but not into business units with greater promotion prospects. Controlling for these differences, however, explains very little of the effects of lateral mobility on promotions.

These analyses indicate support for our argument that lateral moves are associated with higher subsequent promotion rates, particularly once the mover has spent some time in the new job and particularly when the lateral moves take people across different subfunctions. We go on to explore how lateral moves might affect other outcomes—notably pay and performance—to improve our understanding of lateral mobility and shed more light on the mechanisms behind its effects.

4.3. Lateral Mobility and Pay

Table 3 analyzes determinants of pay using the same difference-in-difference type of analyses as in Table 2. We again begin with a simple difference-in-differences comparison without controls or fixed effects (Model 1). Model 2 then introduces those controls and fixed effects. Model 2 demonstrates a significant interaction between *Post* and *Lateral*, indicating that employees who move jobs laterally have higher pay after the move but not before. The difference is noticeable at around 3%. In Model 3, we again allow differences between lateral movers and matched nonmovers to evolve over time. As with pay grade, we find that the difference grows steadily over time. Interestingly, we do not see immediate benefits from moving laterally as the interaction coefficients for the first two years are very close to zero and nonsignificant. The pay increase is not, therefore, automatically triggered by moving jobs. Instead, the differences appear after the third year and grow substantially so that lateral movers earn 16% more than matched nonmovers five years after the move. Figure 3 graphs out how predicted pay evolves for movers and non-movers, both before and after the lateral move. The full model on which this figure is based is reported in Online Appendix 3. Model 4 then divides lateral mobility into moves between subfunctions and moves between business units. We again see that it is moves between subfunctions that drive our effects. These results lend further support to the argument that lateral mobility is associated with more rapid subsequent career advancement.

We also examined whether these increases in pay solely reflected the higher propensity of lateral movers to be promoted or instead, whether they reflect greater pay growth within level, perhaps through increased pay raises over time. Specifically, Model 5 in Table 3 controls for pay grade; if the increased pay of lateral movers solely reflected more rapid promotion, then we should see the coefficient on *Post* × *Lateral* lose significance in this regression. Instead, it remains significant, albeit somewhat diminished. Model 6 explores the role of promotion in a different way, excluding observations where individuals are in a different pay grade to the one that they were in at the time of the lateral transfer. We again see a positive significant coefficient on *Post* × *Lateral*. These models indicate that lateral movers see increases in pay even without being promoted.

We also explored whether these within-pay grade pay gains from lateral mobility came from moving into jobs that tend to pay more on average. Although all roles within a pay grade offer somewhat similar rewards, there are substantial differences in pay between different jobs within the same pay grade (the standard deviation of mean log pay across different jobs within the same pay grade was 0.17, which was slightly larger than the within-job standard deviation of 0.15). We used the full database (rather than our matched sample) to calculate the mean pay level in each year for everybody with the same job title except the focal individual (there were 689 different job titles in our matched sample and around 2,000 in the overall data). We label this variable *Mean Job Pay*. We use this mean pay level as our dependent variable in Model 7 in Table 3 to test whether employees were more likely to move laterally into higher-paying jobs. We again focus on those who have not been promoted to examine determinants of pay growth among those staying in the same level. The model finds a negative but insignificant effect of lateral mobility on mean job pay. We conclude that people are not moving into higher paying roles through lateral mobility. Model 8 then confirms that lateral movers' increased pay growth is coming from their increased pay relative to the job mean. For the dependent variable in this model, we calculated the difference between the employee's log pay and the mean pay for that job type, which we label as *Log pay vs Job Mean*. The analysis confirms that there is a significant coefficient on *Post* × *Lateral*, indicating that lateral mobility is associated with being paid more than others within the job.

These analyses, therefore, suggest that lateral mobility not only increases odds of promotion but that it also increases pay, even among those who do not get promoted. We assess possible explanations for this effect in Section 5.

4.4. Lateral Mobility and Performance

We went on to examine the effects of lateral mobility on performance. Lateral moves might increase promotion rates and pay by improving employees' performance,

Table 3. Determinants of Log Total Compensation

Model	1	2	3	4	5	6	7	8
Dependent variable	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Mean job pay*	*Log pay vs mean job pay*
Sample	All	All	All	All	All	Not promoted	Not promoted	Not promoted
Post	0.0284	−0.0355*		−0.0341+	−0.00155	−0.00259	0.0027	−0.00502
	[0.0571]	[0.0174]		[0.0174]	[0.0157]	[0.0161]	[0.00842]	[0.0142]
Lateral	0.115**	0.000186	0.000891		−0.00258	−0.01	0.00439+	−0.0141
	[0.0363]	[0.0101]	[0.0101]		[0.00893]	[0.00991]	[0.00261]	[0.0101]
Post × lateral	0.102*	0.0290*			0.0220*	0.0253+	−0.0107	0.0358**
	[0.0473]	[0.0130]			[0.0110]	[0.0131]	[0.00708]	[0.0126]
Business unit lateral				0.00857				
				[0.0148]				
Post × Biz unit lateral				0.0084				
				[0.0153]				
Subfunction lateral				−0.0118				
				[0.0127]				
Post × Subfun lateral				0.0372*				
				[0.0149]				
1 year post			−0.0294+					
			[0.0172]					
2 years post			−0.0426*					
			[0.0208]					
3 years post			−0.0590*					
			[0.0232]					
4 years post			−0.0844**					
			[0.0256]					
5 years post			−0.147***					
			[0.0440]					
6 years post			−0.184***					
			[0.0525]					
7 years post			−0.135					
			[0.0820]					
1 year post × lateral			−0.00368					
			[0.0108]					
2 years post × lateral			0.00544					
			[0.0143]					
3 years post × lateral			0.0444*					
			[0.0198]					
4 years post × lateral			0.0820***					
			[0.0245]					
5 years post × lateral			0.160***					
			[0.0451]					
6 years post × lateral			0.0577					
			[0.0453]					
7 years post × lateral			0.114					
			[0.128]					
Promoted into prelat job		−0.103***	−0.0992***	−0.102***	−0.0513*	−0.0572*	−0.000113	−0.0568*
		[0.0258]	[0.0256]	[0.0258]	[0.0235]	[0.0243]	[0.00808]	[0.0246]

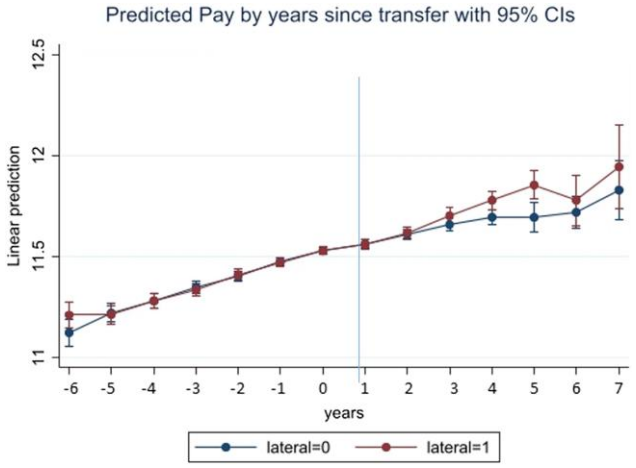
Table 3. (Continued)

Model	1	2	3	4	5	6	7	8
Dependent variable	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Log pay*	*Mean job pay*	*Log pay vs mean job pay*
Sample	All	All	All	All	All	Not promoted	Not promoted	Not promoted
Post × promoted prelat		0.0477*	0.0469*	0.0446*	−0.00633	0.00571	0.0099	−0.00478
		[0.0206]	[0.0204]	[0.0206]	[0.0184]	[0.0193]	[0.00996]	[0.0180]
Lateral into prelat job		0.0177	0.0202	0.0193	−0.00237	−0.0055	0.00651	−0.0116
		[0.0270]	[0.0271]	[0.0269]	[0.0253]	[0.0272]	[0.00755]	[0.0281]
Post × lateralled prelat		−0.026	−0.0253	−0.027	−0.00652	−0.000817	−0.0026	0.00154
		[0.0219]	[0.0215]	[0.0219]	[0.0209]	[0.0224]	[0.0121]	[0.0208]
Acquired into prelat job		0.0204	0.0163	0.0196	0.0244	0.0328	−0.00229	0.0353
		[0.0357]	[0.0353]	[0.0353]	[0.0328]	[0.0329]	[0.00911]	[0.0333]
Post × Acquired prelat		0.00651	0.000798	0.00625	−0.00556	−0.00703	0.01	−0.0175
		[0.0279]	[0.0272]	[0.0276]	[0.0265]	[0.0276]	[0.0190]	[0.0212]
Demoted into prelat job		0.142*	0.142*	0.143*	0.0712	0.104*	0.0138	0.0907*
		[0.0577]	[0.0572]	[0.0580]	[0.0440]	[0.0491]	[0.0125]	[0.0447]
Post × Demoted prelat		−0.0383	−0.0267	−0.0405	0.0323	−0.000372	0.0175	−0.0173
		[0.0327]	[0.0327]	[0.0327]	[0.0274]	[0.0301]	[0.0138]	[0.0252]
Firm tenure		0.00057***	0.00058***	0.00057***	0.00052***	0.000456***	−4.17 e-05+	0.000502***
		[0.000104]	[0.000103]	[0.000104]	[9.18 e-05]	[0.000104]	[2.25 e-05]	[0.000107]
Experience		0.0201**	0.0201**	0.0197**	0.0174**	0.0127+	−0.00157	0.0143*
		[0.00666]	[0.00665]	[0.00670]	[0.00591]	[0.00674]	[0.00171]	[0.00682]
Year dummies		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pay grade fixed effects					Yes			
Match group fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,350	5,350	5,350	5,350	5,350	4,003	3,990	3,990
R^2	0.016	0.959	0.96	0.959	0.967	0.971	0.992	0.565

Notes. The table shows a matched sample of workers moving laterally across subfunctions or business units and matched nonmovers who stayed in their job during that year. "Lateral" indicates that the worker has undergone or will undergo a transfer across subfunctions or business unit. "Post" indicates that observation occurs after the lateral move either (a) for the mover or (b) for the mover who a matched non-mover is matched against. Errors are clustered by match group and individual.

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

Figure 3. (Color online) Predicted Pay by Years Since Transfer: Lateral vs. Nonlateral



Notes. Coefficients were calculated from Model 2 in Online Appendix 3. The figure was drawn using the Margins command. The lateral moves occur between year 0 and year 1. CI, confidence interval.

perhaps because of the improved skills that they acquire or because the move takes them into a job that is a better fit for them (Jovanovic 1979). We, therefore, assessed the effects of lateral mobility on performance ratings. Table 4 presents these analyses, again using the difference-in-differences type of structure presented. Model 1 demonstrates no significant effect of the *Post* × *Lateral* interaction, and the coefficient itself is actually negative. Model 2 in Table 4 then allows the effect of lateral mobility to vary over time. We again see no significant effect of lateral mobility on performance, even in later years.

Any performance effects of lateral mobility could partly be masked by promotion if lateral movers are more likely to be promoted and promoted workers are held to a higher standard. We, therefore, restrict our sample to those who have not been promoted in Model 3 in Table 4. We still see no effect of lateral mobility on performance. In Models 4 and 5 in Table 4, we also make use of the different leadership and business rating scales in the later years of our sample, whereas Model 6

Table 4. Determinants of Performance Evaluations

Model	1	2	3	4	5	6
Dependent variable	*Standardized rating*			*Biz rating*	*Lead rating*	*9-pt rating*
Sample	All	All	Not promoted	8-pt rated	8-pt rated	9-pt rated
Post	0.381***		0.325**	0.136+	0.175+	0.343**
	[0.0991]		[0.101]	[0.0713]	[0.0913]	[0.128]
Lateral	0.0531	0.0514	0.0532	0.00973	−0.0306	0.0652
	[0.0383]	[0.0382]	[0.0359]	[0.0269]	[0.0306]	[0.0439]
Post × lateral	−0.0124		−0.00238	−0.0215	0.0508	−0.00814
	[0.0669]		[0.0695]	[0.0429]	[0.0475]	[0.0958]
1 year post		0.423***				
		[0.0966]				
2 years post		0.396***				
		[0.119]				
3 years post		0.500***				
		[0.138]				
4 years post		0.442**				
		[0.133]				
5 years post		0.632***				
		[0.173]				
6 years post		0.629**				
		[0.192]				
7 years post		1.087*				
		[0.510]				
1 year post × lateral		−0.0723				
		[0.0727]				
2 years post × lateral		−0.0053				
		[0.0900]				
3 years post × lateral		0.0906				
		[0.132]				
4 years post × lateral		0.0998				
		[0.132]				
5 years post × lateral		0.0238				
		[0.154]				
6 years post × lateral		−0.236				
		[0.211]				
7 years post × lateral		−0.229				
		[0.650]				
Promoted into prelat job	0.196*	0.183+	0.0569	−0.0481	0.103	0.17
	[0.0985]	[0.0988]	[0.0982]	[0.0619]	[0.0763]	[0.118]
Post × promoted prelat	−0.429***	−0.420***	−0.302**	−0.143+	−0.127	−0.470**
	[0.105]	[0.106]	[0.106]	[0.0760]	[0.0965]	[0.143]
Lateralled into prelat job	0.0537	0.0388	−0.0196	−0.0837	−0.00352	0.0351
	[0.0974]	[0.0976]	[0.0992]	[0.0633]	[0.0760]	[0.112]
Post × lateralled prelat	−0.359**	−0.354**	−0.375**	−0.0648	−0.0926	−0.344*
	[0.110]	[0.110]	[0.113]	[0.0867]	[0.0942]	[0.144]
Acquired into prelat job	0.0899	0.0852	0.0236	−0.0312	−0.0485	0.155
	[0.154]	[0.154]	[0.155]	[0.0947]	[0.0915]	[0.141]
Post × Acquired prelat	−0.371*	−0.364*	−0.382*	−0.121	−0.0213	0.00883
	[0.164]	[0.163]	[0.171]	[0.105]	[0.121]	[0.569]

Table 4. (Continued)

Model	1	2	3	4	5	6
Dependent variable	*Standardized rating*			*Biz rating*	*Lead rating*	*9-pt rating*
Sample	All	All	Not promoted	8-pt rated	8-pt rated	9-pt rated
Demoted into prelat job	0.340*	0.336*	0.372**	0.00953	0.181	0.393**
	[0.134]	[0.132]	[0.123]	[0.112]	[0.141]	[0.151]
Post × Demoted prelat	−0.495***	−0.517***	−0.719***	−0.256+	−0.321*	−0.495**
	[0.144]	[0.144]	[0.155]	[0.149]	[0.151]	[0.174]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Tenure	−0.00053	−0.000554	−0.000146	−0.00038	−0.000127	−0.000382
	[0.000384]	[0.000383]	[0.000397]	[0.000276]	[0.000312]	[0.000404]
Outside experience	−0.0604**	−0.0608**	−0.0517*	−0.0366*	−0.0411*	−0.0357
	[0.0227]	[0.0226]	[0.0256]	[0.0167]	[0.0205]	[0.0248]
Rating 9-pt dummy	0.287***	0.285***	0.150*			
	[0.0663]	[0.0662]	[0.0726]			
Observations	5,331	5,331	3,986	1,849	1,849	3,451
R^2	0.293	0.295	0.346	0.357	0.336	0.395

Notes. This table shows analyses using a matched sample of workers moving laterally across subfunctions or business units and nonmovers who stayed in their job during that year. Analyses use fixed effects for each group of lateral movers and matched nonmovers. Errors are clustered by match group and individual.

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

includes the original nine-point scale. We again find no significant effects of lateral mobility on performance. Although lateral mobility is associated with increased promotion rates and pay, it appears that this does not happen because lateral mobility leads to higher performance.

4.5. Who Moves Laterally?

Although our main focus is on understanding the consequences of lateral moves, we also conducted analyses to examine the determinants of those moves. Such analysis can shed more light on why lateral mobility is associated with promotion and provide broader insight into the role that lateral mobility plays within careers. For example, we argued that lateral mobility provided a means for people to continue to grow their skills once they had mastered their current job. That might predict that lateral moves were more common among those who had spent longer in their job. We might also expect that lateral mobility would be more common among those whose performance was not strong enough to merit a promotion as a means of advancing instead.

In analyzing the determinants of lateral mobility, we differentiate the characteristics of individuals and roles. Up to this point, we have held roles constant, examining the consequences of moving for different people who start in the same role. We would like to do the same in examining who moves laterally, studying why, holding the role constant, one person would move laterally, whereas another would not. At the same time, however, we also want to examine how role-level characteristics affect when people make lateral moves.

In order to be able to separately analyze the effects of within-role and between-role differences, we use hybrid models to predict who moves laterally (Schunck 2013, Certo et al. 2017). We define a role-year as consisting of a unique combination of job title, organizational unit, and year. For each variable that varies within the role, we then calculated the mean of that variable for each role-year and the mean-deviated value (i.e., the value minus the role-year mean). We then ran a regression where we included both the mean values (labeled "role mean" in the table) and the mean-deviated values as independent variables (labeled "*Employee … vs role mean*" in the table) as well as a random effect for each role-year. In this configuration, the mean-deviated values of each variable represent the effects of within-role-year differences and are equivalent to the coefficients in a regression with role-year fixed effects. The mean values then represent the effect of between-role-year differences, allowing us to understand why people move laterally out of some roles but not others.

Because we are interested in why people move laterally rather than remaining within the job, our dependent variable is one if the person moves laterally in the following year and zero if the person remains in the current job. All other outcomes (e.g., promotions, turnover) are treated as censored observations and dropped from the analyses. We run the analyses using linear probability models for ease of interpretation. In addition to the variables described, we include dummies for how employees entered their current job; the excluded category is having been hired into the job. The results are presented in Model 1 of Table 5.

Table 5. Determinants of Mobility

Model	1	2	3	4
Variables	*Lateral vs Stay*	*Promotion vs Stay*	*Lateral application*	*Lateral vs Stay*
Sample	Lateral or stay	Promotion or stay	Manager pay grades	Lateral applicants only
Role mean performance rating	−0.00539***	0.0668***	−0.0267***	0.0263**
	[0.00131]	[0.00147]	[0.00219]	[0.00893]
Employee perf rating vs role mean	0.00288**	0.0562***	-0.0188***	0.0469+
	[0.000956]	[0.00143]	[0.0033]	[0.0285]
Role mean log pay	0.0113*	0.126***	−0.0444***	0.0101*
	[0.00471]	[0.00528]	[0.0102]	[0.0488]
Employee log pay vs role mean	−6.76E-05	0.181***	0.00851	0.116
	[0.00693]	[0.0105]	[0.0206]	[0.177]
Role mean time in job	0.000169+	0.00136***	0.00112***	−0.00047
	[8.81 e-05]	[0.000100]	[0.000130]	[0.000561]
Employee time in job vs role mean	0.000532***	0.00211***	0.00168***	0.000417
	[8.47 e-05]	[0.000130]	[0.000237]	[0.00221]
Role mean firm tenure	−0.000251***	−0.000905***	−0.000154***	−0.000843***
	[1.45 e-05]	[1.70 e-05]	[2.46 e-05]	[0.000107]
Employee firm tenure vs role mean	−0.000117***	−0.000343***	−0.000221***	−0.00031
	[1.41 e-05]	[2.16 e-05]	[4.11 e-05]	[0.00033]
Role mean subordinate number	−0.00021	−0.000439+	−0.000832***	−0.00027
	[0.000200]	[0.000240]	[0.000221]	[0.00265]
Employees sub number vs role mean	−0.0001	0.000231	−7.15E-05	−0.0169
	[0.000131]	[0.000210]	[0.00025]	[0.0123]
Role mean outside experience	−0.0268***	−0.0655***	−0.0217***	−0.0699***
	[0.00108]	[0.00122]	[0.00182]	[0.00718]
Employee outside exp vs role mean	−0.00784***	−0.0200***	−0.0108***	−0.0498*
	[0.000882]	[0.00134]	[0.00304]	[0.0238]
Pay grade	0.00657***	−0.0401***	0.0110***	0.00837
	[0.00115]	[0.00126]	[0.00332]	[0.0161]
Entry by promotion	0.0133***	−0.0143***	0.0339***	0.0541*
	[0.00229]	[0.00302]	[0.00499]	[0.0241]
Entry by acquisition	0.0124**	−0.0134*	−0.0068	0.152*
	[0.00457]	[0.00577]	[0.0121]	[0.0663]
Entry by demotion	0.00915*	0.0599***	0.0351***	0.0822+
	[0.00427]	[0.00556]	[0.00936]	[0.0446]
Entry by lateral	0.0192***	0.0409***	0.0427***	0.0777**
	[0.00232]	[0.00304]	[0.00511]	[0.0247]
Manager dummy	0.00839**	0.0197***	0.00986**	0.00553
	[0.00269]	[0.00332]	[0.00326]	[0.0177]
Ratings 9-pt system	−0.00414	−0.00385	0.0183+	−0.137+
	[0.00382]	[0.00443]	[0.0108]	[0.0287]
Year dummies	Yes	Yes	Yes	Yes
Observations	109,677	117,780	51,627	5,233

Notes. This table shows the role random effects regression. "*Role mean*" variables are averages across job title, organizational unit, and year. "*Employee vs mean*" variables are deviations of employee score from role mean. Models 1 and 4 examine determinants of moving laterally vs. staying in the job during that year. Model 2 examines determinants of promotion vs. staying in the role. Model 3 examines determinants of making at least one application to move laterally in a year. Model 4 examines determinants of lateral mobility vs. staying among those employees who made a lateral application in that year.

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

Consistent with our arguments, we find that lateral mobility is more common when people have spent longer in the job. In terms of performance, we find that lateral movers come from jobs with lower performance on average but have slightly higher performance within those roles than stayers. This effect is modest, with a

one-standard deviation increase in the performance rating increasing the probability of moving laterally by 0.3%. It suggests, however, that there is weak selection of lateral movers based on performance. Such an effect would be consistent with managers who are filling jobs having a preference for those who are demonstrating adequate performance. Such selection effects could also affect some of the outcome differences described, an issue that we explore in Section 5.

Model 2 in Table 5 examines the determinants of promotion versus staying in the same job. Comparing the determinants of promotion with those of lateral mobility allows us to explore the suggestion that people may move laterally because they are not well placed to be promoted. For this model, we have a dependent variable of one if the individual is promoted and zero if the person remains in the same job. All other outcomes are again excluded. Because different observations are censored for the lateral mobility outcome versus promotion, Model 2 has a different number of observations than Model 1.

Comparing Model 1 with Model 2, we find that the determinants of lateral mobility are often very different to promotion. Starting with performance, we find that the effects of performance relative to the role are almost 20 times as large for promotion as for lateral moves, indicating that high performers are far likelier to be promoted than to move laterally. The comparison with Model 1 is consistent with promotion being the primary advancement route for employees demonstrating strong performance, whereas those employees with weaker but adequate performance instead advance through lateral mobility.

We also find broader evidence that situations that make people less likely to be promoted raise the probability of lateral moves. For example, those in higher pay grades are more likely to move laterally (Model 1) but less likely to be promoted (Model 2). Similarly, employees who have been promoted into a role are more likely to move laterally and less likely to be subsequently promoted. This latter result may indicate that employees are generally expected to acquire broad experience within one level before moving to the next (note that we control for how jobs were entered in our main analyses to address these effects). We further find that although those who are highly paid are more likely to be promoted (Model 2), those who move laterally are not paid any more than their colleagues who stay in their jobs (Model 1).

We probed these effects further using the data on internal job applications, allowing us to assess the factors that make employees more likely to seek a lateral move versus those factors that make their attempts more likely to succeed. Note that we only include employees in managerial pay grades in this analysis as we do not have application data for lower pay grades. We also lack data on those moves that took place without applications, which may be systematically different. Nonetheless, it is instructive to separate out application versus acceptance behavior where we have the data. First, we ran analyses of the probability of making an application for a lateral move in the following year (i.e., the dependent variable is one if an individual made any lateral applications in the following year and zero if the individual made none), presented in Model 3 in Table 5. Many of the results are very similar to the analyses of who moves laterally, indicating that people are more likely to make lateral applications if they are in higher pay grades, have been in the job longer, and entered the role by promotion or lateral moves. The one salient difference is in the effect of performance; whereas higher performers are slightly more likely to move laterally rather than stay in the role, we find that lower performers in a role are more likely to make lateral applications.

Model 4 in Table 5 then explores the employer side of decision making, estimating the probability that somebody who makes lateral applications actually then moves laterally (as with our other models of lateral moves, we only include those who moved laterally or stayed in the job in the model). The analysis demonstrates fewer significant predictors than the models examining who moves laterally, although this may in part reflect lower statistical power. The effect of performance versus role mean is positive but has low significance ($p < 0.100$). Overall, these analyses suggest that the determinants of lateral mobility largely reflect who attempts to move laterally rather than who is able to and that those attempts are more common for those who have been in the job for longer and are in situations from which promotion is less likely.

5. Discussion

Although internal labor market theory has focused on promotions as the main way that people move jobs within organizations, many people also make lateral moves between jobs at the same hierarchical level. We develop theory about how these lateral moves advance careers based on the idea that moving jobs allows employees to develop and demonstrate new skills that can improve their chances of future advancement.

We explore these arguments empirically using data from a large healthcare organization. These analyses establish a number of important facts about how the career outcomes for lateral movers diverge from those of similar employees who do not make such lateral moves. We find that people who move laterally are more likely to be subsequently promoted than those who do not make much moves, specifically after three to four years have elapsed since the move, and when those jobs take them into a different subfunction. We similarly find that lateral moves are associated with

higher subsequent pay, even absent a promotion. Stepping sideways is, therefore, an important precursor to stepping up within this organization. We do not, however, find evidence that lateral moves are associated with improved subsequent performance.

5.1. Assessing the Mechanisms

Although our correlational analysis does not support causal claims, we can assess how our findings fit our argument that lateral mobility advances careers by allowing people to develop broader skills. Many of our results are consistent with our argument. For example, the three-year delay between a lateral move and the emergence of a promotion and pay benefit can be explained by movers taking time to develop and be rewarded for new skills, and it suggests that the gains do not reflect any mechanical benefits from changing jobs. Similarly, the way that the benefits of mobility were concentrated among those who experienced greater changes in job content—those who moved across subfunctions rather than those who moved business units—is consistent with lateral movers learning more when the skills required in the new job are more different from the prior role.

Lateral mobility building valuable skills would also explain how mobility affects pay. We found that lateral movers earned higher subsequent pay, even when those movers had not been promoted and even though those movers do not demonstrate higher performance than matched nonmovers. This could be because the employer values the skills built through lateral moves, even when those skills do not deliver immediate performance gains. Employers should value more promotable employees because filling higher-level jobs through promotion yields substantial returns relative to hiring (Bidwell 2011, DeOrtentiis et al. 2018, Benson and Rissing 2020). They should, therefore, be willing to pay lateral movers more in order to retain them, even before those employees are actually promoted. Employers may also need to pay lateral movers more to retain them if outside employers value the broad skills built through lateral mobility as other research suggests (Merluzzi and Phillips 2016, Won and Bidwell 2023).

We also find tentative support for our skills-based argument in our analyses of which employees are more likely to move laterally. Lateral mobility was more common among those employees who had been in their current job longer and who were, therefore, more likely to have mastered their current job and to benefit more from learning new skills rather than continuing to perfect their existing skills. Lateral movers also had substantially lower performance than those who were promoted, and they were in roles and had prior experiences that were associated with lower promotion rates. Such a pattern is consistent with employees pursuing lateral mobility when the current job provides limited opportunities for career advancement through promotion.

There are other explanations, however, that might account for some of our findings. For example, people might move laterally to enter jobs that would be a better fit for their abilities, just as they often leave firms because of a lack of fit (Jovanovic 1979). Such improvements in fit would explain the higher rates of promotion and higher pay received by lateral movers. That said, some of our other results are less consistent with this account. Arguments about fit imply that moving jobs leads to an eventual increase in performance, even if there is a short-run adjustment cost. Yet, we find no performance gain for lateral movers, even several years after the move. Fit-based models of mobility also argue that people become less likely to move over time because they quickly learn whether they fit the job or whether they should move (Jovanovic 1979). We find, however, that the probability of moving laterally actually increases as employees spend longer in a role.

Our results may also reflect differences in which employees end up moving laterally versus staying in the role. We lack exogenous assignment to lateral mobility that could allow us to rule out such selection effects. Our difference-in-difference structure ensures that our results are not driven by time-invariant differences between movers and nonmovers. Nonetheless, there may be important dynamic differences between the groups that could affect our analyses.

It is possible, for example, that lateral movers have higher potential than nonmovers, particularly if supervisors are more likely to favor higher-potential lateral movers when they are staffing roles. Our results lend some support to this account as we find that lateral movers have slightly higher performance than others in their role. Although we match on observed performance in our analyses, differences in unobserved components of ability between laterals and nonmovers could contribute to the subsequent advantages achieved by lateral movers.

In particular, selection and skill building may work together to explain the lateral advantage. Although it may be easier for higher performers to move laterally, an explanation of their advantage based purely on selection account does not explain why those higher performers should want to move laterally, nor why the organization should prefer that they do. A reasonable explanation is that lateral moves are seen as developing valuable skills, and higher potential employees seek out such moves as a consequence. Put differently, our findings establish lateral mobility as a path through which employees advance their careers, even though we cannot disentangle the extent to which that advancement is driven by selection versus causal effects.

Lateral movers' advantage could also reflect the more proactive way that they manage their careers. Whether

people move laterally often reflects their willingness to seek out and pursue new lateral opportunities. Those who are proactively seeking such moves may also be better at finding opportunities for subsequent promotions or bargaining up their pay. Supplementary analyses of internal applications did not find any correlation between willingness to make lateral applications and subsequent advancement, but the combination of proactivity *and* sufficient potential to persuade managers to facilitate a move could explain why lateral movers advance more subsequently. It is also worth noting that lateral movers' and nonmovers' pay and mobility trajectories look very similar before the lateral move, raising the question of why greater proactivity would benefit lateral movers after their move but not before it. All that said, we cannot rule out these differences in who moves laterally playing a role in shaping our effects.

5.2. Limitations and Questions for Future Research

Our study design has a number of limitations. Unlike some other studies of mobility within organizations (Ferguson and Hasan 2013, Benson et al. 2019), we do not have a source of random assignment of employees to lateral mobility, preventing us from making causal claims. Although this lack of random assignment could be addressed using instrumental variable methods, we were unable to find variables that would meet the exclusion condition of affecting the probability of an employee moving laterally without affecting the returns to either moving laterally or remaining within the job. We believe that our analyses are useful in establishing a pattern of facts about lateral mobility that can point toward the role that it plays within careers. We acknowledge, however, that we are unable to definitively identify a causal relationship.

Our use of data from a single organization creates further limitations, raising the question of how our results might generalize to other settings. We are not aware of any unusual policies at this organization that would shape the effects of lateral mobility. Over 20 interviews with a variety of hiring managers at our research site highlighted that mobility decisions were highly decentralized, relying on the informal networks of employees, and based on the individual decisions of each hiring manager. We believe that such behaviors are common across many organizations. Firms that have more centralized personnel policies or implement formalized rotation policies could, however, demonstrate different patterns. Similarly, other organizations may be less open to lateral mobility and more likely to penalize people who seek to make such moves.

A third limitation reflects the absence of certain variables from our data. It would be particularly valuable to explore whether certain groups, such as women or ethnic minorities, were more or less likely to make use of lateral mobility. It should also be noted that our analyses focus on the role of lateral mobility in facilitating career advancement. An underlying assumption of our arguments is that employees aspire to promotions. There may also be many employees who actively seek to remain in their current role, particularly at certain points in their careers.

An important question that our analyses raise is why more people do not move laterally given the benefits that we document. Based on the internal application data that we had access to, it does not seem that this absence of lateral mobility simply reflects difficulties in persuading managers to allow lateral moves; instead, we found that only a very small minority of employees applied to move laterally in a given year. One explanation is that employees simply failed to recognize the benefits of lateral mobility. After all, prior research has debated whether the challenges of developing an unclear identity might outweigh the benefits of developing more skills. Moreover, within our setting, we found that the benefits of lateral mobility only occurred three years or more after the move. The long gap between mobility and advancement may obscure the benefits of those moves. Certainly, interviews in other organizations suggested that employees often failed to recognize the benefits of lateral moves. For example, one manager we interviewed as part of a broader exploration of internal labor markets noted: "Generally speaking, I think people are usually chasing promotions, first and foremost, so when it comes to a lateral move, sometimes it takes time to get people to understand the benefits." Another described how "employees find it a lot easier to take on a new role if they know they're going to get promoted … Lateral moves often require some convincing." These quotes are illustrative of the general sentiment expressed by nearly all of managers and Human Resource personnel we spoke with—that many employees are hesitant to take on lateral moves because they are uncertain as to how such moves will affect their careers.

A similar question regards the organization's policies and practices. Given the benefits of lateral mobility, should the firm make more efforts to ensure that people with greater potential are moving across roles? We suspect that the weak relationship between performance and who gets to move laterally reflects the very decentralized nature of mobility in this organization. Although an optimal policy would seek to develop those with higher performance (albeit not those performing so well that they are ready to be promoted), mobility decisions at this organization were taken by individual supervisors seeking to fill particular roles. As a consequence, mobility was likely driven by questions of who could do the job rather than who it would be best to develop for future mobility. Although we might also expect individual hiring managers to be reluctant

to accept low-performing individuals into new roles, we found a surprisingly small effect of performance on the likelihood of moving laterally. Hence, although there are strong grounds to believe that lateral moves should not be available to low performers, we did not find strong evidence for such behavior in our data.

5.3. Contributions

This paper is intended to make a number of contributions to research on careers. Perhaps most important, it seeks to develop theory and evidence on the role of lateral mobility within careers. Despite the frequency with which lateral mobility occurs within organizations, existing literature offers little guidance on how it might affect careers. We suggest that lateral mobility can be important for continued career growth by allowing people to continue to develop new skills in the absence of promotion and demonstrate that lateral mobility is associated with significant increases in career advancement. In building this understanding of lateral mobility, we aim to also update internal labor market theory (Doeringer and Piore 1971, Osterman 1987, Osterman and Burton 2006, Dencker 2009), showing how it can be applied to understand horizontal mobility alongside vertical mobility. We show in particular how lateral moves can serve as important precursors to subsequent career advancement.

We also hope to contribute to the literature on careers by highlighting the dual problems that lack of job mobility can cause for career advancement by both limiting current increases in pay and precluding future growth. Prior research has examined career plateauing, exploring the attitudinal correlates of a declining likelihood of promotion (Ference et al. 1977, Yang et al. 2019). This literature often conceptualizes careers in purely vertical terms as employees move by promotion or not at all. By introducing a lateral dimension, we highlight how plateauing may be particularly serious when it leads employees to stop developing new skills by staying in the same job. Moreover, we suggest that these problems of plateauing within a given job can be overcome by moving to a different job within the same level. Indeed, a central implication of our study is that employees who face slowing career advancement through lack of promotion would do well to move jobs laterally, allowing them to develop new skills that can facilitate future promotions.

Finally, our research also has implications for studies of the consequences of "generalist" versus "specialist" career tracks. A variety of research has explored the implications of taking jobs that span different specialties or career lines versus staying within a single domain, often finding negative consequences to generalizing moves (Zuckerman et al. 2003, Ferguson and Hasan 2013, Leung 2014). Our study offers a caveat to that important work by highlighting the importance of the counterfactual. Although moving across areas can incur career penalties, so can staying in the same job for too long and failing to develop and demonstrate new skills. Hence, although generalizing moves may disadvantage employees relative to continuing to advance within the same area, that may not be the choice set that many employees face. Where, instead, the choice is between making a generalizing move and remaining within the same job after having mastered it, the generalizing move may offer important benefits.

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Endnotes

[1] It may be that people are expected to spend a certain amount of time at a given level before being promoted. In that case, somebody who was promoted into the prior job might have slower advancement than someone who moved into it laterally and might be more likely to take a lateral move themselves. Our controls account for such effects.

[2] In a very small number of cases, people with the same job title were in different pay grades. We dropped controls who were in different pay grades to their matched lateral.

[3] Because we explore the pay grade attained in each given year in our sample, the measure does not suffer from the kind of right-censoring problems that might occur with measuring time to promotion.

[4] We replicate Model 3 in Tables 2 and 3 by running separate fixed effect models for each year posttransfer in Online Appendix 2. Although the smaller number of observations in each year reduces significance levels, results are otherwise similar to those present in the full sample.

[5] The similarity between the laterals and nonmovers around the time of the lateral move reflects the matching in the sample. Such matching should not, however, induce greater similarity in the period before the lateral move than in the period after the lateral move. Simulation studies also find that matching approaches are an effective way of addressing any differences in pretrends in difference-in-difference analysis (Ryan et al. 2019).

[6] In supplementary analyses in the online appendix, we found no evidence that people who moved subfunctions and business units at the same time experienced fewer advantages than those who just moved subfunctions, suggesting that the effects do not reflect a penalty for changing businesses.

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