Strategic human capital: Fit for the future

By: Russell Coff and Marketa Rickley

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Abstract:

Human capital—the knowledge, skills, and abilities embedded in employees—represents critical microfoundations for organizational success. This chapter identifies shifting assumptions and recent advances in the field's understanding of how human capital contributes to competitive advantage. The chapter is organized around two major research streams: human capital specificity and assortative matching between workers and firms. The text briefly outlines the evolution of each stream, articulating key cumulative insights regarding human capital selection, compensation, and mobility, and highlighting areas of consensus and disagreement. The major emphasis is on unresolved issues and future opportunities for strategic human capital research.

Keywords: human capital | firm specificity | labor markets | matching | competitive advantage | microfoundations | mobility | knowledge | skills | abilities

Article:

Individual behavior is the essence of microfoundations that drive competitive advantage (Foss, 2011), and this movement has driven interest in strategic human capital (Coff and Kryscynski, 2011). Heightened attention has brought about a substantial shift in our understanding. Much of the early focus was on the differential impact of general and firm-specific human capital for generating and sustaining advantages (Coff, 1997; Wang, He, and Mahoney, 2009). We now see movement toward viewing individuals as having unique bundles of general human capital (Lazear, 2009), which underscores a complex matching process between human capital and organizations (Raffiee and Byun, 2020; Weller *et al.*, 2019). Our understanding of the relationships between human capital selection, development, mobility, compensation, and firm performance has become more nuanced (Campbell, Coff, and Kryscynski, 2012a) and is deviating from the central tenets of Becker's seminal work that suggested firms can capture value from investments into firm-specific but not general human capital (Becker, 1962, 1964).

Traditionally held assumptions regarding what constitutes efficient matching between workers and firms are changing and inspiring new theoretical approaches.

Recognizing this shift holds implications for the broader field of strategy as well. As our understanding of individual behavior changes, this must also be reflected in our organization-level theories (Barney and Felin, 2013; Foss, 2011). While individual cognition, capabilities, and behavior have always played a central role in strategic management (Penrose, 1959), human capital—knowledge, skills, and abilities embedded in employees (Coff, 1997)—has become one of the most critical building blocks of unique firm-level capabilities. Indeed, assumptions regarding individuals and their human capital underlie a range of macro-level theories in strategy, including the resource-based view (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984), knowledge-based view (Grant, 1996; Kogut and Zander, 1992), and behavioral theory of the firm (Cyert and March, 1992). This chapter therefore examines and assesses how thinking about human capital and firm outcomes has changed, and highlights advances in strategic human capital research that can affect the broader field of strategic management.

The chapter is organized around two major areas within strategic human capital research: human capital specificity and assortative matching in worker selection. We examine how each concept relates to competitive advantage and then briefly outline each stream's development, taking pause to identify areas of consensus and dissonance. Our emphasis is on identifying major unresolved issues and suggesting future opportunities.

What is the Role of Firm-Specific Human Capital?

Central to strategic management is the idea that performance among firms differs in large part due to heterogeneity in firm resources and capabilities (Barney, 1991; Leiblein and Madsen, 2009). In particular, firms enjoy sustained superior performance when isolating mechanisms, such as firm specificity, prevent rivals from imitating or accessing key resources (Rumelt, 1984).

Why past human capital research focuses on specificity

Firm-specific human capital has long been considered a critical type of human capital with potential to create value for firms (Jovanovic, 1979; Wang *et al.*, 2009). Firm-specific human capital reflects knowledge and skills that are more applicable in the focal firm and are thereby less transferable, while general human capital can be applied across firms (Becker, 1962, 1964; Coff, 1997). By definition, there is a scarcity of individuals with capabilities that meet firm-specific needs. In addition, such skills may be causally ambiguous, socially complex, and/or tacit in nature (Coff, 1997; Hatch and Dyer, 2004). Accordingly, firm-specific human capital may be valuable and rare, and may hinder imitation by rival firms—a potential source of sustained competitive advantage (Barney and Wright, 1998).

For decades, the distinction between firm-specific and general human capital has been foundational in human capital research and provided a broadly accepted theoretical framing for mobility and compensation (Campbell *et al.*, 2012a; Jovanovic, 1979; Mincer and Jovanovic, 1981), willingness to undertake firm-specific investments (Hashimoto, 1981; Wang *et al.*, 2009),

and how these interact to create value for firms (Campbell *et al.*, 2012a; Kor and Leblebici, 2005).

In the classic human capital literature, the external labor market compensates workers for general human capital but not for firm-specific knowledge and skills from another firm. As a result, workers can expect to receive a discounted wage from other firms that may not reflect their full investment in human capital—reducing their willingness to leave the focal firm (Becker, 1964; Hashimoto, 1981; Jovanovic, 1979). The wage penalty associated with mobility serves two important purposes in this view. It allows the focal firm to retain essential knowledge (Peteraf, 1993), and to capture some of the differential between workers' use value in the focal firm and their next best external offer (Coff, 1999).

This argument sets the stage for a dilemma: workers may be unwilling to invest in firm-specific human capital if these are not fully compensated (Wang and Barney, 2006; Wang *et al.*, 2009). Indeed, workers may perceive their firm-specific investments to be subject to *holdup hazard*—the risk that a firm may not follow through with promised compensation once workers invest. To address this concern, scholars explored corporate governance safeguards and incentives to motivate investment in firm-specific human capital (Mahoney and Kor, 2015).

However, empirical research has uncovered inconsistencies between theory and how employees and firms behaved (Kryscynski and Ulrich, 2015). For example, Somaya, Williamson, and Lorinkova (2008) showed that, not only can firms benefit from *hiring* workers from both cooperating firms (suppliers or buyers) and rivals, but they can even benefit from *losing* employees—though only to cooperating firms. Especially notable is the finding that employees' social capital from a previous employer, a form of firm-specific knowledge, can be leveraged by both cooperators and rivals. Indeed, there is evidence that firm-specific knowledge can be useful *across* firms despite barriers to transferability (Loewenstein and Spletzer, 1999). In practice, employers may not know what skills are applicable at other firms (Kryscynski and Ulrich, 2015).

Bias in perceptions of human capital specificity

Such inconsistencies between theory and observed behavior raise the question of whether the delineation between firm-specific and general human capital is as critical to sustained competitive advantage as traditional theory suggests. Although the claim is often taken for granted, a swell of recent work offers clarifications (Campbell *et al.*, 2012a; Coff and Raffiee, 2015), caveats (Morris *et al.*, 2017; Raffiee and Coff, 2016), reconceptualizations (Lazear, 2009; Lazear and Oyer, 2013), and critiques (Nyberg *et al.*, 2018). However, it is important to acknowledge that it is still widely accepted that firms have heterogeneous capabilities and that these require them to deploy idiosyncratic skill sets. Thus, firm-specific human capital remains an important component of competitive advantage even if classical human capital theory is incorrect or incomplete.

Important recent developments in strategic human capital research highlight numerous implicit assumptions that underlie traditional human capital theory (Campbell *et al.*, 2012a). For instance, in order for firm-specific human capital to function as an isolating mechanism, the external labor

market (demand side) must have near perfect information about the value of applicants' skills at their current employer and the value these skills would provide for a different employer. Furthermore, it requires workers' (supply-side) assessments of the use and exchange value of their human capital to also be in alignment.

Thus, for human capital specificity to explain reduced labor mobility, compensation, and value capture, theories implicitly assume tight coupling between skills' use and exchange values in the market. Yet assuming near-perfect information is inconsistent not only with the way that employers and employees interact in practice (Coff and Raffiee, 2015) but also with information efficiency assumptions underlying resource-based theory (Mahoney and Pandian, 1992). Such inconsistent assumptions pose a fundamental problem for theory building (Foss and Hallberg, 2014) and warrant careful examination in future research.

These ideas have recently been extended in several ways. One such important contribution is the work of Morris *et al.* (2017), who proposed that workers' willingness to invest in firm-specific human capital may actually be perceived by hiring firms as a signal of workers' future willingness to invest in the firm-specific knowledge and skills required by the new employer. Taken this way, some might view workers' firm-specific human capital as a form of general human capital that could actually increase worker mobility.

To combat this and limit employee mobility, Morris *et al.* (2017) suggest that firms can muddy the signal that workers' investment in firm-specific human capital sends to the external labor market by providing incentives to workers for acquiring firm-specific human capital and creating a strong corporate culture. To avoid interference in the original signal, employees may, in turn, choose not to work for firms with such policies. However, questions remain regarding the relative efficacy of using extrinsic versus intrinsic incentives to weaken workers' signaling power. Also, does the positive signal value of worker investment in firm-specific human capital outweigh concerns about focal firms' potential postinvestment holdup?

On the supply side, recent research suggests that imperfect or biased perceptions of human capital specificity also abound (Groysberg, 2010), as evidenced by findings of negative or insignificant relationships between traditional proxies of firm-specific human capital (organizational commitment, firm tenure, and on-the-job training) and workers' perceptions of specificity (Raffiee and Coff, 2016). The implications of these findings could be significant, especially if future research uncovers that workers and firms make investment and mobility decisions based on perceived instead of objective firm-specific human capital.

Coff and Raffiee (2015) suggest that, if hiring firms perceive job candidates' human capital as general instead of as specific to another firm, firm-specific human capital would not hinder mobility. Indeed, the widely accepted use of skills-based résumés reflects the institutionalization of impression management to mask firm-specific skills. Furthermore, if employees perceive their human capital as general even though it is specific, they will be less reluctant to leave because they believe other firms will compensate them fully for their skills. Taken together, the resulting shift in the market equilibrium may push firms to share more of the surplus value created by the employer-employee relationship with employees (to retain them). This may have profound implications not only for employees' propensities to invest in firm-specific human capital, but

also about the role of firm-specific human capital for human capital–based advantage (Coff and Raffiee, 2015). But Coff and Raffiee (2015) also highlight that firms can influence market perceptions of their employees' human capital. For example, firms can create reputations for having complementary assets that elevate productivity—without which workers would be less productive. They also may take actual and symbolic steps, like implementing noncompete agreements, to protect proprietary knowledge that may seem firm-specific. This underscores the significance of signaling and impression management in recruitment, hiring, and development.

Together, this line of inquiry raises several important questions for future research. To what extent are workers' and firms' perceptions of the specificity aligned? How do workers and firms manipulate perceptions of firm specificity? Finally, how do these perceptions affect critical outcomes (investments, mobility, wages, etc.)? This subjectivity prompts myriad questions.

The specific is general—and the general is specific

Recent developments are also changing conceptions of general human capital. Human capital theory posits that general human capital has homogeneous productivity across firms (Becker, 1962, 1964). General human capital has been conceptualized as equally valuable across firms. It was also presumed to be commonly available in the market—pervasive and abundant. Finally, individuals' stocks of general human capital were assumed to vary in level, but not in composition.

Lately, each of these assumptions has undergone scrutiny and criticism. First, because firms are heterogeneous (Weller *et al.*, 2019), the productivity of individuals' general human capital may vary greatly across firms due to greater or lesser fit with firms' resources and capabilities (Ployhart *et al.*, 2014). Second, it is evident that many skills are indeed generally applicable but are also quite rare. The available research on stars and their productivity highlights this point (e.g., Campbell *et al.* [2012b]; Kehoe, Lepak, and Bentley [2018]). For example, researchers who are highly successful at writing grant proposals will raise the profile of most research institutions. But these individuals are rare and thus provide a competitive advantage for only a limited number of institutions. Finally, individuals are not endowed with different levels of identical general human capital, but instead hold idiosyncratic combinations of general human capital (Campbell *et al.*, 2012a; Lazear, 2009).

The conclusion is that firms choose unique combinations of general human capital based on their distinctive needs and preferences (Lazear, 2009), and it underlies the recent theoretical and empirically supported argument that competitive advantage can be derived from idiosyncratic bundles of general human capital (Molloy and Barney, 2015; Raffiee and Byun, 2020). Indeed, in their influential work, Campbell *et al.* (2012a) also noted that firm-specific human capital can only deter mobility through the wage mechanism if workers' idiosyncratic combinations of general human capital are not more valuable than their firm-specific knowledge and skills. This idea was recently empirically explored by Raffiee and Byun (2020), who found that new hires who possessed combinations of general human capital that the hiring firm lacked, experienced faster integration and utilization than new hires with general human capital already possessed by the hiring firm. This indicates that valuable general human capital eases workers' transition

between firms, and lubricates potential frictions caused by transfer of irrelevant, firm-specific human capital.

A specific view of future human capital research

Taken together, recent research on human capital specificity offers important insights and paves the way for new inquiry. First, it is increasingly clear that the line of demarcation between general and specific human capital is blurred (Coff and Raffiee, 2015; Lazear, 2009). Not only are individuals' bundles of general human capital idiosyncratic (Lazear, 2009; Raffiee and Byun, 2020), but firms' and workers' perceptions of human capital may themselves be biased (Morris *et al.*, 2017; Raffiee and Coff, 2016). This not only suggests that distinguishing between specific and general human capital is not as meaningful as prior theory suggests (Morris *et al.*, 2017; Nyberg *et al.*, 2018), but it also upends existing notions of firm-specific human capital as an isolating mechanism. Indeed, some recent work suggests that firm-specific human capital may not constrain mobility (Morris *et al.*, 2017; Raffiee and Coff, 2016). To move forward, research can explore conditions under which workers consider firm specificity as a factor in investment or mobility decisions.

Second, perceptions of human capital specificity appear to play a powerful role in firm and worker mobility. This has implications not only for theory building, but also for how we measure constructs. For instance, using firm tenure as a proxy of firm-specific human capital is not useful where perceptions, and not objective assessments, guide behavior (Raffiee and Coff, 2016), because longer-tenured workers often perceive their skills as more general. Such proxies may fail to predict behavior, especially as perceptions of specificity diverge from objective measures.

These observations motivate several additional avenues of inquiry. First, the recent advances in human capital research underscore the importance of conceptualizing human capital as multidimensional, instead of as dichotomous (Nyberg *et al.*, 2018). But what does such a multidimensional framework look like? What components, categories, and structure should it include? Scholars have previously suggested other types of specificity such as task-specific (Gibbons and Waldman, 2004), unit-specific (Ployhart, Van Iddekinge, and MacKenzie, 2011), industry-specific (Hatch and Dyer, 2004), and occupation-specific human capital (Mayer, Somaya, and Williamson, 2012) that can affect worker and firm behavior. Therefore, rethinking and expanding how we operationalize human capital may further our understanding of human capital–based advantages but may also advance research on employer-employee matching.

Second, although evidence of firm-specific human capital's limitations as a mobility deterrent is accumulating, the debate is not settled. One unexplored area regarding the relationship between firm-specific human capital and mobility is consideration of a worker's relative share of specific to human capital, and also whether the share of specific to general human capital is increasing or decreasing over time. This raises the question of whether mobility is perhaps constrained by the proportion of firm-specific to general human capital instead of the stock of firm-specific human capital. Another unexplored area is the role of human resource management (HRM) practices. HRM scholars argue that while firm-specific human capital is an ineffective deterrent to worker mobility, HRM practices (e.g., pay-for-performance, employment security, self-managed teams, etc.) can be constructed to constrain mobility (Delery and Roumpi, 2017). Delery and Roumpi

(2017) argue that differentiated HRM practices can even be deployed within a single firm to influence different types of workers. Indeed, HRM practices often vary not only between but also within firms (Kehoe and Han, 2020), suggesting that future matching research needs to consider more nuanced HRM practices as an important firm attribute.

Assortative Matching: Finding Fit in the Dark

Given substantial differences in firms' resources and capabilities—and even greater differences in workers' abilities and skills—efficient matching between firms and workers is another key strategic choice with tremendous implications for value creation (Lazear and Oyer, 2013). Matches are the "meso-level building blocks" (Weller *et al.*, 2019) linking micro-level firm and worker attributes to performance (Felin, Foss, and Ployhart, 2015). Yet despite the critical role of employer-employee matching for firm efficiency, we lack clarity for how the process unfolds or even what constitutes an ideal match. This is partly because understanding continues to evolve, but it is also an outcome of inconsistent conceptualizations of match efficacy between economics, strategy, and organizational behavior literatures.

The challenge of forming high-quality matches is threefold. First, workers' productivity is difficult to observe prior to hiring. Second, applicants may misrepresent their abilities and skills. Third, upon hiring, firms may engage in opportunistic behavior that limits worker mobility or compensation. Together, these factors have motivated a rich literature on incentive schemes that induce efficient self-selection (Oyer and Schaefer, 2011) through reliable and costly (e.g., hard-to-fake) signals of true worker ability (Bangerter, Roulin, and König, 2012; Spence, 1973).

What is a match made in heaven?

While economists and organizational behavior scholars agree on the above premises (difficult-to-observe productivity, misrepresentation by applicants, opportunistic behavior by firms), these disciplines differ in assessing match efficacy. Personnel economics uses the lens of productivity to determine match quality (Lazear and Oyer, 2013). Thus, an ideal match would be a high-performing worker going to an especially efficient firm to produce the greatest productivity. In contrast, organizational behavior research applies an expanded view of value creation that includes nonpecuniary outcomes, such as job satisfaction. While this is consistent with the economic notion of maximizing utility, it extends beyond traditional boundaries of production efficiency. Accordingly, whereas economists emphasize observable attributes (e.g., education and experience) to model match formation, organizational behavior scholars include subjective criteria (e.g., attitudes and behaviors) in assessing person-organization fit (Kristof-Brown, Zimmerman, and Johnson, 2005; Kristof, 1996).

These differences have led the two disciplines to focus on different aspects of the matching process. Although personnel economics recognizes that match efficiency can be influenced by training (Lazear and Oyer, 2013) and employment termination (Lazear, 1998), the assumption is that workers adapt to firms—and not vice versa (Lazear and Oyer, 2013). Overall, the research emphasis remains on understanding selection and hiring. Organizational behavior and HRM scholars, in contrast, expect match efficacy to evolve throughout the worker-firm relationship

from selection to termination (Weller *et al.*, 2019), and they explore adaptation by both individuals and organizations (Follmer *et al.*, 2018).

How matches develop over time

These distinct approaches have brought numerous new insights about the matching process. Who drives the process, and how does it unfold? For example, match quality reflects more than the initial fit between individuals and firms; it is also a function of time (Weller *et al.*, 2019). Training (Mincer and Jovanovic, 1981) and socialization (Jones, 1986) improve fit between new hires and their employers over time. Furthermore, mobility through horizontal transfers and vertical promotions can strengthen match quality by aligning human capital with firm resources (Bidwell, 2011; Bidwell and Keller, 2014).

A second insight is that adaptation can be worker-led (as is often assumed) or firm-led. For instance, there is growing evidence of job crafting—worker-led changes in task or relational aspects of their jobs (Wrzesniewski and Dutton, 2001)—to improve fit between their skills and the firm's needs (Pieper *et al.*, 2019). Likewise, firms sometimes engage in job redesign to motivate and retain workers who may initially be a poor match (Follmer *et al.*, 2018).

These new avenues highlight the importance of signaling in all stages of human capital management. In selection, in addition to using reliable and costly (hard-to-fake) signals, realistic job previews (Weller *et al.*, 2019), referral networks (Granovetter, 1995), and intermediaries (Bonet, Cappelli, and Hamori, 2013) may help overcome imperfect information. These methods may deter job seekers from misleading or engaging in impression management (Stevens and Kristof, 1995), as they seek to align signals of their quality with the perceived demands of the hiring firm. Similarly, they may dissuade firms from exaggerating their qualities (Langer, König, and Scheuss, 2019).

The match of the future: a way forward for strategic management scholars

Conspicuously missing from the overview of recent literature on matching are studies firmly rooted in strategy. Contrasted with the ample person-organization fit literature in organizational behavior and the steady advances in personnel economics (e.g., Engborn and Moser, 2017; Fredriksson, Hensvik, and Skans, 2018), explorations of the determinants and consequences of employer-employee matching using a strategy-based lens are comparatively limited.

There are some important exceptions, including recent work by Campbell, Di Lorenzo, and Tartari (forthcoming) and Raffiee and Byun (2020). Specifically, Campbell *et al.* (forthcoming) showed that prior collaboration between individuals employed by separate firms facilitates match quality by enhancing postmobility job performance upon movement to the collaborator's firm. Importantly, given earlier discussion, match performance is driven by both selection (who moves) and adaptation (how new hires acclimate). Raffiee and Byun (2020) recently used matching logic to investigate hiring decisions in knowledge-intensive organizations. They found that job performance of newly hired workers was higher among those

who possessed expertise that the firm lacked (complementary fit) than those workers whose expertise aligned with existing capabilities.

A challenge inhibiting further progress in this area is inadequate theory regarding which pairings of organizational and individual attributes constitute a high-quality match. At first glance, this difficulty appears banal because optimal pairings match the best workers with the best firms. Studies do indeed show assortative patterns in hiring, such as between managerial talent and firm size (Gabaix and Landier, 2008), and between education level and firm pay (Fredriksson *et al.*, 2018). But given the range of attributes along which firms and individuals vary, these findings are unsatisfying as they amount to a rather general conclusion: more resource-rich firms hire more talented workers (and more talented workers accept positions in more resource-rich firms). Future work might explicate *which* firm-level resources and capabilities match *which* individual-level knowledge and skills to add value.

Given the number of relevant attributes and the fact that organizations and individuals are themselves multifaceted, the question of optimal employer-employee matching is complex. There are many ways in which firms may differentiate themselves in factor markets since workers have varied preferences. Firms are characterized not only by size and status, but by industry, ownership (private/public), structure (focused/diversified), location (local/international), and product orientation (good/service), to name a few observable attributes. Individuals differ in ability, personality, experience, and interpersonal connections, among many other attributes. Even though matched employer-employee datasets are increasingly accessible and empirical methods for modeling matching phenomena are becoming more common in strategy research (e.g., Honoré and Ganco, forthcoming; Mindruta, Moeen, and Agarwal, 2016; Rickley, 2018), the challenge now lies in developing more nuanced theory to understand how firm and worker characteristics drive the matching process.

This need for new theory invites deeper exploration into a new construct, firm-specific incentives, which provide a critical vehicle for differentiation in a strategic factor market (Kryscynski, Coff, and Campbell, 2021). Prior research focuses on wages and benefits that are relatively generic and are therefore easy for rival firms to imitate. In contrast, *firm-specific incentives* are defined as incentives that are more valuable to workers in the focal firm than similar incentives offered by other employers (Kryscynski *et al.*, 2021). In this sense, they can be quite idiosyncratic and difficult to imitate. For example, the Walt Disney Company offers rich and highly valued employee discounts whose value draws heavily on the brand and product portfolio. A former cast member commented, “This discount was awesome, and I made use of it often. Not only a discount on park tickets, but also hotel rooms, merchandise, even cruises!” (Glassdoor.com, 2015). A rival, such as Six Flags, might offer a discount at similar levels, but its value to employees is likely substantially lower, because the products are less differentiated and reflect a narrower portfolio than Disney’s. Similarly, companies like Google and 3M offer top employees the autonomy to work on ideas or projects of their choice. While this policy can be imitated, the complementary resources for these projects can vary widely and give this incentive unique value across companies.

Accordingly, firm-specific incentives may attract and motivate workers who become the basis for a competitive advantage. While the person-organization fit literature is not new, it does not

focus on inimitable firm-specific attributes. In other words, applying a strategic human capital lens to this literature will unearth new insights and avenues of inquiry. For example, what attributes attract and motivate workers and thereby promote competitive advantages? A given attribute may attract all workers (or even those with low productivity), which may not generate a competitive advantage unless the firm has unusually strong screening capabilities to identify and hire the best employees. In this way, firm-specific incentives may confer an advantage in some contexts but certainly not always. This, in turn, may prompt exploration into the range of attributes that may confer a strategic factor market advantage, as well as how some firms develop them. For instance, do firm-specific incentives stem from rational decision-making (cost/benefit) or are they path-dependent—arising from environmental imprinting at founding or from managers' idiosyncratic experiences?

Since the construct is new, there has been relatively little research and opportunities abound. Firm-specific incentives range widely across existing incentive categories (tangible/intangible, extrinsic/intrinsic, high-powered/low-powered, etc.), opening new pathways for the incentives literature. Because these incentives are idiosyncratic, they may heavily depend on workers' perceived value, which implies a need for research on subjective value—a topic that seems unnecessary for traditional incentives (wages and benefits). Furthermore, some firm-specific incentives may be experience goods in the sense that workers may grow to value them more highly over time or the goods may instead decrease in value as their novelty wears off. For example, a unique organizational culture may accrue value to workers only after they have come to appreciate it over time. If so, these incentives may be more valuable for motivation and retention than for attraction and hiring. This gives rise to multiple research questions: Are firm-specific incentives equally potent for attraction, motivation, and retention? Can the utility of such incentives extend beyond a given employment relationship? How do sudden external shifts (like global financial crises or pandemics) affect firms' abilities to derive advantage from firm-specific incentives?

In sum, the field of strategic management is uniquely positioned to contribute theory for a more nuanced understanding of matching processes. Given strategy scholars' deep understanding of the firm side of the equation (e.g., organizational capabilities underlying competitive advantage), exploration into the determinants of match quality can begin by pairing critical firm-level factors for organizational performance with key individual-level factors for job performance. From this we can theorize why a particular combination matters for competitive advantage. Furthermore, as we gain insights into effective employer-employee matching, we will build microfoundational understanding of how individual- and firm-level heterogeneity interacts to impact organizational outcomes.

Given that matching is an endogenous process characterized by self-selection, subsequent theory testing would benefit from controlled environments where match quality is observable not only for realized matches, but also for all counterfactual matches between firms and workers that did not occur but could have. An example of one such controlled environment, where researchers have already explored the factors predicting successful matching, is in the field of medicine. Several studies have exploited medical school graduates' realized and unrealized (potential) matches to specialty residency programs to model matching (e.g., Loh *et al.*, 2013; Rinard and Mahabir, 2010). However, the residency matching process is quite unique in that it is conducted

in a closed environment that includes all eligible medical school graduates and all participating specialty programs in the United States (dermatology, general surgery, etc.). Other semiclosed hiring environments—like judicial clerkship appointments, professional sports drafts, or company-specific internship programs—may offer additional settings to explore this process. Exploration could then continue in other contexts to help understand the boundary conditions of a more nuanced matching theory.

Inquiring Minds: Groundwork for Microfoundations

Human capital theory had been relatively stable, even stodgy, for many years. Recent developments have exposed cracks in these foundations. We have described how this has played out with respect to firm specificity and matching as well as mapping an agenda for future inquiry. However, these are only a start, and there are many other promising areas. We have not touched upon human capital aggregation—how human capital combines with other resources to form organization-level capabilities. Nor have we explored value capture in any depth. Also, emergent technologies, like artificial intelligence, challenge the role of human capital in value creation as well as alter the dynamics of value capture. The opportunities are boundless.

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