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SMJ VIRTUAL SPECIAL ISSUE:

HUMAN CAPITAL IN STRATEGY 2008-2018

David Kryscynski and Shad Morris[1]

As strategic human capital scholars we have been deeply influenced by the work of Russ Coff (1997, 1999) and other notable scholars (Barney, 1991; Castanias & Helfat, 1991, 2001, Lepak & Snell, 1999, 2002; Lippman & Rumelt, 1982) who have pushed us to think about human assets differently from other inanimate assets in strategy theory. For this virtual special issue we simply asked a question of recently published research on human capital in strategy: what are the dominant human capital themes in our premier strategy journal? This question guided a few assumptions, which then determined which articles we included in this virtual special issue. First, we assumed that the Strategic Management Journal (SMJ) is the flagship journal for modern strategy research. We thus limited our focus to only papers published in the SMJ. Second, we wanted to focus on the most recent research. Accordingly, we limited our focus to articles published in the last 10 years (July 2008- July 2018). Third, we wanted to identify articles that were wrestling with one or more of the fundamental management dilemmas identified by Coff (1997). Thus, we initially drew only articles citing this seminal piece or his more recent work with Campbell and Kryscynski (2012). This resulted in 47 articles that we reviewed for relevance to the human capital agenda. Within this set of articles we identified the embedded themes and trends – almost all of these articles cited both Coff (1997) and Campbell, Coff & Kryscynski (2012). Our (admittedly biased) analysis suggests four major human capital themes during this time period in SMJ: (1) firm-specific human capital, (2) complementary assets, (3) incentives and (4) signaling. We include in the virtual special issue a handful of

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articles that seemed to illustrate the spirit of each theme. A summary of the included articles along with the associated themes, sub themes and theoretical contributions is shown in Table 1 below. We briefly discuss each them in the following sections.

[INSERT TABLE 1 ABOUT HERE]

Firm-Specific Human Capital

Scholars often split human capital assets into two categories: firm-specific human capital (the networks, knowledge, and competencies used in a *specific* workplace) and general human capital (such as communication, leadership, and management that can be used in many different workplaces). Strategy scholars have long assumed that firm-specific human capital can underlie a firm's competitive advantage precisely because it is more valuable there than elsewhere (Barney *et al.*, 2001; Campbell *et al.*, 2012). Mahoney and Kor (2015) argue that many of the firm's most important competitive capabilities rely on employee firm-specific human capital.

One prominent problem with firm-specific human capital, however, is that while firms need employees to gain it, employees prefer not to invest in it (Wang & Barney, 2006) – some call this the firm-specific human capital dilemma. Accordingly, several key recent SMJ studies seem to wrestle in one way or another with the firm-specific human capital investment dilemma. Some scholars seem to believe in the dilemma and explore ways to solve it, while other scholars seem to explore the implications of firm-specific human capital as if the dilemma does not exist. We highlight special issue articles on both sides of this debate.

Assuming the dilemma exists, how do we solve it? While a bit unusual to include three articles from a single author in a special issue, we felt that three articles from Heli Wang and colleagues **(Wang, He, & Mahoney, 2009; Wang, Zhao, & Chen, 2017; Wang, Zhao, & He,**

2016) effectively represent research that assumes a firm-specific human capital dilemma. Their work explores the various ways that firms can overcome this dilemma to motivate employees to invest in firm-specific human capital. They proxy for firm-specific knowledge using a scaled and adjusted measure of patent self-citations. Embedded in their logic is the assumption that firm-level firm-specific knowledge rests upon individual level firm-specific human capital. In the first paper (Wang *et al.*, 2009) they show that firms with higher self-citation scores also have more employee stock ownership and higher relational governance scores. They also find that stock ownership and relational governance positively moderate the relationship between self-citation scores and Tobin's Q. In the second paper (Wang *et al.*, 2016) they show that when takeover protections increase (due to a regulatory change) self-citation scores increase, especially when managers have higher ownership. In the third paper (Wang *et al.*, 2017) they show that firms with higher self-citation scores also leverage more restricted stock options for CEOs and have lower CEO dismissal. Across these papers we see evidence that a firm's patent self-citations seem to increase as firms adopt policies and practices designed to give increased security and benefits to the firm's employees and key decision makers. Inasmuch as these patent self-citations appropriately proxy for a firm's firm-specific knowledge and their employees' underlying firm-specific human capital, then these papers may imply that addressing the dilemma with takeover protections, relational governance, ownership, etc. will result in higher employee investment in firm-specific human capital.

Arguments against the firm-specific human capital dilemma. We also see two flavors of papers that seem to oppose the logic of the firm-specific human capital dilemma. The first flavor is represented in the work of **Morris, Alvarez, Barney and Molloy (2017)**. They argue that immediate financial incentives have less to do with an employee's decision to make firm-specific

human capital investments than previously assumed. They point out that making firm-specific human capital investments signals a person's willingness and ability to make firm-specific human capital investments to the external labor market. Competitors may not want the employees exact firm-specific human capital, but may highly value the employee's willingness and ability to acquire firm-specific human capital. As a result, employees may be willing to make these firm-specific investments regardless of the management practices or incentives offered by the firm. Such an argument takes into account some of the agency elements of human capital and also offers credence to evidence that often the most productive employees with the highest levels of firm-specific human capital are also the most sought after in the external labor market (Groysberg, Lee, and Nanda, 2008; Oldroyd and Morris, 2012). For instance, investing in specific relationships within a firm or learning a firm's proprietary software would be considered firm-specific investments. While such skills may seem relevant only to the particular firm in which they were invested, these investments may also send valuable signals to competing firms that such employees are willing and able to make similar investments elsewhere. Hence, managers are often interested in determining if a potential hire has made prior firm-specific investments to help them know if that person might be likely to make such investments in their future place of employment.

The second flavor of research opposing the logic of the firm-specific human capital dilemma simply explores the individual benefits of firm-specific human capital. We see two exemplar papers of this kind. **Frank and Obloj (2014)** found that bank branches whose managers possessed higher levels of firm-specific human capital performed two percentage points lower than bank branches whose managers possessed average levels of firm-specific human capital. Looking into these findings, they found that it was not that the firm-specific human capital was

less valuable to the firm, but rather the firm-specific human capital allowed the managers to more effectively manipulate loan terms to redirect profits from the firm to themselves. In fact, managers with superior levels of firm-specific human capital were found to be more productive by a variety of measures.

Finally, **Chatain and Meyer-Doyle (2016)** study deployment of human capital assets to different M&A deals in the UK M&A legal market and find that law firms try to balance the workload of their attorneys in hopes of efficiently allocating their human capital, but attorneys that seem to have higher firm-specific human capital may receive above their predicted allocation of deals. In other words, their evidence also seems to support the idea that individuals with more firm-specific human capital may reap greater private benefits, and may do so at the expense of the firm. Taken together, these papers beg the question of why individuals would resist gaining firm-specific human capital if they benefit so much from having it.

Incentives

Given the long history of exploring incentives in attracting, motivating, retaining and deploying human capital in organizations (Barnard, 1938; Simon, 1945), it is not surprising to find incentives as one of the four primary themes in our review. We note explicit theory connecting incentives to human capital rents in recent years that seem to motivate a continued interest in incentives and human capital outcomes (Chadwick, 2017; Gallus and Frey, 2015; Gambardella, Panico, and Valentini, 2015; Gottschalg and Zollo, 2007). We were interested, however, to note that most of the incentives papers we identified seemed focused on non-monetary aspects of incentivizing human capital. We thus start with one example of a study focused on monetary incentives and then shift to those focused on non-monetary incentives.

Monetary Incentives. **Hill, Aime and Ridge (2017)** study the fit between pay dispersion and resource value dispersion. Quite simply, when there is a higher dispersion of performers within an organization then a higher dispersion of pay outcomes is effective, but high pay dispersion with low performance dispersion or low pay dispersion with high performance dispersion may be less optimal. This finding is intriguing because it suggests that the structure of the monetary incentives, conditional upon the context, may be more important than the relative value of those incentives.

Non-monetary Incentives. **Gambardella, Panico and Valentini (2015)** directly explore autonomy as a powerful non-monetary incentive to enhance human capital productivity. In contrast to the Hill, Aime and Ridge (2017) paper where resource value and performance is relatively easy to observe, Gambardella et. al. (2015) study knowledge intensive activities where monetary incentives may be less effective due to difficulty in verifying output and performance, among other challenges. They use a formal model to show that firms can grant autonomy as a strategic incentive to human capital, and that this may be particularly important when employees are assigned to projects further from the firm's core. The closer the projects to the core, the more benefits employees receive from participating in the projects, and the less they need autonomy to replace those incentives. Their work clarifies the conditions under which knowledge intensive firms may benefit from leveraging autonomy as a strategic incentive.

Gallus & Frey (2015) explore non-monetary incentives differently through developing a theory of awards in organizations. In particular, they develop a theory of when awards will be most effective. They note the potential benefits of awards when they are low cost to offer and tied to the firm-specific context. They also note the conditions under which awards might

actually destroy firm value and get in the way of firm-productivity. Their work helps to expand our understanding of when and how firms might effectively design non-monetary rewards.

Flammer and Luo (2017) and Bode and Singh (2018) both study corporate social responsibility (CSR) as a source of positive utility for employees and, therefore, as a form of incentive. Both argue that CSR can be a source of meaning for employees that enhances employee identification with the firm and potentially makes the firm a more attractive employer than competitor firms. Flammer and Luo (2017) examine a context in which the risk of moral hazard unexpectedly increased. They find that firm investments in employee-related CSR increase after such an exogenous change. They interpret this finding as evidence that firms adopt CSR in part to address concerns with employee motivation and effort. Bode and Singh (2018) study employee involvement in CSR activities through employee sponsored assignment in CSR projects. They examine the reasons why employees may participate in these activities and find that employees are willing to participate even when facing a significant pay cut. Part of their willingness to endure a pay decrease was due to the opportunity to participate in social good, but some of their motivation was due to future anticipated career benefits associated with their CSR assignment. These authors note that the importance of future career benefits through a participatory CSR experience is more important to employees when they have to accept a pay cut to do it.

Resource Complementarities

Strategic human capital research also emphasizes the importance of complementarities between human capital and other strategic assets. Complementarity exists when human capital resources combine with other resources (such as social capital or firm processes) to create a

surplus over and above the sum of the amounts of value they could create independently (Adegbesan, 2009; Crocker and Eckardt, 2014; Mackey, Molloy, and Morris, 2013; Wright, Coff, and Moliterno, 2014). Overall, strategic human capital research on resource complementarities explores the ways that human capital becomes a vital component of a firm's competitive advantage, and the associated resources and capabilities needed to support those advantages. Is it enough to hire and develop people with the right skills, or is it how the skills are used that matters?

Managerial Resources. **Holcomb, Holmes and Connelly (2009)** show that it's not just the human capital resources found within a firm that matters, but rather it is also how those human capital resources are managed toward competitive advantage. Hence, management matters in determining competitive advantage. In fact, if you have insufficient human capital resources, then a manager's ability to align and coordinate the individual human capital resources can improve the sum of the parts, making them more likely to create value than were those resources working on their own. These managerial abilities represent skills at allocating resources to their appropriate places in the organization so they can maximize value creation. These skills also allow managers to align processes so they can be directed and targeted toward a common objective. Holcomb and colleagues also find that these managerial skills are even more valuable when the human capital resources they have to work with are not individually as strong.

Dezso and Ross (2012) find that not only does management matter, but that the human capital diversity of management also matters. They find that female managers add informational and social diversity benefits to the top management team. Because of these managerial benefits, firms with female representation in top management teams are more likely to have increased performance when the firm has high levels of R&D intensity. In other words, when firms are

devoted to innovation and put the proper resources towards R&D, then having female influence in top management will improve the firm's performance. However, if the firm is not focused on innovation, then having female representation does not seem to make a difference on firm performance.

Because top management teams are overwhelmingly composed of men, Dezco and Ross argue that when a woman joins a firm's top management team, the team becomes more diverse, both in terms of social categorization and information (van Knippenberg, De Dreu, and Homan, 2004). This happens because women add diversity of life experiences and they may have additional insights to certain consumers, employees and trading partners (Daily, Certo, and Dalton, 1999). Moreover, even surface-level diversity from social categorization can trigger expectations that informational differences may be present and legitimize the expression of divergent perspectives among the male majority (Phillips, Liljenquist, and Neale, 2009).

Organizational Resources. **Riley, Michal and Mahoney (2017)** found that when firms get their employees to make general and firm-specific human capital investments through training programs, these firms are likely to achieve higher stock market returns than their rivals. In other words, firms that are willing to invest in their employees' training and development can expect to outperform their peer firms that see human capital investments more as a cost. At the same time, Riley and colleagues find that while human capital investments by themselves make a difference for the firm, such investments will drive even greater performance if the firm also makes above average investments in R&D, physical capital for production and advertising. In other words, firms can achieve higher financial performance if they invest in complementary organizational resources (Helfat, 1997).

Relational Resources. **Byun, Frake and Agarwal (2018)** examine the US lobbying industry to isolate the dimensions of firm-specificity and relational (social) capital. They find that performance is influenced not only by "what you know", but by "who you know". On one hand, employees with more firm-specific knowledge tend to have deeper, but fewer, client relationships that help to buffer them when their suppliers lose their ability to produce and the client may potentially suffer. On the other hand, employees with more general knowledge tend to have broader, but less deep, networks with more clients. When their suppliers improve their ability to supply, this benefits the generalist employees who can deliver to more clients. The implications of this research are that firms need both generalists and specialists who can capitalize on different relationships.

Chen and Garg (2018) also show that relationships matter. In a study of National Basketball Association star athletes, they find that stars who temporarily leave the team create an environment where non-stars can introduce new routines and improve the teamwork for when the star returns. Because most teams develop routines around their stars, this approach does not play to everyone's strengths on the team. Rather, it focuses too much on the star and makes everyone adjust how they work with how the star works. However, if a star leaves for a short period of time, the team can reorganize and build on their strengths. When the star returns, the team now works to combine the star's routines with those of the other team members. This creates greater synergies and performance within the team.

Signaling

The last theme we identified was signaling, meaning research that explores some aspect of how employees and/or firms signal to each other in the marketplace. In an ambiguous world it

may be difficult for employees and/or firms to correctly observe and assess other players and, accordingly, they may look for signals of underlying quality (Spence, 1973). We see at least three kinds of signaling related to human capital in the included studies. First, a firm's human capital functions as a positive signal to the market. Second a firm's status functions as a positive signal to perspective employees. Third, a firm's litigiousness over knowledge issues functions as a signal to both competitors and employees.

A firm's human capital as a signal to other firms. **Younge, Tong & Fleming (2015)** conduct a fascinating study on the likelihood of acquisition after an exogenous change in mobility constraints. They leverage an unanticipated regulatory shift in Michigan leading to increased enforcement of non-compete agreements. They show that Michigan based firms are significantly more likely to be acquired after the change (i.e. when the target firms are more likely to retain critical human capital after the acquisition), and that this is particularly pronounced for more human capital intensive firms. While the target firms are not explicitly signaling their ability to retain human capital, one important implication of their work is that when firms can provide positive signals of their ability to retain valuable human capital post-acquisition they may be more attractive acquisition targets.

A firm's status as a signal to potential employees. **Tan and Rider (2017)** offer a counterintuitive perspective on the strategic value of losing employees to high status competitors. They show that the more firms lose employees to high status competitors, the more they improve their own status in the eyes of potential employees. Thus, one important way firms can signal to potential employees that they are a desirable employer is by establishing a track record of career advancement beyond the focal firm. This may increase the extent to which employees perceive the firm as being an attractive employment stop and/or destination. Thus,

counterintuitively, one of the best signals of quality these firms can offer to potential employees is the mobility of employees out of their firm, as long as that mobility is to high status competitors.

Bidwell, Won, Barbulescu & Mollick (2015) study one implication of the Tan and Rider (2017) findings above. They show that higher status firms can actually hire high quality human capital at a discount at the hiring interface. Because they are high status and, likely, because employees see the long term career benefits from working for these firms, employees are willing to accept lower wages initially to work for these firms. Thus, one of the benefits of placing workers in high status competitors through the positive mobility Tan and Rider (2017) study is the wage benefits when hiring top talent. These benefits may be short lived, however, as individuals can subsequently bargain with the focal firm for higher wages and/or leverage the focal firm's status to seek other high status employment opportunities. Taken together, these two papers show us how status can be a double-edged sword in signaling to employees in the labor market.

A firm's reputation for litigiousness as a signal to competitors and employees. In two studies **Agarwal, Ganco and Ziedonis** (2009; 2015) explore the signaling value of aggressiveness in patent litigation – meaning firms that sue other firms aggressively for potential IP infringement. In the first paper (2009), they show that very aggressive firms experience lower than anticipated knowledge spillovers when inventors move between firms. This suggests that being aggressive in litigiousness can be an important deterring signal to competitor firms in both poaching employees and hoping to gain some knowledge benefits from those poaching efforts. In their subsequent paper (2015), they show that inventors are less likely to leave litigious firms for other

firms in the industry. Thus, patent litigiousness may help the firm signal both to competitors and to employees in ways that enhance the firm's human capital.

Commentary

Up to this point, our goal was simply to report on the major human capital themes we have observed in the SMJ, but we now shift to our own reflections based on what we have seen in our review. We frame our brief comments around a few questions for the strategic human capital scholars publishing in strategy journals:

Where are the HR systems in strategic human capital research? Competitive advantage comes as firms are able to align all their resources in different bundles and manage those bundles appropriately to ensure capabilities that drive performance. When done well, alignment of resources and managerial activities eliminates noise in the system, allowing us to get a better understanding of what truly drives competitive advantage. Perhaps we can even turn more to our human resource management scholar peers to help with this more systematic approach. For example, HR scholars have long recognized the importance of systems of practices and resources working together to support a strategy (Arthur, 1994; Huselid, 1995; Macduffie, 1995; Snell, 1992). They ascribed a number of concepts, most notably "high performance work systems" (Huselid, 1995) to describe not only what these systems were, but what their impact on the firm might be. Some strategy scholars have dismissed the HR systems work because many of the systems HR scholars study seem to be easy to imitate and replicate (e.g. Coff and Kryscynski, 2011), but HR scholars have offered compelling counters to these criticisms. We have heard scholars such as Barry Gerhart and Clint Chadwick point to the firm-level performance differences that seem to relate to different aspects of the HR system AND they note that these

differences are not simply disappearing with time. They pose an important question – if these systems are so easy to replicate, then why aren't all firms replicating them and competing away the performance differences that we can associate with them? We see many fruitful opportunities for strategy scholars to more fully embrace the insights from the strategic HR research and consider carefully this important question.

Where are the modern human capital themes from practice? The modern world seems to be re-defining what it means to be a part of a firm, and we see many new individual-firm relationships emerging that did not make sense in prior times. Individuals have human capital, and some of this human capital is highly specialized to specific firms, but they may or may not have traditional employment relationships with these firms. Where are these themes in our strategic human capital research, and what do they mean for competitive advantages through human capital? We see important opportunities to explore these new issues through research on (a) different workforce compositions (e.g., gig workers, contingent workers, core workers, knowledge workers, etc.), (b) new organizational capabilities, and (c) evolving employment relationships and cultures.

For example, to support increased strategic complexity in the external environment, firms are also likely to increase the level of workforce complexity; that is, employing a more diverse composition of workers in multiple work modes, with varied skills and differentiated human capital, and inevitably, establishing different employment relationships and segmented (sub)cultures. A study of human capital in this divergent environment would need to include all (or many) of these sub-systems working together. What happens when they do, and what happens when they don't?

Examining human capital in these environments are intrinsically difficult due to the multiplicity of strategies and workforce arrangements that exist within a firm. For example, many of the Fortune 500 companies represent diverse conglomerates with operations in multiple country markets. A senior HR executive at Royal Dutch Shell pointed out to us that part of the difficulty (and advantage) they recognize is the tension of managing multiple strategic objectives, cultural norms, unit-level capabilities, and workforce compositions across the globally distributed firm.

But there is another element to managing human capital in this complex environment. As the firm increases its level of variation, and human capital increases its divergent properties, there is likely to be a concomitant need to increase the integrative resources of the firm as well. Workforce complexity is likely to require (at least some) aspect of unity and commonality, enterprise logic or architectural knowledge that connects differentiated human capital, shared norms, values, and expectations that integrate different sub-cultures and relationships.

Where is dynamism in our study of human capital? We also note that much of the research on human capital in strategy seems to implicitly hold constant the external environment of the firm. In other words, research seems to explore human capital issues in an implicit cross section. We think it is critical to research in a dynamic world that requires agility, transformation, and renewal. Strategic change is endemic in environments characterized by disruption, innovation, and shifts due to growing and constantly shifting market forces. As the firm increases its level of strategic change, how does the strategic human capital research agenda respond? Research on human capital and how it relates to a broader picture of resource bundles and firm activities would be valuable to better clarify the nature of dynamic fit in the firm.

Consider a context of strategic change. To support strategic change, firms likely increase the level of workforce flexibility. This means that they likely establish more rapid deployment of people, less permanence, and more flexible employment modes. They are likely to increase learning capabilities, creating and sharing new knowledge around the firm, and working to continually reaffirm employment relationships, embracing cultural renewal.

Thus, a more holistic perspective invites us to study the *processes* of human capital management, not just its static features. It can help to depict the interactions among elements of the employment compositions, capabilities and cultures. Because these interactions are myriad and constantly in flux, strategic human capital researchers might approach human capital in a dynamic way by examining where and why human capital resources tend to change and how they are reintegrated into the system to assure consistency and synergy. Part of our responsibility as scholars is to explain how variation occurs and then explain how these changes are assimilated into the firm. Our traditional research models may not suffice.

Where is the multi-level richness? We also note the frequency of cross-level fallacies in strategic human capital research (Rousseau, 1985). Our multi-level colleagues have made significant advancements in recent years in helping management scholarship more carefully embrace the richness of relationships across levels of analysis. It may be easy to see how some individuals affect firm-level performance (e.g. Elon Musk seems to have a large effect on Tesla, Space X and Solar City and Steve Jobs seems to have had a strong effect on Apple's performance), but most of us have a far less direct impact on the overall performance of the firm. When we casually refer to individual level human capital and argue that it can impact firm performance, we are ignoring many mechanisms through which individual human capital may (or may not) actually lead to firm-level outcomes. Some human capital scholars have started to

embrace this logic explicitly (e.g. Ployhart *et al.*, 2014; Ployhart and Moliterno, 2011) and have offered powerful conceptual tools to help us embrace this richness. We find it intriguing that strategic human capital scholars seem very focused on individual level human capital while implicitly hoping to explain firm-level performance differences. We believe the next generation of strategic human capital research in our core strategy journals will benefit from a richer acknowledgement of the many pathways through which individual human capital might (or might not) actually affect firm level performance outcomes.

CONCLUSION

In conclusion, we have reviewed the human capital articles published in SMJ over the last 10 years and discovered four major themes: (1) firm-specific human capital, (2) incentives, (3) complementarities and (4) signaling. We see great value in the contributions within these four themes. At the same time, however, we see a few important issues missing from the modern research on human capital in strategy: (1) where are the HR systems? (2) where are modern themes from practice? (3) where are theories of dynamism and human capital and (4) where are multi-level theories? We see rich opportunities for future research exploring these issues in strategy.

Table 1: Virtual Special Issue Papers

Main Theme	Sub Theme	Article	Summary of Contributions
Firm-Specific vs. General	Arguments for the Firm-Specific Human Capital Investment Dilemma	Wang, He, & Mahoney, 2009	Employees are reluctant to make firm-specific investments, but will be more willing to if incentivized through greater ownership and relationships with peers
		Wang, Zhao, & He, 2016	Firms less likely to be taken over by competitors are more likely to incentivize employees to make firm-specific investments
		Wang, Zhao, & Chen, 2017	Firms with higher knowledge specificity will use more incentives like restricted stock and increased job security to protect the employee's firm-specific human capital
	Arguments against the Firm-Specific Human Capital Investment Dilemma	Morris, Alvarez, Barney & Molloy, 2017	Making firm-specific human capital investments signals to the external labor market a person's willingness and ability to make firm-specific investments in other firm settings
		Frank and Obloj, 2014	Making firm-specific human capital investments may come as a result of gaming opportunities for employees to appropriate the rents from these investments
		Chatain and Meyer-Doyle, 2016	Making firm-specific human capital investments can help individuals reap greater private benefits at the expense of the firm
Incentives	Non-Monetary Incentives	Gambardella *et al.*, 2015	Firms can use autonomy as a strategic incentive to human capital, but can offer less autonomy for projects that are more core to the business.
		Gallus and Frey, 2015	Awards can function as a strategic non-monetary award, and can be especially powerful when they are uniquely tied to the focal firm.
		Flammer and Luo, 2017	Firms can use CSR as a motivational tool that reduces moral hazard problems within the firm.
		Bode and Singh, 2018	Employees derive value from participating in CSR activities, and may accept pay discounts in exchange for this opportunity, but they may also anticipate career benefits from participation.
	Monetary Incentives	Hill *et al.*, 2017	Pay dispersion is more effective in the context of resource value dispersion.
Comp.	Managerial Resources	Holcomb, Holmes & Connelly 2009	The managerial capability to coordinate and align human capital can compensate for weaker human capital resources
		Dezso & Ross 2012	Managerial diversity helps to improve the innovative capability of firms
	Organizational Resources	Riley, Michael & Mahoney 2017	Firms that view human capital development as an investment will perform better than firms that view human capital development as a cost
	Relational Resources	Byung, Frake & Agarwal 2018	General human capital helps develop broad networks for servicing more clients and specific human capital helps develop deep networks for holding on to clients over time
		Chen & Garg 2018	Temporarily removing star employees from their teams helps the team to develop new valuable routines to build on the star's strengths
Signaling	Employee Benefits of Signals	Bidwell *et al.*, 2015	Employees may take pay cuts to work for high status firms initially, but may receive higher wages over time.
	Firm Benefits	Tan & Rider 2017	Losing employees to high status firms may elevate the status of the focal firm.

	Signals to Acquirers	Younge, Tong & Fleming 2015	Firms may become more attractive acquisition targets when there are mobility constraints that retain workers (e.g. when regulations makes non-competes more enforceable)
	Signals to Competitors	Agarwal, Ganco & Ziedonis 2009	Firms that litigate patents aggressively may have lower knowledge spillovers.
		Ganco, Ziedonis & Agarwal 2015	Inventors are less likely to leave firms that have reputations for aggressive IP litigation.

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