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Resetting the Shot Clock: The Effect of Comobility on Human Capital

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In this paper, we examine how employee mobility impacts the human capital of both those who are new to the organization (movers) and those who are existing members (incumbents). Employee mobility events can disrupt both the location-specific and the colleague-specific components of human capital and thus have different impacts on overall human capital. We test our theory on the disparate effects of location change and personnel change on human capital in the highly interdependent context of the National Basketball Association. We find that movers experience adverse performance shocks after mobility events that are moderated when moving as a group, and we also find that group mobility events hinder the performance improvement of incumbents. Our findings are consistent with the limited transfer of location-specific human capital and the disruption of colleague-specific human capital after mobility events.

Keywords: *knowledge transfer/replication; strategic HRM; groups/group processes/dynamics; teams*

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> "If you read any of the papers in Los Angeles or listen to any sports talk radio or scan through the dozens of purple-and-gold blogs, you'd believe there must be some master solution that will make all the Lakers' disparate parts cohere into some unstoppable basketball force. Once Dwight learns to play with Pau, everything will be fine. Or once Nash learns to play alongside Kobe, the team will stop looking slow and confused on offense. Or once the bench players find their roles, the second unit will look like something more than five random dudes who happen to be standing on a basketball court together."
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> —Jay Kaspian Kang (2012), journalist at ESPN, referring to the disappointing start to the Lakers 2012 season after trading for new players

Strategic human capital research on employee mobility has highlighted that the movement of human capital across firm boundaries facilitates the ability of an organization to transfer resources (Rao & Drazin, 2002) or learn (Song, Almeida, & Wu, 2003). In exploring this phenomenon, the extant literature attributes changes in organization-level performance to mechanisms that occur at the individual level, such as the flow of human capital (Agarwal, Ganco, & Ziedonis, 2009; Campbell, Ganco, Franco, & Agarwal, 2012; Maliranta, Mohnen, & Rouvinen, 2009), social capital (Agarwal, Campbell, Franco, & Ganco, 2012; Somaya, Williamson, & Lorinkova, 2008), and routines (Aime, Johnson, Ridge, & Hill, 2010; Phillips, 2002) that are embedded in people. However, the proposed microlevel mechanisms drive organizational outcomes through their effects on individual outcomes (Abell, Felin, & Foss, 2008; Coleman, 1990), yet the effects of employee mobility on the knowledge, skills, and abilities of individuals are generally undertheorized and underexplored in the strategic human capital literature.

Accordingly, we explore the consequences of employee mobility on individual skills and abilities through the twin lenses of human capital theory and social capital theory. In so doing, we argue that some components of human capital are location-specific and some are colleague-specific, and as such, these components drive different effects of mobility on the skills and abilities of individual movers and incumbents. As individuals acquire experience within an organization, they develop firm-specific human capital, some portion of which may be specific to the location and some portion of which is specific to the set of colleagues within that organization with whom they work (i.e., the component of social capital that is embedded in an employee's relationships with colleagues). If employees change employers, they "reset the clock" on individual experience (Amburgey, Kelly, & Barnett, 1993; Huckman, Staats, & Upton, 2009). A change in organization and a change in the set of colleagues disrupts the location-specific and colleague-specific components of their human capital and restarts the process of building new skills and relationships. Similarly, if employees are joined by new colleagues through inbound mobility events, they preserve the value of their firm-specific human capital, but their collection of colleague-specific capital is disrupted and must be rebuilt to accommodate relationships with their new colleagues.

Empirically, we explore the impact of location change and personnel change on individual human capital by examining players within the National Basketball Association (NBA), a context marked by high levels of interdependency between employees where colleague-specific capital is likely to be highly valuable, and where it is common for several employees with previously existing relationships to change organizations together. In line with the quote at the start of the paper that suggests that organizational performance after a mobility event

was adversely affected because players did not know how to play with each other and instead looked like "five random dudes who happen to be standing on a basketball court together" (Kang, 2012), we demonstrate that employee mobility has a temporary adverse impact on human capital of moving employees consistent with the loss of location-specific and colleague-specific human capital as captured by a decrease in individual performance. Additionally, we show that moving players experience a loss of human capital that is moderated if they move with previous colleagues and thus can maintain the value of some colleague-specific human capital. Contrary to our hypotheses, we do not find that the human capital of incumbent players is significantly affected by inbound mobility events.

This paper makes three main contributions. First, we formalize and test microlevel effects that have been posited in previous research (e.g., Aime et al., 2010; Campbell, Ganco, et al., 2012; Wezel, Cattani, & Pennings, 2006) to drive organization-level impacts of employee mobility. While we do not directly hypothesize or test links between mobility and organizational performance, this formalization provides a stronger foundation for the understanding of one possible way in which employee mobility affects organization performance—its effect on different aspects of individual human capital. We do not explicitly theorize or test cross-level mechanisms; our objective is to offer an exploration of the underlying micromechanisms. Related to this, we expand the construct of context-specific human capital (Ployhart & Moliterno, 2011) by demonstrating a type of context-specific human capital (previously formed colleague-specific capital) that is not location-specific (i.e., it can be transported across, and disrupted within, organizational boundaries) and that impacts the performance of both those who have it and others in the organization who interact with those who possess it. Second, by examining the differential impact of employee mobility on the performance of movers and incumbents, we contribute to a deeper understanding of a series of results (Groysberg, Lee, & Nanda, 2008; Huckman & Pisano, 2006) highlighting the potentially contrasting effects of location-specific human capital and colleague-specific capital on post-mobility performance of organizations. Our framework provides a theoretical explanation of these prior results and identifies how the devaluation and subsequent construction of different aspects of human capital after employee mobility events play a central role in the evolution of knowledge, skills, and abilities as employees construct their careers across organizations. This conceptualization calls into question traditional measures of firm-specific human capital, such as firm tenure, which confound location-specific and colleague-specific human capital. Third, we extend a series of results on the impact of team composition changes on team performance (Huckman et al., 2009; Reagans, Argote, & Brooks, 2005). We demonstrate that changes in team composition "reset the clock" on the process through which employee experiences generate both location-specific and colleague-specific human capital. Specifically, we demonstrate the patterns through which different aspects of existing human capital are devalued and subsequently developed after different types of mobility events.

Theoretical Framework

Brief Literature Review

We propose that employee mobility leads to the disruption of both location-specific and colleague-specific human capital. We operationalize human capital in line with Becker (1964: 11), who describes human capital as resulting from "activities that influence future

monetary and psychic income by increasing the resources in people." This definition includes both those investments and characteristics that produce resources that apply across organizations and situations and those that are more narrowly tailored to a specific context. It includes knowledge, skills, abilities, and other characteristics (KSAOs) that are specific to a particular occupation (such as the rules of basketball, in our context, or case law for an attorney) or apply to a broad variety of occupations (such as facility with written English or leadership techniques). It also includes KSAOs that are specific to a particular firm. We argue that the traditional conceptualization of firm-specific human capital can be classified into KSAOs that do not depend on a particular group of coworkers to create value (termed location-specific human capital) and those that do depend on coworkers to create value (termed colleague-specific human capital), which is a type of social capital.

While social capital is a broad term used to cover a variety of concepts, from "the linkages among individuals or groups within the collectivity and, specifically, in those features that give the collectivity cohesiveness and thereby facilitate the pursuit of collective goals" (Adler & Kwon, 2002: 21) to "an individual's personal network and elite institutional affiliations" (Belliveau, O'Reilly, & Wade, 1996: 1572), we follow Burt (1997) and focus on the particular conceptualization of social capital that is embedded in dyads of individuals and represents complementarities between individuals. Under this treatment of social capital, social capital is defined by its effects, not by its form (Coleman, 1990): It may include such disparate aspects as networks, trust, common social norms (Putnam, 2000), and more generally, any social structure that enables people to work together (Fukuyama, 1996). We consider this aspect of social capital to be a component of human capital, in that it is embedded in a specific individual and captures the ability of that focal individual to work productively with specific colleagues. In other words, we conceptualize colleague-specific human capital as an individual's KSAOs related to the identification and operationalization of opportunities for complementarities with specific colleagues.

The extant literature on the role of individual mobility on organizational performance highlights the ways in which employee mobility introduces valuable human capital (and their embedded know-how and skills) into target organizations (Campbell, Ganco, et al., 2012; Carnahan, Agarwal, & Campbell, 2012; Franco & Filson, 2006; Rao & Drazin, 2002; Wezel et al., 2006) and removes it from source organizations (Agarwal et al., 2012; Campbell, Ganco, et al., 2012; Wezel et al., 2006), introduces new *types* of human capital into target organizations that facilitate expansion of the breadth of an organization (Rosenkopf & Almeida, 2003; Song et al., 2003), transfers social capital with clients (i.e., client-specific human capital) into target organizations to enhance client relationships (Somaya et al., 2008), transfers social capital with external organizations into target organizations to help shape institutions and policy outcomes (Dokko & Rosenkopf, 2010), facilitates knowledge flow back to source firms by enhancing social networks between organizations (Corredoira & Rosenkopf, 2010), and facilitates the dissemination of routines to target firms (Aime et al., 2010; Phillips, 2002).

These rich relationships contribute to the strategic human capital literature by highlighting mechanisms through which employee mobility can alter organizational outcomes. However, these effects of employee mobility represent mechanisms that occur through individuals, yet there is little research exploring the impacts of these proposed mechanisms on individuals. Huckman and Pisano (2006) highlight the role of firm-specific human capital on individual

performance after employee mobility by demonstrating a performance reduction among surgeons when operating at new hospitals, even when performing the same procedures. Similarly, Groysberg et al. (2008) show that star employees' performance tends to decline when changing from one firm to another even in contexts where firms appear very similar. Furthermore, the study found that when an employee is moving along with at least one other employee, no performance reduction was observed, which suggests that colleague-specific human capital is an important predictor for postmobility performance. Dokko, Wilk, and Rothbard (2009) extend the analysis of the transfer of human capital into new organizations and demonstrate that while task-relevant human capital positively affects performance in a new organization, other experiences adversely impact individual performance. On the colleague-specific capital side of the coin, Castilla (2005) demonstrates that the individual performance of workers who join an organization through a referral is adversely impacted when their referrer leaves the organization, suggesting the importance of social capital within an organization on individual performance. Note, however, that in these studies, the effects of location-specific and colleague-specific human capital, as we have defined them here, are often commingled (cf. Castilla, 2005; Groysberg et al., 2008). This is to say, the studies do not draw a distinction between the loss of location-specific human capital associated with changing organizations and the losses associated with leaving behind old coworkers and joining new ones.

Given the dearth of studies examining the microlevel underpinnings of the relationships between employee mobility and organizational performance, the theoretical understanding of how mobility affects organizational performance is underexamined. We explore one mechanism through which organizational performance is affected by employee mobility by highlighting how and when employee mobility affects individual knowledge, skills, and abilities. Further, we argue that there are two distinct categories of individuals that are affected by employee mobility: the movers themselves and the incumbents in the organizations in which they join. This distinction allows us to compare the effects of changing locations and of changing colleagues. Specifically, we explore how employee mobility affects the location-specific human capital and the colleague-specific human capital of both types of workers.

Location-Specific Human Capital, Colleague-Specific Human Capital, and Employee Mobility

Becker (1964) conceptualizes human capital as an aggregation of skills that have different loci of relevance; in other words, the human capital of an individual can be partitioned according to its relevance in other settings. Becker goes on to characterize human capital as either general human capital that is valued in many other organizations or firm-specific human capital that is valued only in one organization. While we focus on the human capital possessed by individuals, organizational human capital is a seminal resource of organizations, including knowledge organizations (Starbuck, 1992), technology and innovation organizations (Collins & Smith, 2011), and organizations in fast-moving, turbulent environments (Fine, 1999). Human capital within an organization captures the interdependent and embedded nature of employees and employers as it is a "a unit-level resource that is created from the emergence of individuals' knowledge, skills, abilities, and other characteristics (KSAOs)" (Ployhart & Moliterno, 2011: 128). Organization-level measures of human capital are

positively related to organizational performance (Hitt, Bierman, Shimizu, & Kochhar, 2001; Kor & Leblebici, 2005), and the knowledge, skills, and abilities that support individual human capital are associated with positive outcomes for individuals (Mincer, 1974; Topel, 1991). Firm-specific human capital is particularly relevant in the strategic context because firms and workers share the rents associated with firm-specific human capital (Coff, 1997), and thus it can support competitive advantage if it can be effectively isolated (Campbell, Coff, & Kryscynski, 2012; Chadwick, 2013).

In competitive labor markets, when an employee changes jobs, the difference in productivity across the two jobs may be attributed to the change in value of the underlying aspects of the individual's human capital. For example, when employees who possess firm-specific human capital change jobs, their performance is expected to initially decrease because while the general component of their human capital has equivalent use value in their new organization, their investments in firm-specific human capital in previous organizations are no longer valuable to them. As a result, in the short term, the individual loses the value of his or her firm-specific human capital. This logic is drawn upon by Groysberg et al. (2008) and Huckman and Pisano (2006) to explain their findings *ex post* on the role of mobility on the individual performance of moving employees and is developed explicitly by Dokko et al. (2009). However, after the initial dip, the process of building new human capital that is specific to the new employer begins. As a consequence, when workers who have valuable firm-specific human capital change employers, there should be an initial dip in outcomes followed by a long-term recovery (Campbell, 2013; Carnahan et al., 2012). The size of the initial dip is shaped by the use value of the employee's firm-specific human capital in the employee's prior job, and the rate of recovery is driven by the ability of the employee to acquire new firm-specific human capital and the use value of firm-specific human capital in the employee's postmobility job.

While the component of firm-specific human capital that is truly location-specific cannot be transferred across locations, mobile employees may be able to transfer some of their colleague-specific human capital if they move with previous colleagues. Similarly, incumbents retain the value of their location-specific human capital but lose the value of colleague-specific human capital that had been formed with departed colleagues and must develop new relationships with new colleagues. Since we conceptualize colleague-specific human capital as an individual's KSAOs related to the identification and operationalization opportunities for complementarities with specific colleagues, when an employee possesses colleague-specific human capital, the employee's performance will be greater when coworking with that specific colleague than in his or her absence. These complementarities—which might be driven by trust; shared routines; artifacts of common work, such as improvised technology; or other receptacles of tacit knowledge—serve to reduce coordination costs between actors: They facilitate the ability of multiple actors to recognize and implement more productive ways to work together. In contexts where work processes are interdependent, the private- and public-good aspects of social capital (Coleman, 1988; Leana & van Buren, 1999) should be complementary within organizations, which is to say, increased social capital broadly, and colleague-specific capital more narrowly, should lead to improved performance by both individuals and organizations.

Empirical studies have borne out this connection—social capital has been found to improve both the performance of organizations wherein it exists (e.g., Coleman, 1990) and career outcomes of the individuals involved in the relationships where it is embedded (e.g.,

Burt, 1997; Useem & Karabel, 1986). Work on the benefits of social capital within organizations (Leana & van Buren, 1999; Nahapiet & Ghoshal, 1998) has emphasized the benefits to coordination that it confers on the individuals that possess it. Nahapiet and Ghosal (1998) focus on the role of social capital in the development of new knowledge within the firm, which, at the collective level, they refer to as intellectual capital. They argue that the presence of relationships among firm members and the accompanying social capital facilitate combination and exchange processes that lead to the development of new knowledge.

This conceptualization suggests that mobility events adversely affect both the location-specific and colleague-specific aspects of human capital of movers and adversely affect the colleague-specific human capital of incumbents. Mobility events might be more or less disruptive of human capital depending on the status of the employee and the relative extent to which location- and colleague-specific human capital is disrupted in a given individual, but all the possible effects of a mobility event on human capital are negative. As a result, we hypothesize the following:

Hypothesis 1a: Employee mobility has an adverse effect on the human capital of the employees joining the organization.

Hypothesis 1b: Inbound employee mobility has an adverse effect on the human capital of incumbent employees within the organization.

Colleague-Specific Capital and Group Mobility Events

Because addition of a new employee into an organization disrupts the set of colleagues of the mobile employee, his or her ability to coordinate actions with others in the new firm is compromised, the employee's store of tacit knowledge is devalued, and his or her complementarities with coworkers are eroded. However, if a mobile employee enters an organization with others with whom he or she has shared experience and has developed colleague-specific human capital, then the ability to coordinate with colleagues is partially transferable and the value of tacit knowledge and the associated complementarities with coworkers are less devalued.

The benefits gained by the new employees when they move along with others with whom they share experience should have a negative effect on the performance of incumbents in the new organization. Since social capital serves to aid in coordination among individuals (Coleman, 1988) the greater the disruption to such knowledge, the lower the performance of incumbents until new relationships develop in response to the new additions. In line with this reasoning, the magnitude of the disruption of colleague-specific capital of incumbents will be greater when the mobility event is a team event: There is a decreased efficacy of the existing ability to coordinate as the size of the mobility group and the percentage of employees that do not share the same knowledge increase. The regularity and predictability of actions the group previously depended on will no longer be present; the coordination that had been facilitated by the relationships will require a greater cognitive effort (Cyert & March, 1963). As a result, simultaneous actions will be harder to undertake, and performance will be reduced.

In summary, employees who change organizations cannot transfer the location-specific aspects of their human capital and can transfer only the colleague-specific capital that they have developed with any comovers (if they move as part of a group). If movers do move as

Table 1
Impact of Mobility Events on Firm-Specific and Colleague-Specific Human Capital

Event	Moving Employees	Incumbent Employees
Solo mobility event	Large disruption of location-specific human capital	No disruption of location-specific human capital
	Larger disruption of colleague-specific capital (relative to movers in a group)	Smaller disruption of colleague-specific capital (relative to incumbents joined by a group)
Group mobility event	Large disruption of location-specific human capital	No disruption of location-specific human capital
	Smaller disruption of colleague-specific capital (relative to solo movers)	Larger disruption of colleague-specific capital (relative to incumbents joined by a solo mover)

part of a group, they are able to transfer some of their existing colleague-specific capital, so the adverse impact on their individual performance is moderated.

On the other hand, incumbents who are impacted by an inbound mobility event do not change firms, so, by definition, their location-specific human capital is not impacted. However, replacing coworkers disrupts the set of colleague-specific capital of incumbents. As new employees replace coworkers with whom they have developed social capital, their ability to identify and operationalize opportunities with all their colleagues is disrupted, and the larger the change in colleagues, the greater the impact on performance of incumbents. This logic is summarized in Table 1. Because group mobility events affect the extant colleague-specific capital of movers and incumbents differently, we hypothesize the following:

Hypothesis 2a: The adverse effect of employee mobility on the human capital of moving individuals is moderated by whether movers move as part of a team, such that the effect is stronger for solo movers than for those who move as part of a team.

Hypothesis 2b: The adverse effect of employee mobility on the human capital of incumbent individuals is moderated by whether or not they are joined by an inbound mobility team, such that the effect is weaker for those joined by solo movers than for those joined by a team.

Group Mobility Events and Performance Recovery

Given that colleague-specific capital is created and accumulated within the context of a particular relationship, investments in this aspect of human capital can be made only once the focal relationship starts and accumulates as exchanges take place (Lawler & Yoon, 1998). As a consequence, colleague-specific capital takes time to form. Given the limitations on the ways in which social capital is beneficial outside of the relationship in which it was formed, changes in the personnel associated with a particular organization (either additions or subtractions of personnel) will necessarily devalue investments in relationships that were previously made. This is obvious in the case of subtractions from a team but can also be true when new members are added. To the extent that the addition of new organizational members disrupts the context in which previous colleague-specific capital was developed, those investments may not continue to produce value for those who made them. To add to this point, it should be noted that while theorists differ on the effects of network structure and hierarchical

relations on social capital (e.g., Burt, 1997; Coleman, 1990), those effects are included in almost all models. It is widely believed that changes in network structure will have some implications for social capital and consequently for colleague-specific human capital.

Combining the logics that colleague-specific capital takes time to build and that moving with a team moderates the human capital reduction of movers also suggests that movers in a group should recover faster from that reduction except when movers are assigned to different tasks (Dokko et al., 2009). Since there is less adjustment required due to the previously developed relationships, less time should be required to restore performance to its previous level. The better coordination that exists among subgroup members should give those individuals a head start on building new human capital. Having to develop colleague-specific capital with fewer actors should speed the process; the relationships that need to be established should be simpler and more easily developed.

Moving with a team should affect incumbents in the temporal dimension in addition to causing a larger performance reduction. Within a group mobility event, each incumbent member must develop complementarities with more than one actor. More experience will be required to develop tacit knowledge, because the number of actors with whom shared experience will be needed is increased where the incoming group is larger. It will take time for incumbents to develop expertise both with the new team members individually and with the group of them (in the case where they have previous experience as a group); each incumbent will have to adjust his or her performance to account for the new relationships that will be introduced into the group. As a result, we hypothesize the following:

Hypothesis 3a: The rate of human capital recovery is greater for movers who move as part of a group relative to solo movers.

Hypothesis 3b: The rate of human capital recovery is smaller for incumbents exposed to an inbound group mobility event relative to a solo inbound mobility team.

Data and Methodology

Empirical Context

As the opening quote highlights, the on-court dynamics of the NBA are marked by highly interdependent teams where individual performance is affected by the skills of the individual as well as individuals' familiarity with their teammates. The interdependencies rely critically on players' knowledge of the abilities and tendencies of their teammates. Part of understanding the tendencies of teammates involves developing social capital that allows players to operate productively together in dynamic and uncertain environments. The addition of new personnel disrupts the existing coordination as coaches and incumbent players learn how to best work with a new teammate. During this learning period, when new relationships are being developed, the performance of affected individuals is adversely impacted.

The context of professional sports organizations has been frequently used to study organizational phenomena (Aime et al., 2010; Berman, Down, & Hill, 2002; Wright, Smart, & McMahan, 1995), and the NBA is an ideal context in which to study the accumulation of colleague-specific human capital for several reasons. First, the game of basketball features a high degree of interdependence among players (Berman et al., 2002). For example, players depend on each other to pass the ball in places and times that enable them to score. Players must position themselves correctly relative to each other, with and without the ball, on both offense and defense. At the

professional level in particular, correct timing is critical; a teammate's action coming a half-second too slowly or too quickly may prevent a play from working. The interpersonal action necessary to make all these actions happen is precisely what colleague-specific human capital facilitates. Second, available data on individual performance in professional basketball are more reliable than those available in other settings. Third, while the rules of basketball have shifted in interpretation over the study period, this effect is gradual and should not affect the relationship between individual performance and mobility events in our study, because individual performance is compared from before and after each individual mobility event.

The study examines data from the NBA for all player-game dyads from 2000 to 2009 to demonstrate the effects of employee mobility across organizations on individual human capital over time. In this context, it is fairly common for employees to move in groups from one organization to another and be expected to integrate their skills with that of their teammates in a short period of time under intense competitive pressure in a zero-sum environment. One important advantage of this context is the availability of detailed individual performance data; these data allow the performance of mobile players and incumbent players to be measured before and after mobility events. In this context, we use weighted shooting percentage as a reflective indicator of the human capital of the individual. Reflective indicators represent the effects of the construct. In this context, salary, all-star votes, points, assists, and so on are all reflective of the player's underlying human capital. In a reflective construct, the use of one item is valid as long as it reflects the construct. Omission of alternative reflective indicators does not affect the interpretation of the results because the items are interchangeable due to the underlying interitem correlations (Nunnally & Bernstein, 1994).

Even with these strengths, this setting carries with it a generalizability concern: A basketball team is a small, relatively cohesive unit with a degree of interdependence that is perhaps higher than teams in other contexts.

Data Source

The data for this study are collected by Sports Reference, LLC, and represent data aggregated from NBA game logs for all players that appeared in any game between 2000 and 2009. The raw game logs capture a variety of individual performance measures for every player and every game over the course of the season. The raw data include measures such as minutes played, points scored, rebounds, and assists, as well as date of the game and the organization for which the individual plays. These last two variables allow us to construct measures of employee mobility across organizations. Because we know the employing organization for each individual at all points in time over the 10 years, we can reconstruct each individual's career, which allows the identification of all mobility events. Further, we can identify mobility events where a group of individuals transfer from one organization to another by identifying all individuals that move from one organization to the same subsequent organization within a 10-game window.

Estimation Strategy

We compare and contrast the effects of disruptions in location-specific and colleague-specific human capital after mobility events. These postmobility dynamics provide insight on the evolution of different aspects of individuals' human capital after shocks. We operationalize our estimations by using variations on the following model of individual human capital:

$$y_{it} = \alpha_1 M_{it} + \alpha_2 T_{it} + \alpha_3 G_{it} + \alpha_4 M_{it} * G_{it} + \alpha_5 X_{it} + \alpha_6 X_i + \alpha_7 X_{ft} + \alpha_8 X_f + c + \varepsilon_{it},$$

where i indexes individual; t indexes time (we assume that mobility events occur between time periods 0 and 1); y_{it} is a measure of individual i's performance at time t, which we treat as a proxy for human capital; M_{it} indicates whether the focal individual experienced a mobility event in the prior 10 games; T_{it} indicates whether the mobility event was a group mobility event (i.e., did multiple people move in unison to a new organization?); and G_{it} measures the number of games since the most recent mobility event that affected individual i. Finally, X_{it} is a time-variant individual control that controls for roles and usage of every individual within the organization. Our primary parameters of interest are α_1, α_2, α_3, and α_4, which provide estimates of how the human capital of an individual is shifted when experiencing a mobility event, how whether the mobility event is part of a team moderates that shift, how individual performance evolves over time after mobility events, and how team mobility events moderate that evolution.

We adapt this specification to explore two empirical relationships. First, we examine how mobility and group mobility differ in their impact on human capital of moving players relative to nonmoving players. Second, we examine how inbound mobility and group mobility differ in their impact on human capital of incumbent players relative to incumbent players who did not experience an inbound mobility event. In our empirical strategy, we are concerned that unobserved characteristics of the organization and of the individual may bias the results. For example, if an organization is systematically better at integrating new human capital or an individual is systematically better at building different aspects of capital, then the empirical results will be biased. To address this concern, we include individual- and organization-level fixed effects (as well as year fixed effects), which allows us to estimate how *changes* in individual human capital are related to characteristics of mobility events and games since the occurrence of mobility events while controlling for *changes* in individual and organization characteristics. We estimate a series of specifications of our base model on both organization- and individual-level outcomes.

In our analysis, we exclude mobility events that occur between seasons. When a mobility event occurs between seasons, the new players and incumbent players have a long period in which to practice together, to share interdependent coexperiences, and ultimately, to develop location-specific and colleague-specific capital outside the context of observed games. Although these events represent the majority of mobility events, we must exclude them because we cannot accurately measure the evolution of individual's human capital.

Variables

Weighted shooting percentage. The primary dependent variable for all the hypotheses is constructed as the following:

$$Weighted\ Shooting\ Percentage = \frac{Points\ Scored - Free\ Throws\ Made}{2 * Field\ Goals\ Attempted}$$

This measure captures the efficiency of a player on the offensive end of the court. A player with a high value on this metric has a high expected value of points scored for each field goal attempted. This measure is independent of the pace of the employing organization and is also

independent of the efficiency of other teammates within the organization. We assume that this measure captures the ability of an individual within an organization to attempt his personal high-percentage field goals. In the interdependent and complex context of an NBA offense, the ability for a player to take high-percentage shots is affected by the skills of the focal individual but also by how well the focal player knows the strengths, weaknesses, and preferences of his teammates within that system; this ability also requires that the other players on their team know *his* strengths, weaknesses, and preferences. In other words, weighted shooting percentage is affected by the tacit knowledge and coordination of an individual within an organization. As a result, this measure is a proxy for the aggregate skills and abilities an individual has within the focal context and is our primary measure of human capital.

Descriptive statistics and correlations of all variables are available in Table 1. As shown in the table, the mean of weighted shooting percentage is 45%. In other words, across all games and all players in the NBA from 2000 to 2009, the expected value of every field goal attempt was (0.45*2), or 0.90 points.

Mobility. A key measure in the specifications is an indicator of employee mobility. This measure takes a value of 1 for every game in which the individual plays for a team other than the one with which he started the season and averages more than 8 minutes a game in his first 10 games after changing organizations. The measure takes a value of 0 otherwise. The restriction on minutes played excludes added players who did not play meaningful minutes with the new organization. Overall, this measure allows us to capture the average impact of employee mobility on individual performance relative to his performance before the mobility event within a season. The data contain 340 mobility events that meet the criteria of a midseason mobility event. This measure captures the disruption of location- and colleague-specific human capital.

Moved with a group. For every mobility event captured above, we measure the total number of players involved in the same transition. In other words, we count the number of people who left the same source organization in the middle of the season, joined the same receiving organization within 10 games of the focal individual's entrance, and averaged more than 8 minutes a game in their first 10 games after moving organizations. Since we observe only players who actually appear in a game, if a coach chooses not to use all new players for the first time in the same game (which is fairly common in the data), we would incorrectly identify them as part of different mobility events—even though they have shared experiences. We allow group mobility events to occur within a 10-game window to more accurately identify the events of interest: people who shared experiences in one setting bringing their human capital to a new setting. Injuries could be driving longer observed gaps between players' first appearances; however, this approach should provide conservative tests of our hypotheses. Of the 340 mobility events, 41 are group mobility events: 30 two-person events, 10 three-person events, and 1 four-person event (Raef LaFrentz, Nick van Exel, Avery Johnson, and Tariq Abdul-Wahad were traded together from Denver to Dallas in exchange for three players on February 21, 2002). This measure captures the extent to which colleague-specific human capital is disrupted.

Games since mobility event. For every mobility event, we identify the first game in which a player in that mobility team appeared at the receiving organization. We use this game as

a reference point, and for every game in which a mobile individual appears after changing organizations, we calculate the number of games played since changing organizations.

Controls. In the individual-level models, we control for time-variant and time-invariant individual characteristics. In order to control for individual differences in experience, we control for games played in the NBA. To capture team experience in a given year, we control for the game in the year. Additionally, in all individual specifications, we include an individual fixed effect to control for time-invariant characteristics of the individual as well as year and firm fixed effects. We control for player usage with controls for minutes played, assists, steals, and total rebounds. Means and correlations of all individual-level variables are available in Table 2. Table 3 presents summary statistics of individual players conditional on mobility.

Results

Figures 1 and 2 depict the weighted shooting percentage of individuals after experiencing a solo mobility event or a group mobility event for movers and incumbents, respectively. In Figure 1, the solid line depicts the performance trajectory of a solo mover who joins a new team; the dashed line depicts the performance of movers who move as part of a group. The initial performance shock is much smaller for players who move with a group, and the time to recovery to premobility performance is much faster for players who move with a group. In these raw results, individual performance of solo movers are shown to recover to premobility levels about 18 games after joining a new team, while movers in a group are consistently back to their premobility performance levels after about 9 games. Figure 2 depicts the performance of incumbents in the organization after new colleagues join their organization. The solid line represents individual performance of incumbents after a solo mobility event, and the dashed line represents the performance of incumbents after being joined by multiple players on the same team. Inbound mobility events that consist of one person have very little effect on incumbents, while inbound group mobility events demonstrate an adverse effect on the performance of incumbents. Together, the two figures suggest that there is a trade-off inherent in group mobility events: The larger the size of the group mobility event, the smaller the impact on the performance of the movers, but the larger the impact on the performance of the incumbents, and vice versa.

The figures suggest the validity of Hypotheses 1, 2, and 3 but do not control for any underlying differences in players and teams. We provide more rigorous tests of the hypotheses in Table 4. Table 4 contains our results for the impact of employee mobility on the individual performance of both movers and incumbents. Model 1 of Table 4 contains the estimates for the tests of the impact of mobility on the individual performance of movers. Model 2 includes group mobility as a moderator. These models test Hypotheses 1a, 2a, and 3a on the role of mobility team size on the performance of moving individuals and their rate of recovery after moves. Models 3 and 4 present the same relationships for incumbents that are joined by new teammates, testing Hypotheses 1b, 2b, and 3b. In Model 1, we demonstrate that mobility events have a significant adverse impact on individual performance, which supports Hypothesis 1a. Model 2 includes group mobility as a moderator. Group mobility has a significant positive impact on postmobility individual performance after controlling for the

Table 2
Summary Statistics of Individual-Level Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Mobility event	0.04	0.19	—															
2. Mobility Event × Moved With a Group	0.01	0.11	.574	—														
3. Log(games since mobility event)	0.10	0.53	.937	.559	—													
4. Log(games since mobility event) × Moved With a Group	0.03	0.32	.541	.943	.594	—												
5. Log(# of games experience)	4.96	1.12	.102	.059	.103	.060	—											
6. Log(game in year)	3.43	0.92	.137	.077	.139	.079	.167	—										
7. Shared experience of mobility team (games)	1.21	13.05	.467	.814	.470	.792	.061	.061	—									
8. Weighted shooting percentage	0.45	0.26	–.008	–.002	–.004	–.002	.042	.021	.002	—								
9. True shooting percentage	0.51	0.24	–.009	–.002	–.006	–.002	.041	.019	.002	.918	—							
10. Player efficiency rating	15.44	15.14	–.010	.003	–.007	.003	.066	.027	.004	.653	.707	—						
11. Points	10.18	8.14	–.019	.008	–.011	.009	.157	.018	.016	.410	.440	.629	—					
12. Assists	2.26	2.55	–.002	.005	.002	.005	.121	.020	.014	.057	.067	.263	.374	—				
13. Rebounds	4.38	3.56	–.024	.014	–.020	.014	.097	.001	.012	.100	.104	.307	.391	.069	—			
14. Steals	0.79	1.03	–.005	.004	–.001	.004	.049	.003	.006	.065	.072	.270	.286	.287	.123	—		
15. Minutes played	25.08	11.35	–.020	.018	–.009	.019	.194	.018	.028	.181	.191	.308	.730	.495	.521	.355	—	
16. Blocks	0.51	0.96	–.025	.004	–.025	.003	.021	–.012	.001	.063	.060	.186	.134	–.058	.376	.024	.203	—

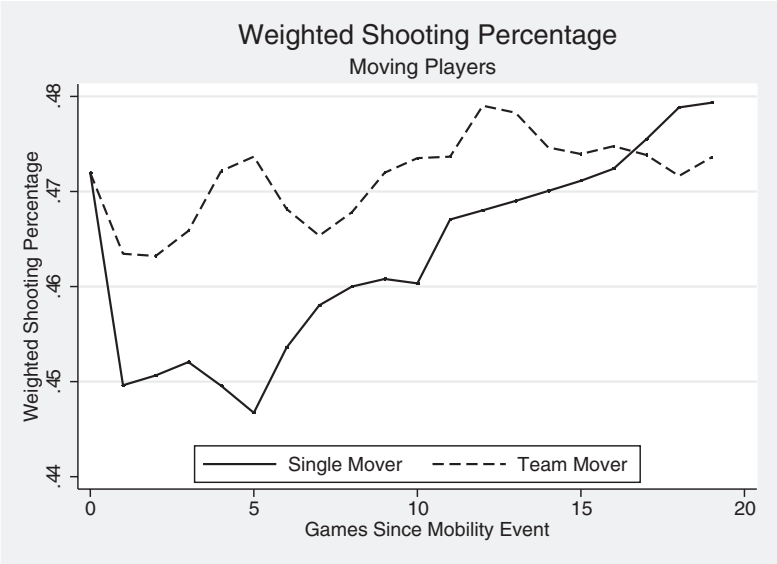
Note: $N = 226{,}950$.

Table 3
Summary Statistics of Individual-Level Variables, Conditional on Mobility

Variable	*M*	*SD*
Mobility event	1.00	0.00
Mobility Event × Moved With a Group	0.33	0.47
Log(games since mobility event)	2.54	0.95
Log(games since mobility event) × Moved With a Group	0.88	1.36
Log(# of games experience)	5.52	0.76
Log(game in year)	4.06	0.32
Shared experience of mobility team (games)	31.25	58.74
Weighted shooting percentage	0.44	0.26

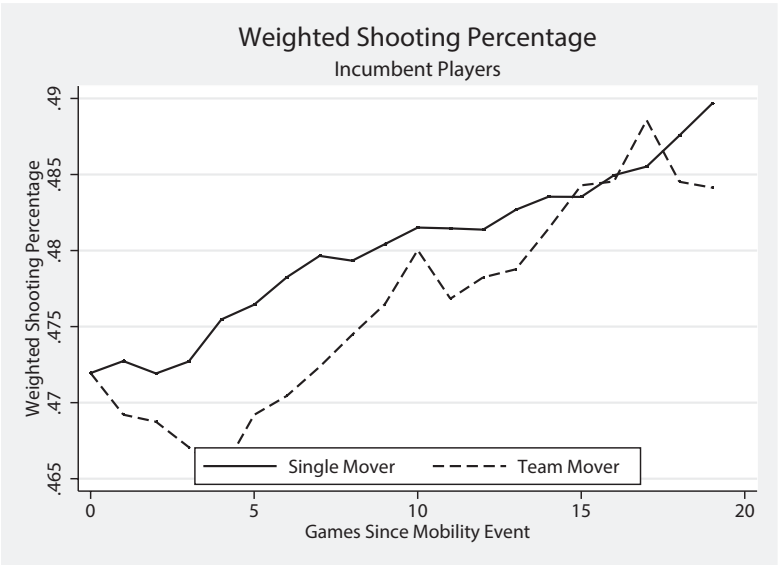
Note: $N = 8{,}804$.

Figure 1
Weighted Shooting Percentage of Movers After Mobility Events



overall impact of mobility, supporting Hypothesis 2a. In other words, the performance of players after group mobility events is less adversely affected than that of players who are part of solo moves. Similarly, the interaction of games since mobility event and group mobility events possesses the opposite sign of the direct effect of games since mobility events. This suggests that the recovery rate for group movers is slower on a per-game basis than for solo movers—however, this result may be driven by the fact that group performance has a less adverse shift from which to recover. This result does not support Hypothesis 3a.

Figure 2
Weighted Shooting Percentage of Incumbents After Mobility Events



Models 3 and 4 present the same analysis focused on the individual performance of incumbents in organizations. We do not find a strong direct effect of inbound mobility on incumbent performance. In Model 3, we find that exposure to a mobility event (i.e., being joined by a new teammate or teammates) does not have a significant adverse impact on incumbent performance, but we find that incumbent performance improves with each game after the mobility event. Model 4 includes group mobility as a moderator. These results do not indicate significant direct effects on incumbents. The positive sign on games since mobility event and the marginally significant negative sign on the interaction of games since mobility events and joined by a group suggest that when exposed to a group mobility event, incumbents' game-to-game improvement is disrupted—but we cannot assess the validity of Hypothesis 3b since there is no performance dip from which incumbents can recover.

While the absolute sizes of the effects for movers are small, in context they are important. Weighted shooting percentage has a mean value of 45%; the immediate effect of mobility on a solo mover is a decline of about 2.3%. Relative to the mean, these effects are small and they disappear quickly; however, they do represent a change that is about 8.8% of a standard deviation in the measure. While these results are admittedly small, they are indicative of the underlying relationship connecting colleague-specific human capital to individual performance. These players have spent much of their lives playing on many teams and with many players; thus this is a context where players are potentially very good at adapting to new teammates and quickly generating new, relevant, colleague-specific human capital. As such, this context is biased toward not finding any results at all, despite being a context where interdependence and coordination matters. In other contexts, where the coordination goes

Table 4
Effect of Mobility Events on Weighted Shooting Percentage

	Dependent Variable: Weighted Shooting Percentage			
	Movers (Tests of Hypotheses 1a, 2a, 3a)		Incumbents (Tests of Hypotheses 1b, 2b, 3b)	
Mobility Event	Model 1	Model 2	Model 3	Model 4
Mobility event (Hypothesis 1)	–.01362†	–.02271*	–.00226	–.00117
	(.00782)	(.00937)	(.00220)	(.00240)
Mobility Event × Moved With a Group (Hypothesis 2)		.02833†		.00029
		(.01696)		(.00615)
Games since mobility event	.00388	.00805*	.00204*	.00246**
	(.00287)	(.00349)	(.00083)	(.00088)
Games Since Mobility Event × Moved With a Group (Hypothesis 3)		–.01242*		–.00398†
		(.00612)		(.00241)
# of games experience	–.00094	–.00093	–.00086	–.00093
	(.00121)	(.00121)	(.00121)	(.00121)
Constant	.32337***	.32310***	.32392***	.32318***
	(.00582)	(.00582)	(.00582)	(.00583)
Individual role controls?[a]	Yes	Yes	Yes	Yes
Year effects?	Yes	Yes	Yes	Yes
Team effects?	Yes	Yes	Yes	Yes
R^2 within	.014	.014	.014	.014
R^2 between	.301	.301	.302	.302
R^2 overall	.028	.028	.028	.028
Number of observations	226,962	226,962	226,962	226,962
Number of players	1,000	1,000	1,000	1,000

Note: Models are panel regressions with individual fixed effects. Numbers in parentheses are robust standard errors.
[a]Individual role controls include minutes played, assists, steals, blocks, and total rebounds.
†$p < .10$.
*$p < .05$.
**$p < .01$.
***$p < .001$.

deeper and employees are less experienced in adapting to new personnel, we anticipate that the results would be much stronger and the trade-off between group mobility and solo mobility even more salient.

Additional Analysis and Robustness Checks

We find mixed support for our prediction that the adverse consequences of employee mobility on human capital increase with the magnitude of the disruption to colleagues. A potential concern is that our results may be driven by endogeneity of player mobility. Two mechanisms through which endogeneity may impact the results are that (a) organizations may add only players who they believe will adapt quickly to the organization's incumbents, and (b) teams with low coordination of existing players may be more likely to alter their workforce in an attempt to establish new, higher value coordination.

The first concern suggests that our results are conservative tests of the impact of colleague-specific capital disruption on individual performance within organizations. The second concern suggests that high-performing teams and low-performing teams add players for different reasons and thus might exhibit different effects. To address this concern, we performed a subsample analysis of all of our models in which we divided the universe into players on teams with winning records at the time of the mobility event and players on teams with losing records at the time of the mobility event. In unreported results, we find that moving with other players has a dramatically more positive effect on movers' individual performance in losing organizations than in winning organizations. For incumbents, the results are weak and do not suggest strong differences in the impact of mobility on incumbents across winning and losing organizations. These results weakly suggest that low-performing organizations may have low-value relationships and movers that import existing relationships into these organizations have higher individual performance relative to solo movers.

Another concern with the validity of the results is that the importance of colleague-specific human capital may differ according to the roles played by the individuals. To address these concerns, we examined the robustness of the results to different roles played by the individuals as measured by minutes played. In other unreported results, we present baseline results from subsample analyses using different restrictions on the number of minutes played. In the baseline results, we constrained our universe to players that average at least 8 minutes a game since this cut-off focuses on the results of meaningful contributors to the team. However, we expect that the results will differ for starters and for players that see very little court time. The addition of a rarely utilized player, for example, is not expected to affect the performance of players who are often on the court. In this robustness test we test the sensitivity of the results to using no restriction on minutes played and focusing only on players that average more than 24 minutes per game, where starters average 28 minutes a game (Gonzalez et al., 2013). We find that for movers, starters are not significantly different from the full sample. For incumbents, we also do not find significant differences across the two subsamples.

There are several potential concerns with our measure of weighted shooting percentage as the primary dependent variable. First, there is heterogeneity in players' abilities. While shooting percentage captures how well their offensive decisions reflect their coordination with their colleagues, we include individual fixed effects so that the results represent change in

shooting percentage within an individual. Second, there is heterogeneity in players' objectives. For example, some players are defensive specialists, and some players are rebounders. As such, offensive coordination with their colleagues may not be their primary objective; thus we explore the baseline results using a variety of different aspects of human capital, including true shooting percentage (a ratio-based measure that adjusts shooting percentage to account for the likelihood of shooting and making free throws), player efficiency rating (a composite measure capturing a player's performance on a variety of metrics, such as points scored, assists, steals, rebounds, etc., relative to the rest of the league), points scored, assists, total rebounds, steals, minutes played, and defensive rating (a composite measure capturing the quantified aspects of individual defense, such as defensive rebounds, steals, etc.). Third, our primary dependent variable is a ratio that potentially leads to biased results (Wiseman, 2009). We follow Wiseman's (2009) suggestion and residualize the ratio of interest by regressing the numerator on the denominator and using the residual as the dependent variable. The results of these alternative specifications are presented in Tables 5 and 6. Table 5 contains the results on movers, and Table 6 contains the results on incumbents. We find that the baseline results for movers are fairly robust to choice of dependent variable, while the group mobility moderator is more fragile to alternative dependent variables. The alternative results for incumbents are noisier. The weakness of these results suggests that impact on incumbents is small and perhaps not economically significant. However, a potential confounding factor in these alternative results is that mobility events impact the minutes played by a player. While the models include minutes played as a control where relevant, if there is a nonlinear relationship between minutes played and the dependent variable, the results could be biased. Because of this, efficiency-based measures, such as weighted shooting percentage and true shooting percentage, which are independent of minutes played, are cleaner measures of the focal aspects of human capital.

Discussion and Conclusion

When employees change organizations, they take their human capital with them. Some of their human capital is valuable in the new location, and some is not (as in the familiar distinction between general and specific human capital). While specific human capital has been generally understood to mean *firm*-specific human capital, this is not necessarily the case. For example, some previously formed aspects of social capital may be valuable in the new setting (particularly if the employee moves as part of a group), and some aspects of social capital (formed with people the individual is no longer working with) is devalued even for people who do not change firms. Put another way, the value of human capital is sensitive to changes in both location and personnel. Changes in personnel can occur within the same organization, and changes in organization do not necessarily imply a wholesale change in personnel. Using this logic, this study examines the microlevel mechanisms that underpin a series of results in the strategic human capital literature connecting employee mobility to organizational performance. Building on the work of Groysberg et al. (2008) and Huckman and Pisano (2006), who demonstrate that taking workers out of their existing context and inserting them in a new context has adverse consequences on individual performance, we examine the effect of mobility on individual human capital. As summarized in Table 1, we argue that moving employees experience a larger disruption to their firm-specific human

Table 5

Robustness Tests: Effect of Mobility Event Size on Alternative Measures of Individual Skills, for Movers

Mobility Event	True Shooting Percentage	Player Efficiency Rating	Points	Assists	Total Rebounds	Steals	Minutes Played	Residualized Shooting Percentage
Mobility event (Hypothesis 1)	–0.02012*	–0.31254	–0.14388	0.13376*	0.29689**	0.01419	–1.80035***	–0.37664**
	(0.00893)	(0.52883)	(0.21124)	(0.06574)	(0.09704)	(0.03492)	(0.27431)	(0.14018)
Mobility Event × Moved With a Group (Hypothesis 2)	0.02616	1.27735	0.91214*	0.18821	0.22839	0.02031	2.43092***	0.28099
	(0.01593)	(0.95635)	(0.38237)	(0.11901)	(0.17565)	(0.06320)	(0.49685)	(0.25390)
Games since mobility event	0.00681*	0.05695	0.01143	–0.04429†	–0.09104*	–0.00144	0.56033***	0.13360*
	(0.00332)	(0.19716)	(0.07877)	(0.02452)	(0.03619)	(0.01302)	(0.10232)	(0.05229)
Games Since Mobility Event × Moved With a Group (Hypothesis 3)	–0.01136*	–0.42013	–0.27892*	–0.06477	–0.06181	–0.00531	–0.69580***	–0.14011
	(0.00574)	(0.34497)	(0.13792)	(0.04292)	(0.06336)	(0.02280)	(0.17922)	(0.09159)

Note: Models are the same specification as Model 2 in Table 4. Numbers in parentheses are robust standard errors.
†$p < .10$.
*$p < .05$.
**$p < .01$.
***$p < .001$.

Table 6

Robustness Tests: Effect of Mobility Event Size on Alternative Measures of Individual Skills, for Incumbents

Mobility Event	True Shooting Percentage	Player Efficiency Rating	Points	Assists	Total Rebounds	Steals	Minutes Played	Residualized Shooting Percentage
Mobility event (Hypothesis 1)	–.00120	.08562	–.04690	–.00238	–.01800	.00413	–.24694***	–.04120
	(.00223)	(.13513)	(.05401)	(.01681)	(.02481)	(.00893)	(.07019)	(.03587)
Mobility Event × Moved With a Group (Hypothesis 2)	.00401	.21132	–.08127	–.07694†	.05672	.03488	–.21458	.05307
	(.00574)	(.34700)	(.13875)	(.04318)	(.06374)	(.02293)	(.18030)	(.09214)
Games since mobility event	.00193*	.06846	.04032*	.01356*	.01935*	.00025	.12151***	.02319†
	(.00082)	(.04983)	(.01992)	(.00620)	(.00915)	(.00329)	(.02588)	(.01323)
Games Since Mobility Event × Moved With a Group (Hypothesis 3)	–.00430†	–.28762*	–.03305	.01852	–.04155†	–.00143	.19185**	–.06620†
	(.00224)	(.13567)	(.05425)	(.01688)	(.02492)	(.00897)	(.07050)	(.03603)

Note: Models are the same specification as Model 4 in Table 4. Numbers in parentheses are robust standard errors.
†$p < .10$.
*$p < .05$.
**$p < .01$.
***$p < .001$.

capital than do incumbents and that group mobility events drive a smaller disruption in colleague-specific capital for movers than for incumbents.

We examined the implications of this logic using data from the NBA, which is a context marked by highly interdependent actors and where there is a premium on cooperation between actors. Although these properties create a challenging environment in which to integrate new players, it is not uncommon to observe groups of players moving from one team to another during the season. Our empirical strategy was to compare the effects of solo and group mobility events on individual performance to explore how human capital disruptions after mobility events for both movers and incumbents are shaped by the disruptability of location-specific and colleague-specific human capital. We found support for our hypotheses that at the individual level, mobility adversely impacts the performance of movers, suggesting that both location disruptions and personnel disruptions impact human capital. Further, the results demonstrate that moving with a team of colleagues diminishes the adverse performance consequences of movers, providing evidence of the importance of colleague-specific capital for movers. These results are consistent with our logic that human capital disruptions of mobile employees are driven by both the firm specificity of employees' human capital and the disruption of colleague-specific human capital that employees share with their coworkers, both of which are rebuilt over time. We do not find robust results for the impact of inbound mobility on incumbents; thus we cannot make any claims on the validity of the hypotheses pertaining to incumbents.

While our study contributes to the existing literature on the human capital impacts of employee mobility, there are some important limitations and boundary conditions. An important limitation of this project is our use of proxies for human capital. We are unable to measure exactly what knowledge, skills, and abilities individuals have or exactly what relationships two employees have and how much shared knowledge is embodied in the dyad. As such, we proxy for these specific attributes with measures of individual performance and employees' experiences on teams and with colleagues. Future research that more deeply delves into the exact nature of the multiple aspects of human capital could provide deeper insights into this phenomenon.

Additionally, future work should investigate how both individual- and firm-level moderators affect the relationship between employee mobility and individual and organizational performance. Individuals may differ in their ability to generate different aspects of human capital. This differential ability may be related to past education and past work experiences. Similarly, organizations may differ in their capabilities to "fit new pieces" into the organization. In our results, we have not reported the firm effects; however, many firm effects are significant and they vary in sign. This suggests that some organizations can integrate new players better than other organizations. The organizational-level factors that drive this heterogeneity are very interesting but beyond the scope of this paper. Future research exploring such factors would help identify how firms may learn from their competitors more efficiently.

Another limitation that provides an opportunity for future complementary research in a different context is the inability to examine the effect of inbound mobility of multiple players who come from different organizations within this context. Given the nature of trading in the NBA, it is rare that multiple players from different sources join a team together. As a consequence, our results on the effects of group mobility on both movers and incumbents represent

only players with shared experiences. Examining inbound mobility of players coming from multiple teams would facilitate further examination of the role of colleague-specific capital. Groups of employees who join an organization with shared experiences may be easier to assimilate than groups of independent employees, because the incumbents only have to adapt to one new set of processes as opposed to adapting to multiple sets of processes and backgrounds. On the other hand, groups of inbound employees with shared experience may be harder to assimilate if the movers' shared colleague-specific human capital hinders their ability and willingness to adapt to the new organization.

Another limitation of our study, which we also believe represents an excellent opportunity for further research, is our inability to test psychological mechanisms for our results. There is a wide literature on coworker effects on individual performance (e.g., Chiaburu & Harrison, 2008), findings from which could explain our results. In addition, work in the area of person-organization fit (Kristof-Brown, Zimmerman, & Johnson, 2005) might also shed insight into our findings.

As previously noted, professional sports have important advantages for studying organizational phenomena as compared with other settings. However, they raise generalizability concerns. Performance in the NBA is completed in public; patterns may differ where organizations know less about each other's performance and about the capabilities of individual employees. In addition, the game of basketball is highly interdependent; colleague-specific human capital will possibly be less important where interdependence is lower, thus attenuating the effects we found. Further work in other industries will help us understand the phenomena more completely.

Another limiting factor in this setting is the nature of the transfers between organizations. In this setting, management is able to transfer human capital involuntarily, which is not possible in most other industries. Team management makes these changes for particular reasons, often (but not always) to improve the club. Because teams that are trading differ from those that are not, our results may be biased. While this is a concern, it is ameliorated by the fact that under the salary cap (which was in effect for our entire study period), teams trade for multiple reasons. For instance, it is not uncommon for teams to trade for players and cut them immediately to save on salary expenses (a fact we accounted for in our methodology). Teams often trade valuable assets in an effort to save money; they are not necessarily trying to immediately improve the on-court performance of the organization. Additionally, the trades identified in the data are often symmetric, where teams exchange players with similar market value. This finding suggests that the population of trading teams is not necessarily systematically different from the population of NBA teams as a whole. With that said, further research should investigate the varying effects of different human capital strategies on performance.

Contributions

In addressing the impact of employee mobility on individual performance, we contribute to several literatures. First, we contribute to the discussion in the strategic human capital literature that is reexamining the overemphasis on firm specificity as an isolating mechanism that supports human capital–based competitive advantages. In line with previous research that challenges the received understanding of firm-specific human capital by arguing that there are very clear boundary conditions on when firm specificity can prevent mobility

(Campbell, Coff, et al., 2012) and that investments in firm-specific human capital cocreate general human capital so that workers can appropriate the value of firm-specific investments by threatening mobility (Morris, Alvarez, Barney, & Molloy, 2013), we highlight that traditional measures of firm specificity, such as firm tenure, might confound location-specific capital and colleague-specific capital, where colleague-specific human capital can be transferred outside the physical boundaries of an organization. As such, we call for more careful measures of firm specificity that better capture human capital that is not transferrable to other organizations.

We also contribute to the literature that explores the role of employee mobility on organizational performance. This literature argues that individual mechanisms drive the connection between employee mobility and organizational performance but does not explore whether the proposed mechanisms are actually reflected in individual outcomes. We provide a deeper understanding of two series of results suggesting that personnel and contextual (Groysberg et al., 2008; Huckman & Pisano, 2006) factors are important in understanding the performance of organizations after mobility events. We develop a framework that provides a theoretical explanation of the prior results and identify how disruption and emergence of different aspects of human capital through employee mobility play a central role in determining individual human capital after employee mobility events and thus in determining organizational performance after employee mobility events.

Our findings also provide a more detailed empirical understanding of the role of mobility on human capital. By examining how individual performance evolves over time following mobility events, we illustrate that the magnitude of a shock to human capital affects the length of time it takes for the employees to recover to preshock levels. This finding suggests that organizations should be thoughtful when making workforce, organizational, or technological changes that disrupt the relationships embedded in the workforce, because to recover from the disruption may take time (although the effects are quite transitory in the context under study).

This work suggests important implications for managers in contexts where individual performance is highly sensitive to context and personnel. When adjusting the composition of their workforce, managers face a key trade-off. Mobility of individuals as part of a group has positive effects on the human capital of incumbents, while inbound mobility of a group has a potentially negative effect on the human capital of incumbents. At the same time, the human capital of individual movers is more adversely impacted than the performance of group movers. While the disruptions to individual human capital may be temporary and quite short-lived, if immediate individual performance is an important objective, then managers must be very careful before integrating multiple people at the same time. Managers, given their specific conditions and short-term and long-term objectives, must choose how best to adjust their workforce with the knowledge that hiring a large group or multiple independent individuals will have short-term adverse consequences on individual performance.

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