

GIVE THEM SOME SLACK—THEY’RE TRYING TO CHANGE! THE BENEFITS OF EXCESS CASH, EXCESS EMPLOYEES, AND INCREASED HUMAN CAPITAL IN THE STRATEGIC CHANGE CONTEXT

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We address calls for contextualization in the study of slack resources by examining the pursuit of strategic change as a contingency that shapes the effects of human resource (HR) slack and financial slack on firm performance. Using data on U.S. commercial banks from 2002 to 2014, we demonstrate that HR slack is more positively related to firm performance in firms pursuing strategic change, and that this relationship is stronger in the presence of greater financial slack. Moreover, we find that the moderating effect of financial slack on HR slack in the strategic change context operates through changes in organizations’ human capital investment, offering a unique examination of a key mechanism through which slack resources create value and through which complementarities between different types of slack come to fruition. Our paper advances the contingency perspective within the slack literature and brings important insights from the resource management perspective to the conversation on slack and performance.

Whether slack resources—defined as resources in excess of current business requirements (Mishina, Pollock, & Porac, 2004)—represent potential value or waste for organizations remains an unresolved question. On one hand, proponents have noted that slack offers firms increased capacity to deploy resources for learning and exploration (Cheng & Kesner, 1997; Cyert & March, 1963; Nohria & Gulati, 1996), positioning organizations for renewal and growth. On the other hand, skeptics have suggested that, at best, slack represents unutilized assets, and at worst, slack contributes to lax and irresponsible resource management, leading to reduced organizational efficiency (Fama, 1980; Jensen & Meckling, 1976; Tan & Peng, 2003).

In light of these conflicting theoretical perspectives and amid mixed empirical findings, scholars

have begun to examine the influence of context in the relationship between slack and firm performance (Lecuona & Reitzig, 2014). Drawing on contingency theory and the resource-based view (Barney, 1991; Sirmon, Hitt, & Ireland, 2007), research in this vein has demonstrated that the effects of slack depend on the fit between the characteristics of a firm’s excess resources and the requirements of firms’ external and internal environments. For example, scholars focusing on the external environment have demonstrated that the relationship between slack and firm performance varies based on the environmental hostility and dynamism (Bradley, Shepherd, & Wiklund, 2011), competitive intensity (Lecuona & Reitzig, 2014), and government regulation (Martinez & Artz, 2006) encountered by a firm, arguing that these environmental conditions may create resource needs to which excess resources can be applied. Internally, scholars have focused on the alignment between different types of slack (e.g., financial slack, human resource [HR] slack) and alternative strategic logics, including innovation (Geiger & Cashen, 2002; Nohria & Gulati, 1996), exploration versus exploitation (Voss, Sirdeshmukh, & Voss, 2008), and product versus market expansion (Mishina et al., 2004), arguing that the level and predictability of resource

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requirements for different strategic logics vary, and that particular types of slack may be valuable when they align with a firm's strategic goals. This work is useful, as it has helped to address the need to contextualize the effects of slack, and has helped to bring our understanding of slack into alignment with a key presumption of the resource-based view—i.e., that the value of resources varies across strategic and organizational contexts (Miller & Shamsie, 1996).

We build on this foundation laid by prior scholarship to advance our understanding of slack resources in several important ways. First, we integrate insights from research on resource management (Sirmon et al., 2007; Sirmon, Hitt, Ireland, & Gilbert, 2011) with contingency theory (Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967) to develop a model wherein we focus on the differential effects of slack within and outside the context of *strategic change*—a line of inquiry that accounts for the dynamic resource requirements associated with the pursuit of any strategy (Sirmon et al., 2011) and the infrequent and compressed periods that characterize firms' strategic change efforts (Amburgey & Dacin, 1994).

We define strategic change based on compositional changes in a firm's client mix (Ramaswamy, 1997; Sirmon & Hitt, 2009). Pursuits of strategic change create pressure for firms to engage in learning, reorganize operations, and establish legitimacy (Haveman, 1992; Mudambi & Swift, 2014). These requirements point to several identifiable purposes for slack, thereby reducing the likelihood of misuse or waste. A comparison of the effects of slack during the pursuit of strategic change and during periods of more stable strategic investment accounts for the possibility that the value of slack may diminish over time following a firm's strategic change effort, as slack held for an extended time beyond this period may get absorbed into a firm's routine operations (George, 2005), leading to reduced organizational efficiency.

Second, following prior research (e.g., Mishina et al., 2004; Voss et al., 2008), we differentiate between slack in different types of resources—namely human resources and financial resources—to consider potential complementarities associated with different types of slack in the strategic change context. We first argue that HR slack—defined as employees in excess of a firm's current business requirements (Mishina et al., 2004)—is likely to be more positively related to firm performance in the context of strategic change than in more stable periods (i.e., in nonchange contexts). We suggest that

HR slack provides the head count necessary for a firm to develop new capabilities while maintaining current operations, establish rapport with an expanded customer base without alienating current clientele, and address unanticipated challenges that arise as the firm encounters new competitive landscapes (Haveman, 1992). We then suggest that financial slack strengthens the positive effect of HR slack in the strategic change context, in part through its positive effect on changes in firms' human capital investments—which represent the per-employee financial allocations that a firm makes to salaries, bonuses, and training. Specifically, we argue that (1) firms are especially likely to use available financial slack to increase investments in employees' human capital in the context of strategic change to address the need for new skills and competencies posed by the change context (Boeker, 1989); (2) changes in human capital investment are likely to strengthen the positive relationship between HR slack and firm performance by helping to overcome knowledge- and motivation-based barriers that may prevent excess employees from supporting the firm's strategic change initiative; and (3) while financial slack may support firms' strategic change efforts in a variety of ways (e.g., by providing a buffer, through investments in physical capital), changes in human capital investment are most relevant in enhancing the benefits of HR slack, particularly in service industries, such as in the sample of commercial banks that comprise our research context.

Our study's key contributions are rooted in our incorporation of insights from the resource management perspective with the contingency theory lens traditionally applied in the slack literature. Using these two perspectives, we develop arguments that because firms' strategies are not static, an effective approach to resource management cannot be static either. Rather, maintaining alignment between a firm's strategy and its resource positions requires that increases in resource stocks (i.e., HR slack and financial slack) correspond with changes in a firm's resource needs (e.g., the requirements of strategic change) that can be addressed through the effective utilization (e.g., changes in human capital investment) of available resources.

We contribute to the slack literature in two ways. First, in a departure from prior research focusing on firms' current, static strategic positions (e.g., Lecuona & Reitzig, 2014), we examine strategic change as a contingency influencing the value of slack that reflects the dynamic nature of firms' strategic goals and the varied resource requirements associated with

different phases of strategy implementation (Cheng & Kesner, 1997; Kraatz & Zajac, 2001). Second, by examining change in human capital investment as a mediator through which financial slack moderates the effect of HR slack on firm performance, we address calls for the examination of more proximal mechanisms through which firms may bring the value of slack (Lecuona & Reitzig, 2014)—and complementarities between different types of slack (Paeleman & Vanacker, 2015)—to fruition.

We also contribute to research on resource management. First, while the resource management perspective rests on the idea that organizations manage their resource portfolios through the coordination of multiple resource management activities (Sirmon et al., 2007), there is only limited empirical work examining how firms combine these activities to create value. With our examination of changes in human capital investment as a mechanism through which financial slack strengthens the effects of HR slack in the strategic change context, we contribute to the small body of empirical research examining the interaction of firms' resource accumulation and deployment activities (Hitt, Bierman, Shimizu, & Kochhar, 2001; Kor & Leblebici, 2005; Sirmon, Gove, & Hitt, 2008; Sirmon & Hitt, 2009). Second, despite the dynamic theoretical nature of the resource management perspective (Sirmon et al., 2007), prior empirical work has largely taken a static view of how firms' resource management activities interface with their strategic positions (e.g., Sirmon & Hitt, 2009). By focusing on the varied resource requirements dictated by firms' dynamic strategic trajectories, and accounting for the effect of firms' prior slack levels, we offer a unique contribution to the scant empirical research capturing the dynamic nature of how firms' strategic conditions interface with their resource management activities.

THEORETICAL BACKGROUND

The Contingent Effects of Slack

Contingency theory advances the logic that a good fit between relevant features of an organization supports superior performance (Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967). While contingency theory has been applied to the study of many organizational factors, its use in research on slack has focused on the fit of slack resources to the resource requirements indicated by the organization's internal operations or external environment (Cheng & Kesner, 1997; Lecuona & Reitzig, 2014; Lungeanu, Stern, & Zajac, 2016).

A contingency perspective suggests that the value of slack depends on a firm's potential to utilize excess resources to productive ends. Slack is expected to create value when it is held in an organizational context where it has an identifiable purpose (Deb, David, & O'Brien, 2017) to which it is well suited (Lecuona & Reitzig, 2014). Scholars have examined the influence of both external (e.g., characteristics of the competitive environment [e.g., Deb et al., 2017] or labor market [e.g., Sgourev & Lent, 2017]) and internal (e.g., strategy [e.g., Mishina et al., 2004], R&D intensity [e.g., Geiger & Makri, 2006]) contingencies on the relative value of slack.

Research focusing on the distinction between different types of slack has further emphasized differences in when each type of slack is likely to create value. For instance, financial slack has been characterized as generic and unabsorbed, and thus more freely deployable across a broader range of uses (George, 2005; Iyer & Miller, 2008). Consistent with this characterization, extant empirical research has suggested that financial slack tends to be more beneficial in two types of contexts. First, in environments where organizations face limited or volatile access to financial resources, financial slack provides an economic buffer (Bradley et al., 2011). For example, Vanacker, Collewaert, and Zahra (2017) found that financial slack is more positively related to firm performance in countries with weaker creditor rights (i.e., where external financing is tighter), and Wan and Yiu (2009) found that financial slack is positively related to performance in the context of an environmental jolt, but negatively related to performance before and after the jolt (i.e., when external resource availability is more stable).

Second, in contexts where financial resources are more abundantly available, such as in dynamic and munificent environments, financial slack enables experimentation (Bradley et al., 2011), providing the means for a firm to invest in new ideas or processes (Mishina et al., 2004; Sharfman, Wolf, Chase, & Tansik, 1988; Tan & Peng, 2003). Relatedly, financial slack has been positively linked to performance in environments requiring greater adaptability, including those characterized as competitive, research-intensive, and growth-focused (Deb et al., 2017).

Scholars examining internal contingencies have provided additional evidence to suggest that financial slack is valuable in strategic contexts that require experimentation or adaptability. For example, Nohria and Gulati (1996) and Geiger and Cashen (2002) found that financial slack exhibited a curvilinear relationship with innovation, suggesting that a moderate level

of slack is optimal for firms pursuing innovation as a strategic goal. Also consistent with this view, Herold, Jayaraman, and Narayanaswamy (2006) found that financial slack exerted a similar curvilinear effect on the impact of firms' patents. Other findings have reflected an unqualified positive effect of financial slack in innovative contexts. For instance, Geiger and Cashen (2002) found that potential slack, measured as a firm's debt to equity ratio, exhibited a positive linear relationship with innovation. Likewise, Luo, Zhang, Luo, and Ge (2017) found that financial slack increased the performance benefits of an ambidextrous strategy. Finally, Voss and colleagues (2008) found that financial slack was positively related to exploration and negatively related to exploitation, though only when perceptions of the environmental threat facing a firm were high.

Scholars have also examined contingencies surrounding the value of HR slack, though research in this vein is scarcer. HR slack has been characterized as idiosyncratic and absorbed (i.e., suggesting that managers have less discretion in deploying it for alternative uses), as employees have finite cognitive resources, such that their usefulness may be limited to contexts where their current abilities can readily create value (Mishina et al., 2004). Consistent with this logic, Mishina et al. (2004) found that HR slack was positively related to sales growth in the context of a market expansion strategy, reasoning that this type of expansion is more predictable, with benefits derived from deploying talent to tasks consistent with a firm's prior operations. Building on this view, Lecuona and Reitzig (2014) found in a sample of Mexican manufacturing plants that, based on its aforementioned limitations, HR slack was generally negatively related to firm performance, with the exception of HR slack comprised of employees holding tacit and firm-specific knowledge (i.e., who overcome the deployment constraints of other types of HR slack), which was positively related to performance, and whose value was strengthened in competitive environments characterized by high pressures for adaptation.

Importantly, the contingency perspective suggests that in some cases slack may be a liability for organizations, such as when it is held without an identifiable and suitable purpose. For instance, Nohria and Gulati (1996) demonstrated that while an optimal level of financial slack fosters innovation, beyond this optimal level slack may reduce discipline in resource management, leading to lax controls. Cheng and Kesner (1997) found that the effect of financial slack on firms' response to industry deregulation depended

on how it was allocated by the firm, with firms taking a more inward approach demonstrating reduced responsiveness to the environment. Finally, Deb et al. (2017: 436) found that excess cash is detrimental in firms that are "poorly governed, diversified, or opaque" (i.e., where power and information asymmetries across stakeholders may obscure or prevent its optimal allocation).

In sum, there is strong support for the idea that slack creates value in contexts where it has a clear, identifiable, and suitable purpose. In contrast, slack may be detrimental when a firm's excess resources are poorly aligned with the identified purpose for slack, or when the purpose itself is unclear. For instance, whereas financial slack tends to be most valuable in contexts either characterized by uncertainty or requiring adaptability, HR slack may be more beneficial in contexts requiring the deployment of excess employees to tasks that are consistent with the firm's prior activities. As such, external and internal contingencies may influence the value of slack by increasing a firm's need for a particular excess resource or by shaping the characteristics of a firm's slack resources to better fit the organization's resource requirements.

The Strategic Change Context

Strategy formulation is a discontinuous process in which resources are continuously reallocated as strategies change and evolve over time (Ginsberg, 1988; Mintzberg & Waters, 1982). Strategic change refers to modifications in the orchestration of resources (Van de Ven & Poole, 1995) made to improve an organization's alignment with the external environment (Rajagopalan & Spreitzer, 1997). Strategic change may take the form of changes in the products, services, or markets on which a firm is focused (Ansoff, 1965; Ginsberg, 1988). Building on open-systems theories of organization (Pfeffer & Salancik, 1978), scholars have pointed to the importance of strategic change as a means for organizations to achieve and preserve a sustained competitive advantage (Kraatz & Zajac, 2001; Zajac & Shortell, 1989), with strategic change often offering a response to external threats or a means of exploring additional product and service markets (Kraatz & Zajac, 2001; Rajagopalan & Spreitzer, 1997).

The initial phases of change are characterized by the determination of the nature and content of strategic change and the articulation of a mission and specific goals for the change initiative (Greiner & Bhamri, 1989; Rajagopalan & Spreitzer, 1997). These

decisions largely revolve around which products and services to provide, and in which markets to offer them (Boeker, 1997). In this early period, decisions must also be made regarding the acquisition and allocation of resources necessary to facilitate the initiative (Mintzberg & Waters, 1982; Myer, 1982). Scholars taking a behavioral view of strategic change have suggested that effective change initiatives require that organizational leaders not only ascertain the content and resource requirements of the planned change, but also generate momentum for the change (Miller & Friesen, 1984). Such momentum can be difficult to generate as organizational stakeholders tend to favor reliability and consistency in the products and services offered by a firm (Kelly & Amburgey, 1991). The tension between stakeholders favoring the status quo and those favoring strategic change may be assuaged through the orchestration of resources to simultaneously support the needs of both current customers, and of target markets that are consistent with the change effort (Kraatz & Zajac, 2001). However, striking and maintaining this balance is difficult, resulting in the tendency for firms to infrequently engage in major strategic change, and to limit these efforts to relatively brief durations (Amburgey & Dacin, 1994).

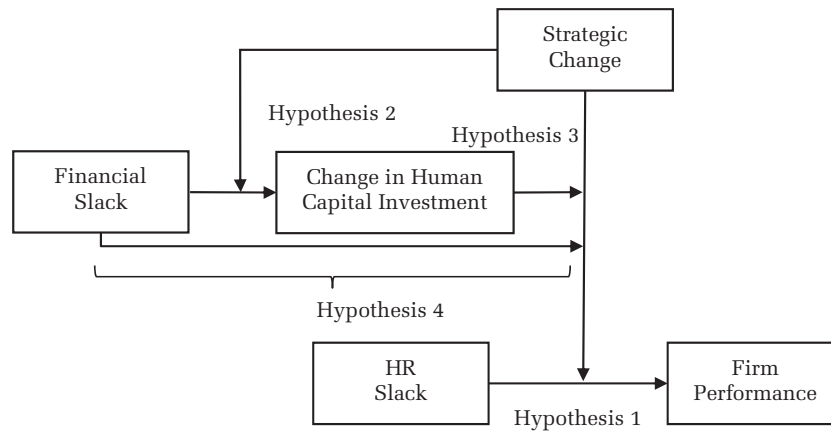
Scholars have identified a variety of factors underlying firms' pursuit of strategic change, including shifts in the environment (e.g., Haveman, 1992; Kraatz & Zajac, 2001; Smith & Grimm, 1987), performance fluctuations (e.g., Barker & Duhaime, 1997; Kuusela, Keil, & Maula, 2017), and changes in resource stocks (e.g., Kuusela et al., 2017; Mudambi & Swift, 2014)—with general agreement that it is often the convergence of multiple conditions that prompts the decision to initiate a change effort. Importantly, there is a divergence in views on how slack affects the likelihood that a firm will engage in strategic change, with one view suggesting that firms with slack are more likely to engage in change based on the availability of excess resources for the development of new capabilities (Cheng & Kesner, 1997), and the other view suggesting that because slack buffers firms from the immediate effects of unfavorable changes in the environment (Bourgeois, 1981), the possession of slack may decrease a firm's likelihood of pursuing change in circumstances that may otherwise warrant its consideration (Kraatz & Zajac, 2001; Latham & Braun, 2008). In light of these conflicting perspectives, and given the theoretical scope of our paper, we empirically address the possibility that slack relates to the pursuit of strategic change but do not develop predictions concerning this relationship.

HYPOTHESES

We integrate insights from the resource management perspective (Sirmon et al., 2007) with contingency theory (Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967) to develop arguments concerning the complementary effects of HR slack and financial slack in the context of strategic change. While contingency theory broadly suggests that alignment across relevant features of an organization supports superior performance (Powell, 1992), the resource management perspective offers unique insights into how a firm's resource management activities contribute to alignment with the dynamic requirements of the firm's environment (Sirmon et al., 2007). In particular, a key underpinning of the resource management perspective is that firms must constantly navigate decisions concerning how much to invest in resources and how best to deploy resources in light of the strategic and competitive contexts they face (Miller & Shamsie, 1996; Sirmon & Hitt, 2009), with firms that achieve better alignment enjoying superior performance (Sirmon et al., 2011). We integrate these perspectives to argue that the strategic change context entails unique requirements that force firms to divide their attention and resources across multiple sets of demands, pointing to several identifiable purposes for which excess resources may be utilized. Within this context, we further argue that financial slack is likely to complement HR slack in supporting increased firm performance, in part by promoting increases in a firm's investments in employees' human capital and—in so doing—reducing the motivation- and knowledge-based deficiencies that can limit the value of excess employees in the pursuit of strategic change. A depiction of our predicted model is provided in Figure 1.

Although the temporal dynamics associated with strategic change are poorly understood (Kunisch, Bartunek, Mueller, & Huy, 2017), implied in our theoretical arguments is a sequential logic that characterizes the accrual and management of resources in a firm's pursuit of strategic change. Because our definition and measure of strategic change—i.e., change in a firm's client mix—in fact reflect the *consequence* of a firm's pursuit of strategic change (i.e., rather than the decision to engage in change or the investments required to achieve change, which necessarily occur in previous periods), we begin with an assumption that a firm's accrual and management of slack resources prior to our observation of strategic change are most relevant in our theorizing. Specifically, in the theoretical arguments and hypotheses that follow, our expectation

FIGURE 1
Conceptual Model of the Relationship between HR Slack, Financial Slack, Human Capital Investment, Strategic Change, and Bank Performance



is that firm performance at time $t + 2$ will reflect the financial success associated with the strategic change observed as changes in a firm's client mix in the same period ($t + 2$). The success of this observed strategic change, we argue, will depend on the firm's deployment of HR slack and changes in human capital investment in the prior period ($t + 1$) (i.e., when the firm is initiating relationships with new customer segments). We focus on financial slack one period prior to that (time t). This sequencing is important, as it aligns with the idea that, in the broader strategic change context, financial slack that we observe in one year is allocated to increase investments in human capital (and thereby to improve the alignment of HR slack with the requirements of the strategic change context) in the following year. More broadly, our sequencing is consistent with the idea that, prerequisite to any observed change in client mix, employees must be deployed to a firm's new target markets to address the needs of its intended customer segments.

Finally, we note the relevance of our research context to our conceptualization of key variables and theoretical arguments. Our empirical setting is the U.S. banking industry, a service context wherein value is created through the direct interactions between an organization's employees and customers (Batt, 2002; Hitt et al., 2001). Because employees are so directly involved in meeting customers' needs in the service context, the importance of the knowledge, skills, and abilities (KSAs) of employees at all organizational levels is elevated relative to in other settings, such as manufacturing (Sirmon & Hitt, 2009). This is worth noting for two reasons. First,

while strategic change may take a variety of forms, we focus specifically on changes in the client mix, which refers to changes in the ratio of business loans to consumer loans in our sample of commercial banks (Bowden, 1980; Rose, 1988). Client mix represents an important component of strategy for service firms, as different customer segments hold distinct expectations for the sophistication, personalization, and interactions characterizing their service experiences (Batt, 2002; Sirmon & Hitt, 2009). Second, while we expect our findings to generalize to other settings, we acknowledge that the contingent value of HR slack and investments in human capital may be more generalizable to firms in other service industries than to settings where human capital is less integral to value creation and competitive advantage.

HR Slack and Firm Performance in the Strategic Change Context

Although strategic change is an important adaptive mechanism enabling firms to maintain alignment with the environment (Barker & Duhaime, 1997; Smith & Grimm, 1987), the change process is challenging and risky, as it requires firms to divide their attention and resources to achieve growth in new markets while maintaining a portion of their present operations and continuing to serve current customers (Kraatz & Zajac, 2001).

A firm's core human resource stocks may be insufficient to support a strategic change effort for at least two reasons. First, the stock of core human resources employed to support an organization's current operations are likely to possess KSAs that support these

operations and may lack the cognitive capacity—at least in the short term—to develop competencies required to understand and serve new markets (Mishina et al., 2004). Second, even with the cognitive capacity required to develop competencies aligned with a firm's new businesses, the division of employees' attention and efforts across distinct competitive spaces is taxing, such that employees may lack the time and cognitive resources required to both serve these new domains *and* ensure that the firm's current operations and customer relationships are preserved (Voss et al., 2008).

On these bases, we suggest that the strategic change context represents an environment in which HR slack may serve multiple identifiable and important purposes. Specifically, slack human resources can be deployed for the purpose of environmental surveillance (i.e., observing and interpreting the requirements of the firm's new competitive domains) (Haveman, 1992) or can be delegated to the development and enactment of new capabilities (Mishina et al., 2004), helping both to inform and support a firm's change efforts. With ample employees available to allocate both to current and change-oriented operations, changing firms may more easily overcome the inertial pressures of entrenched strategy (Zajac & Shortell, 1989) as decision makers will face reduced pressures to take resources and attention from one market to support the firm's growth in another. With the luxury of matching employees' unique human capital to the roles (and markets) where they are likely to create the most value (Sirmon et al., 2007), firms with HR slack may be less susceptible to the challenges of acquiring and allocating "sticky" resources (Oster, 1982) that are typically faced by organizations pursuing strategic change (Mintzberg & Waters, 1982; Myer, 1982). Moreover, HR slack allows firms to limit the extent to which individual employees are required to split their time or to work ambidextrously to simultaneously serve the needs of the organization's current and future competitive domains, allowing for improved focus for employees in any role. In sum, we argue that HR slack serves multiple identifiable purposes in organizations pursuing strategic change, including increasing the head count available to deploy across a greater range of needs, circumventing cognitive and motivational constraints that may limit longstanding employees' acquisition of new KSAs and mobility to new roles, and easing tensions and tradeoffs among decision makers associated with the inertial tendencies of the firm on one hand and the need for strategic change on the other.

We can contrast the strategic change context with the standard "nonchange" context that more often characterizes an organization's operations (Hannan

& Freeman, 1984), wherein the optimal acquisition and allocation of resources can be contemplated over time (Kelly & Amburgey, 1991), where resource orchestration decisions entail fewer tradeoffs (Kraatz & Zajac, 2001; Rajagopalan & Spreitzer, 1997), and where the path-dependent nature of employees' development of firm-specific human capital functions as a benefit rather than a hindrance in supporting the organization's goals (Buller & McEvoy, 2012). The increased stability and narrower scope in a firm's operations make the value of excess human resources less intuitive—and may in fact suggest inefficiencies associated with its retention. On these bases, we predict:

*Hypothesis 1. Strategic change will moderate the relationship between HR slack and firm performance, such that the relationship will be more positive in the context of strategic change.*¹

The Complementary Effects of Financial Slack and HR Slack in the Strategic Change Context

Financial slack and change in human capital investment. We have noted that an important requirement of strategic change is for the changing firm to align resource allocations with the requirements of the firm's current and new competitive domains (Haveman, 1992). Drawing on the behavioral theory of the firm (Cyert & March, 1963), prior research has highlighted that slack enables firms to more effectively understand and adapt to changing environments (Bradley et al., 2011; Deb et al., 2017). This is in part because in addition to allowing firms to protect themselves against uncertainty, financial slack provides the means for firms to invest in new capabilities (Chattopadhyay, Glick, & Huber, 2001) and alleviates constraints associated with the firm's sunk costs from prior investments (Haveman, 1992).

Financial slack, which represents the accrual of financial resources in excess of a firm's typical holdings at a given level of operations, is liquid and easily deployed for different purposes (Lee, 2011)—and thus may be used to support investments in a variety of organizational resources (e.g., infrastructure, technology) (Deb et al., 2017). However, as we have noted, a key requirement for strategic change—particularly in

¹ Importantly, based on our argument concerning the contingent effects of slack (i.e., that whether slack creates value depends on its alignment with a clear, identifiable purpose), we take no stance and offer no predictions related to the main effects of HR slack or financial slack on firm performance.

the service context (Hitt et al., 2001; Sirmon & Hitt, 2009)—is the deployment of employees with the KSAs required to meet the distinct requirements of a firm's new target customer groups (Batt, 2002). In light of the recognition that the employees in a firm's current workforce are most likely equipped with knowledge that is aligned with a firm's *current* (rather than change-oriented) operations (Levinthal & March, 1993), we suggest that firms engaging in strategic change are likely to use available financial slack to increase investments in employees' human capital of their workforce, which include a firm's outlays related to training, salary, and employee benefits. Through such investments, managers can identify motivational shortcomings or knowledge gaps in the workforce and make appropriate allocations to address these specific needs, whether these involve targeted changes to compensation plans or revisions to mentoring arrangements, formal training programs, cross-functional experiences, or other developmental opportunities (Sirmon et al., 2011). Indeed, the development of human capital represents a clear, identifiable, and valuable purpose for financial slack that is aligned with the changing firm's goals to effectively enter new markets and is thus unlikely to be contested in the strategic change context (Deb et al., 2017).

In contrast, in the nonchange context, the most appropriate use for financial slack is less clear, which may create the perception that excess financial resources are more "up for grabs" by different stakeholder groups with distinct goals (Deb et al., 2017). In this setting, financial slack may thus be less strongly related to change in human capital investment, as it is dispersed more broadly across a wider variety of uses or initiatives throughout the organization.

Hypothesis 2. Strategic change will moderate the relationship between financial slack and change in human capital investment, such that this relationship will be more positive in the context of strategic change.

Change in human capital investment, HR slack, and firm performance. Scholars have long recognized the critical role of human capital in supporting firm performance (Pfeffer, 1994)—a role that is heightened in the service context, where employees must draw on their understanding of organizational processes, the competitive environment, and the firm's service offerings to interact with clients to meet their needs (Hitt et al., 2001; Reilly, Nyberg, Maltarich, & Weller, 2014; Pennings, Lee, & Witteloostuijn, 1998; Skaggs & Youndt, 2004). These benefits are likely further amplified in the strategic change context,

where new customer segments translate to new expectations for customer service (Batt, 2002).

While we have suggested that HR slack provides the changing firm with an increased capacity to maintain current operations while pursuing new areas of growth, prior research has pointed to a potential limitation of HR slack in contexts requiring capabilities that deviate from a firm's current operations (Voss et al., 2008; Wang et al., 2016). That is, to the extent that HR slack is in fact idiosyncratic and absorbed, as some prior research has suggested (Mishina et al., 2004), despite the fact that HR slack makes excess employees *available* for redeployment (Iyer & Miller, 2008), these employees may possess human capital that is aligned with a firm's current operations and may lack the requisite KSAs needed to support the firm's change efforts (Mishina et al., 2004). Alternatively, if HR slack has been more recently acquired, and excess employees' human capital is more closely aligned with the firm's new competitive domains, excess employees may lack an understanding of the nuances of the organizational context required to propel the firm through the change process (Ployhart, Van Iddekinge, & Mackenzie, 2011).

In light of these challenges, we suggest that positive changes in human capital investment made by a firm are likely to help align the qualities of a firm's excess employees with the requirements of the strategic change context (Sirmon et al., 2007). Human capital investments can help to address weaknesses in excess employees' KSAs relative to the requirements of a changing firm's strategic goals (Nyberg, Moliterno, Hale, & Lepak, 2014). Indeed, broad literature on strategic human resource management has suggested that firms' total workforce investments—including investments in practices such as training and compensation—are positively associated with employees' human capital and motivation (for a meta-analytic review, see Jiang, Lepak, Hu, & Baer, 2012). Moreover, research by labor economists has pointed to the importance of differentials in compensation and benefits specifically as reflective of levels of human capital across employees and firms (e.g., Abowd, Kramarz, & Margolis, 1999). Thus, we argue that through changes in human capital investment in the form of increased allocations to training, compensation, and benefits, firms can achieve targeted gains in the skills, motivation, and retention of the employees needed to support their change efforts (Sirmon & Hitt, 2009), thereby improving the value and fit of HR slack in supporting performance in the strategic change context—without sacrificing the capacity or attention of employees dedicated to maintaining current operations.

In contrast, in the nonchange context, changes in human capital investment within a firm beyond the status quo may simply lead to the unnecessary overqualification of employees. In the presence of HR slack, this could amount to excess in both the number and quality of human resources with no identifiable purpose in a firm's operations. Accordingly, we predict:

Hypothesis 3. There will be a three-way interaction between HR slack, strategic change, and change in human capital investment in the prediction of firm performance, such that HR slack will be more positively related to firm performance in the context of strategic change, and this relationship will be even more positive when change in human capital investment is high (i.e., more positive).

Financial slack, change in human capital investment, HR slack, and firm performance. Based on the insights developed in our prior arguments, we suggest that in the strategic change context, financial slack is likely to complement HR slack in supporting firm performance, in part by supporting increases in a firm's investments in human capital. In particular, by increasing investments in practices such as training and compensation, firms can employ financial slack to address the knowledge- and motivation-based shortcomings that may otherwise limit the deployment value of excess human resources in the context of new customer segments (Sirmon & Hitt, 2009). We acknowledge that firms pursuing strategic change may employ financial slack to create value in other ways (e.g., changes in investments in physical capital), but suggest that, in light of the centrality of human capital in the service context (Hitt et al., 2001) and the need to employ distinct skill sets in providing service to different customer segments (Batt, 2002), increases in human capital investment are an intuitive option for utilizing financial slack in the pursuit of change. In sum, we suggest that the strategic change context is one in which (1) firms are more likely to use their financial slack to increase investments in human capital, and (2) such increases in human capital investment are likely to complement a firm's HR slack by better equipping a firm's excess employees with the motivation and skills required to support the unique requirements of the change initiative. More formally, we predict:

Hypothesis 4. There will be a three-way interaction between HR slack, strategic change, and financial slack in the prediction of firm performance, which will be partially mediated by change in human capital

investment, such that HR slack will be more positively related to firm performance in the context of strategic change, and this relationship will be even more positive when financial slack (operating in part through positive changes in human capital investment) is high.

METHODS

Data

We tested our hypotheses using data provided by the Federal Deposit Insurance Corporation (FDIC) on federally chartered U.S. commercial banks. The FDIC serves as a key regulatory agency of federally chartered, deposit-holding banking institutions. In an effort to increase the transparency of the banking industry, the FDIC makes data on banks' operations publicly available. Our sample consists of 6,606 federally chartered banks over the period 2002–2014, for which at least four years of data were available.

The banking industry is an appropriate setting to test our theory for several reasons. First, given the service-intensive nature of this context, firms rely heavily on both human and financial resources to achieve success (Sirmon & Hitt, 2009). Second, due to the wealth of data made public by the FDIC, this context offers a unique opportunity to observe all institutions in our focal industry (i.e., the U.S. commercial banking industry), which is particularly beneficial in the study of slack, as expected and excess resource levels are defined and calculated in part relative to all other firms in an industry. Finally, the granularity of these data allows us to capture changes in strategy and slack in each bank over the entire study period—allowing for our dynamic assessments of strategy and slack that address limitations in the extant slack literature.

Measures

Firm performance. Consistent with prior research focusing on value added through firms' resource management activities, we measured firm performance using Tobin's q (Kor & Mahoney, 2005; Sirmon & Hitt, 2009). Tobin's q provides a measure of the difference between a firm's market value and the replacement cost of its assets. The measure captures the value added through resource management as it reflects the premium the capital market will pay for the portfolio of assets possessed by the firm (Huselid, Jackson, & Schuler, 1997). As we are interested in

assessing the performance implications associated with the utilization of resources (here, human and financial), this measure of firm performance closely aligns with our theorizing.² Tobin's q also provides a measure of firm performance that has been shown to quickly reflect market reactions to the strategic actions taken by the firm (e.g., strategic change) without the incorporation of temporal lags between strategic actions and firm performance that would increase the likelihood of spurious results being driven by exogenous factors (Sirmon & Hitt, 2009).³ Following prior research (Kor & Mahoney, 2005; Sirmon & Hitt, 2009), we estimated Tobin's q as the ratio of the sum of the market value of equity and the book value of debt to the book value of a firm's assets. Values above 1 reflect the value created by firms through the effective management of resources, while values below 1 reflect the value lost through the mismanagement of resources. While there are additional, more complex approaches to measuring q , such approaches can induce sample selection bias as a result of their reliance on data with more limited availability (DaDalt, Donaldson, & Garner, 2003).

HR slack. HR slack refers to the accrual of employees in excess of what is required for a firm to maintain its current level of operation. Consistent with prior studies, we operationalized HR slack as the difference between a firm's employees-to-sales ratio and the average employees-to-sales ratio across other firms in the industry (Mishina et al., 2004; Vanacker et al., 2017). Since we are interested in measuring *slack* resources, we set negative values (which reflect relative resource deficits and thus indicate an absence of slack) equal to 0.

While this measure captures the extent to which a firm's headcount exceeds levels typically employed by other firms at the same level of operations, it does not capture the inherent variance in resource requirements across firms (i.e., it ignores the fact that even within an industry, firms' varied business models

require different employment levels at a given level of operation) or the extent to which some firms persistently employ workers in excess of their baseline requirements.⁴ Thus, to account for the variance in resource needs across firms (Bourgeois, 1981), and for the likely absorption of resources into an organization's operations over time (i.e., for the fact that persistent excess in resources does not continue to represent slack indefinitely) (George, 2005), we controlled for the cumulative average of excess human resources held in prior periods.⁵ We conducted a Breusch–Godfrey LM test (Greene, 2003) to determine the appropriate number of periods to include in the cumulative average based on the strength of the relationship between current and past excess resource levels across different spans of time. The results supported using a moving average for the prior three years.

Financial slack. Consistent with prior studies, we measured financial slack as the difference between a firm's current ratio—computed as the ratio of current assets to current liabilities—and the current ratio of other firms in the industry (Bourgeois, 1981; Cheng & Kesner, 1997; Iyer & Miller, 2008). Consistent with our approach for HR slack, we set negative values of this measure equal to 0 to reflect the absence of slack. Following the same rationale underlying our decision to control for historical levels of HR slack, we also controlled for a firm's prior levels of financial slack in our analyses. We again conducted a Breusch–Godfrey LM test (Greene, 2003) to determine the appropriate number of lagged values to include in the cumulative average. The results revealed that the appropriate period was again the prior three years.

Strategic change. We follow prior research in assessing banks' strategies based on relative client mix (Ramaswamy, 1997; Sirmon & Hitt, 2009; Stemper,

² In an unreported analysis, we also tested our model using net income as an alternative, accounting-based measure of bank performance. The results were consistent with those reported here and are available upon request.

³ While this logic supports our decision to measure Tobin's q in the same period as strategic change, we also tested our model with performance measured in the period following strategic change ($t + 3$) to determine whether performance outcomes persisted in the year following change. The results were consistent with those reported here and are available upon request.

⁴ We take no stance on the relative value of this "fat," or excess, as a variety of factors that we do not explicitly consider here may increase (e.g., a human resource-intensive business model) or decrease (e.g., poor planning) the likelihood that it fulfills a purpose within the firm's ongoing operations. Rather, we simply contend that this form of excess is less available for redeployment to alternative (e.g., strategic change-oriented) activities.

⁵ Bourgeois (1981) argued that slack should be assessed in terms of changes in firms' resource stocks (albeit using a different approach), citing similar concerns related to interfirm resource heterogeneity noted here. However, missing from his recommendations was a comparison of the firm's resource position to industry norms—an omission that overlooks the importance of industry-level changes that influence firms' resource requirements over time.

1990), which refers to the ratio of business loans to consumer loans (Bowden, 1980; Rose, 1988). To capture strategic change, we first constructed historical trends in the client mix of each bank. We then set a bank's historical strategy equal to a two-year moving average estimated using an autoregressive moving average approach. We selected two years for the moving average based on the results of a Breusch–Godfrey LM test (Greene, 2003). Deviations from this moving average reflect a change in strategy. We then converted these deviations into z-scores to capture the magnitude of the strategic change. Since we are primarily concerned with the strategic change pursuit itself (i.e., rather than the content or direction of this change), we used the absolute value of the z-score to capture changes in a bank's strategy. Values for this variable thus indicate whether banks engage in strategic change, as well as the magnitude of such change. We categorized banks with a z-score greater than 1 as having engaged in strategic change, and those with a z-score less than 1 as not having engaged in strategic change in a given period. We ran all of our analyses separately for these two groups. A benefit of this approach was that it allowed us to test our hypotheses without creating three-way interactions, which can be difficult to interpret. However, in additional analyses, which we report in a later section, we also ran all tests with a continuous strategic change variable.

Change in human capital investment. Human capital reflects the KSAs of a firm's workforce. Firms accumulate human capital through acquisition (i.e., hiring) or internal development (Sirmon et al., 2007). Consistent with prior research (Sirmon & Hitt, 2009; Symeonidou & Nicolaou, 2018), we capture human capital investment as the ratio of the financial resources that a firm directs to salaries, bonuses, and training over the total number of employees in the firm. Our measure of change in human capital investment represents the year-over-year difference in this value. A focus on the change in—rather than the absolute value of—a firm's human capital investment is appropriate to test our model because our interest is in a firm's *new* allocations to human capital in a given year. Because changes in human capital investment are likely to be endogenous, we utilized an estimation technique that addressed the endogeneity of such investment decisions, which we describe in a more thorough discussion below.⁶

Control variables. In addition to the controls already mentioned (i.e., prior average of HR slack, prior average of financial slack), we also controlled for variables traditionally included in studies on the relationship between slack and firm performance, and in research conducted in the banking industry. First, we included a control for *firm size*, operationalized as the natural log of assets. As prior performance is likely to affect market returns (Sirmon & Hitt, 2009), we controlled for *prior performance*, operationalized as the prior year's Tobin's *q*. This also allowed us to assess the impact of the hypothesized predictors on firm performance above and beyond the effects of prior levels of performance without having to use change scores. This is beneficial, as scholars have raised concerns that change scores may be unreliable and sensitive to regression toward the mean (Allison, 1990). We controlled for *prior human capital investment* level because the effects of changes in human capital investment may depend on the baseline representing a firm's status quo. As banks may also make investments in physical capital (Sirmon & Hitt, 2009), we controlled for *changes in physical capital investment* as the year-over-year change in investments in plants, property, and equipment. Based on the influences of geographic location on banks' customer bases, strategies, and performance (Kim & Miner, 2007), we controlled for the regional *geographic district* in which each bank is headquartered. We followed the demarcation of geographic districts used by the Federal Reserve, another regulator of banking institutions. Since bank performance is sensitive to the risk profile assumed by the bank (Kim & Santomero, 1988), we controlled for a bank's *risk profile* using the ratio of Tier-1 capital to total loans, where Tier-1 capital reflects the most liquid form of capital available to the bank. As banks establish a charter that defines their activities and geographic scope (e.g., state, national), which may influence the overall performance of the bank (Bamford, Dean, & McDougall, 2000; Kim & Miner, 2007), we controlled for *charter* type. Lastly, given the panel nature of the dataset and technological advancements that can influence the productivity of a bank as well as the products and services that a bank can offer, we included *year* controls.

ANALYSES AND RESULTS

Estimation Approach

In our conceptual model, we proposed that financial slack operates through changes in human capital

⁶ We also conducted additional analyses to determine whether strategic change itself was endogenous, which we also report in a later section.

investment to moderate the relationship between HR slack and bank performance in the context of strategic change. Testing this pattern of relationships requires that we first examine whether financial slack predicts change in human capital investment and then examine whether the indirect effect of financial slack through change in human capital investment interacts with HR slack to predict bank performance in the context of strategic change. This is equivalent to the second-stage moderated mediation model (Model 1G; Equation 20) in Edwards and Lambert (2007).⁷ Consistent with Edwards and Lambert's (2007) framework, we estimated two multiple regression models. The first model tests whether financial slack predicts change in human capital investment (Edwards & Lambert, 2007: Equation 3). The second model estimates whether financial slack operates through change in human capital investment to moderate the relationship between HR slack and bank performance. Specifically, we regressed bank performance on HR slack, financial slack, change in human capital investment, and the interactions between HR slack with financial slack and change in human capital investment, respectively (Edwards & Lambert, 2007: Equation 20). We centered variables used in the interactions to reduce concerns regarding multicollinearity.

To minimize issues related to autocorrelation and heteroskedasticity, we estimated our models using random effects. Random-effects models address heteroskedasticity by creating a random effect that is a combination of the fixed organizational effect and the time-varying component to account for both temporal and interorganizational variability (Greene, 2003). The results of a Hausman test—used to determine whether a fixed- or random-effects model is appropriate—supported the use of the random-effects model. Moreover, as our interest fundamentally centers on variance in resource stocks that is observed between firms, but also within firms, over time, random-effects models allowed us to appropriately capture such variance (Kraatz & Zajac, 2001). To further mitigate concerns regarding heteroskedasticity, we estimated the models using robust standard errors. Lastly, we estimated variance inflation factors (VIFs) following each regression to

check for the presence of multicollinearity. All VIFs were below the generally accepted maximum value of 10 (Greene, 2003), thereby reducing concerns of multicollinearity.

Tests of Hypotheses

Descriptive statistics and correlations are provided in Table 1. Table 2 provides the regression estimates for the models predicting change in human capital investment (i.e., the mediator), as well as Tobin's q (i.e., the dependent variable). To test Hypothesis 1, which predicted that strategic change would moderate the effect of HR slack on bank performance, we compared the estimates of HR slack on Tobin's q between banks engaged in strategic change and banks not engaged in strategic change. As shown in Models 2a and 2b, HR slack has a negative and statistically significant effect on Tobin's q in the nonchange context ($\beta = -0.151$, $p < .001$), and a positive and statistically significant effect in the context of strategic change ($\beta = 0.300$, $p < .05$). The difference between the estimates is statistically significant ($t = 3.047$, $p < .01$). Together, the results indicate that strategic change moderates the effect of HR slack on Tobin's q , such that the relationship is negative in the nonchange context but positive in the context of strategic change, providing support for Hypothesis 1.

To test Hypothesis 2, we estimated the effect of financial slack on change in human capital investment and compared this effect for banks engaged in strategic change to those not engaged in strategic change. As shown in Models 1a and 1b, respectively, the relationship between financial slack and change in human capital investment is positive and statistically significant for banks not engaged in strategic change ($\beta = 0.015$, $p < .001$) and those engaged in strategic change ($\beta = 0.020$, $p < .001$). The difference between the estimates is statistically significant ($t = 3.535$, $p < .001$). The results indicate that the positive relationship between financial slack and change in human capital investment is stronger for banks engaged in strategic change than for banks not engaged in strategic change, thus supporting Hypothesis 2.

To test Hypothesis 3, where we predicted that, among banks engaged in strategic change, the relationship between HR slack and bank performance would be moderated by change in human capital investment, we added an interaction between HR slack and change in human capital investment to the model. As shown in Table 2, the effect of the

⁷ We also tested our conceptual model using an alternative approach centered on hierarchical multiple regression and instrumental variables techniques to address potential endogeneity of both changes in human capital investment and strategic change. We present this additional analysis in a later section.

TABLE 1
Descriptive Statistics and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Tobin's q_{t+2}	9.94	3.50												
2. HR slack $_{t+1}$	0.17	1.73	0.03											
3. Financial slack $_t$	1.20	3.90	0.06	0.01										
4. Prior HR slack $_t$	0.04	0.16	0.06	0.72	0.02									
5. Prior financial slack $_{t-1}$	0.09	0.26	0.03	0.01	0.83	0.02								
6. Δ Human capital investment $_{t+1}$	2.37	13.43	0.11	0.00	0.05	0.01	0.03							
7. Prior human capital investment $_t$	61.69	111.37	0.14	0.31	0.07	0.02	0.03	0.53						
8. Δ Physical capital investment $_{t+1}$	16.19	24.72	-0.11	0.01	-0.03	0.01	-0.04	0.11	0.11					
9. Charter $_t$	0.98	1.34	0.01	0.00	0.03	0.00	0.03	0.09	0.09	0.09				
10. Geographic district $_t$	6.18	3.32	-0.07	-0.02	-0.05	-0.03	-0.05	0.20	-0.20	-0.22	-0.15			
11. Firm size $_t$	11.89	12.68	0.18	-0.01	0.23	-0.01	0.29	0.25	0.25	0.66	0.16	-0.32		
12. Prior performance $_{t+1}$	9.98	3.49	0.78	-0.02	0.08	-0.04	0.11	-0.06	-0.12	0.12	-0.02	0.04	0.12	
13. Risk profile $_t$	0.23	1.53	0.04	0.08	0.00	0.07	0.00	0.01	0.01	0.00	0.00	-0.02	0.00	-0.03

Notes: $n = 60,328$. Correlations above 0.02 are significant at the 0.01 level. All variables are reported prior to transformations used to normalize non-normal distributions.

TABLE 2
Regression Results for Moderated Mediation

Strategic Change Context	Δ Human Capital Investment _{t+1}						
	No Change		Strategic Change		Tobin's q _{t+2}		
	Model 1a	Model 1b	Model 2a	Model 3a	Model 4a	Model 2b	
Constant	-1.696*** (0.020)	-1.696*** (0.020)	1.516*** (0.023)	1.516*** (0.023)	1.515*** (0.019)	1.696*** (0.062)	1.685*** (0.062)
Charter	0.001 (0.001)	0.002 (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)	-0.007*** (0.003)	-0.007*** (0.003)
Geographic district	-0.003*** (0.000)	-0.002*** (0.000)	0.004*** (0.001)	0.004*** (0.001)	0.005*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Firm size	0.039*** (0.001)	0.031*** (0.002)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.009* (0.004)	0.008* (0.004)
Prior Tobin's q	-0.008*** (0.000)	-0.007*** (0.000)	0.074*** (0.003)	0.074*** (0.004)	0.074*** (0.004)	0.063*** (0.001)	0.063*** (0.001)
Risk profile	0.001*** (0.000)	0.001*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.002* (0.001)	-0.002* (0.002)
Δ Physical capital investment _{t+1}	0.003*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.002)	0.008*** (0.003)
Prior average financial slack	-0.028*** (0.004)	0.004 (0.008)	0.034*** (0.004)	0.032*** (0.004)	0.034*** (0.004)	0.363* (0.148)	0.354* (0.149)
Prior average HR slack	0.000 (0.000)	-0.002* (0.000)	-0.038*** (0.005)	-0.039*** (0.006)	-0.034*** (0.009)	0.094** (0.027)	0.206*** (0.040)
Prior human capital investment _t	0.101*** (0.001)	0.217*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
Δ Human capital investment _{t+1}			-0.046*** (0.009)	-0.046*** (0.009)	-0.046*** (0.009)	0.113*** (0.022)	0.107*** (0.022)
Financial slack _t	0.015*** (0.001)	0.020*** (0.001)	-0.056*** (0.008)	-0.056*** (0.008)	-0.056*** (0.008)	0.074** (0.027)	0.075** (0.033)
HR slack _{t+1}	0.008*** (0.000)	0.013*** (0.002)	-0.151*** (0.040)	-0.150*** (0.040)	-0.149*** (0.040)	0.300* (0.148)	0.292* (0.147)
HR slack x Δ Human capital investment			0.020** (0.008)	0.020** (0.008)	0.016* (0.008)	0.354*** (0.098)	0.296** (0.111)
HR slack x Financial slack			-0.014 (0.009)	-0.014 (0.009)	-0.014 (0.009)		0.086** (0.033)
χ^2	34.958	18.662	42.122	42.244	42.252	19.304	19.317
R ²	0.7093	0.7086	0.3206	0.3209	0.3210	0.3828	0.3841

Notes: Robust standard errors reported in parentheses; n = 38,249 for no strategic change; n = 19,079 for strategic change; year dummies included in all models.

* p < .05

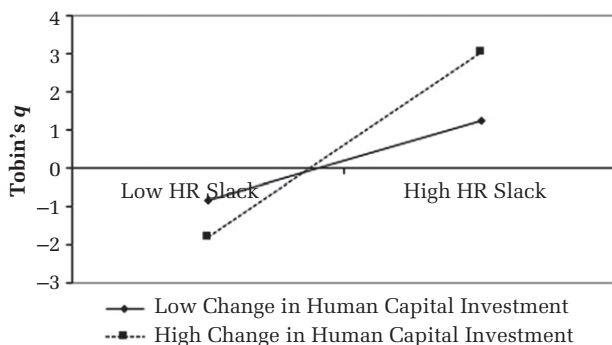
** p < .01

*** p < .001

interaction is positive and statistically significant among banks not engaged in strategic change (Model 3a) ($\beta = 0.020, p < .01$), but the effect is stronger and more statistically significant among banks engaged in strategic change (Model 3b) ($\beta = 0.354, p < .001$). The difference between these estimates is statistically significant ($t = 3.40, p < .001$). A plot of this interaction for banks engaged in strategic change is shown in Figure 2. As shown in the figure, the positive effect of HR slack on Tobin's q is more positive when change in human capital investment is high (where a one standard deviation increase in HR slack increases Tobin's q by a factor of 3, which, on average, translates to an increase in the market valuation of a firm's resources of approximately \$30 million), relative to when change in human capital investment is low (where a one standard deviation increase in HR slack increases Tobin's q by a factor of 1.3, which, on average, translates to an increase in the market valuation of a firm's resources of approximately \$10 million). The difference between the slopes is statistically significant ($t = 2.178, p < .05$). These results provide support for Hypothesis 3.

In Hypothesis 4 we predicted that, in banks engaged in strategic change, financial slack would operate through change in human capital investment to moderate the relationship between HR slack and performance. We tested this prediction of moderated mediation using the four-step procedure outlined by Edwards and Lambert (2007). In the first step, we estimated the effect of financial slack on change in human capital investment. The results are provided in Model 1a for firms not engaged in strategic change and in Model 1b for firms engaged in strategic change.

FIGURE 2
Plot of the Interaction Between HR Slack and Change in Human Capital Investment on Tobin's q , in the Context of Strategic Change



In the second step, we regressed Tobin's q on HR slack, financial slack, change in human capital investment, and the interactions between HR slack and both financial slack and change in human capital investment (Model 4). As shown in Model 4a, among banks not engaged in strategic change, while the interaction between HR slack and change in human capital investment is positive and statistically significant ($\beta = 0.016, p < .05$), the interaction between HR slack and financial slack is not significant ($\beta = -0.014, p > .10$), precluding the completion of the remaining steps to test for moderated mediation among these banks. In contrast, as shown in Model 4b, among banks engaged in strategic change, both the interactions between HR slack and change in human capital investment ($\beta = 0.296, p < .01$) and HR slack and financial slack ($\beta = 0.086, p < .01$) are positive and significant. Thus, we proceeded with the remaining steps to test our moderated mediation hypothesis for banks engaged in strategic change. Specifically, we utilized bootstrapping techniques to generate 1,000 samples to produce bias-corrected estimates for the direct and indirect effects (steps 3 and 4, respectively). Consistent with prior studies (Ferris, Lian, Brown, & Morrison, 2015), we provide a table (Table 3) of the effects partitioned by direct, indirect, and total effects, which provide evidence of an interaction between HR slack and the indirect effect of financial slack in predicting bank performance. Specifically, as shown in the table, the indirect effect of financial slack on Tobin's q through changes in human capital investment varies across low ($b = -0.06$) and high levels of HR slack ($b = 0.08$). The confidence intervals for each of these effects and the difference between these effects ($[.08] - [-.06] = 0.14, p < .01$) do not include 0, lending support to our full model.⁸

To illustrate how these empirical results relate to our conceptual model, in Figure 3 we provide a plot

⁸ While from a conceptual standpoint it is meaningful to identify which variable included in an interaction represents the moderator, from an empirical standpoint the distinction between the moderator and the independent variable is irrelevant, as the model used to test for moderation requires the inclusion of both variables, as well as the interaction between them (Hayes, 2013; Langfred, 2004). The analysis required to test our moderated mediation model required that we specify HR slack as the moderator and financial slack as the independent variable; we used the effects estimated in this analysis to compute estimates of the effects predicted in our conceptual model.

TABLE 3
Analysis of Simple Effects for Firms Engaged in Strategic Change

HR Slack	Direct Effects			Indirect Effects	Total Effects
	Pyx	Pmx	Pym	(Pym × Pmx)	(Pyx + Pym × Pmx)
Low (−1 SD)	0.08**	0.02***	−0.21***	−0.06**	0.02***
High (+1 SD)	0.08**	0.02***	0.28***	0.08**	0.16***
Differences	0.00	0.00	0.49***	0.14**	0.14**

Notes: Pyx = estimate for financial slack on Tobin's q ; Pmx = estimate for financial slack on change in human capital investment; Pym = estimate for change in human capital investment on Tobin's q .

** $p < .01$

*** $p < .001$

of the interaction, illustrating how the effect of HR slack on firm performance varies across levels of financial slack. Consistent with our predictions, the interaction plot demonstrates that the effect of HR slack on Tobin's q is more positive when financial slack is high (where a one standard deviation increase in HR slack increases Tobin's q by 0.8, which, on average, translates to an increase in the market valuation of a firm's resources of approximately \$6 million) relative to when financial slack is low (where a one standard deviation increase in HR slack increases Tobin's q by 0.1, which, on average, translates to an increase in the market valuation of a firm's resources of approximately \$750,000). The difference between the slopes is statistically significant ($t = 3.551$, $p < .001$). In addition, these results suggest that approximately 60% of the moderating effect of financial slack can be explained by the mediating effect of change in human capital investment. These results provide support for Hypothesis 4.

Robustness and Sensitivity Analyses

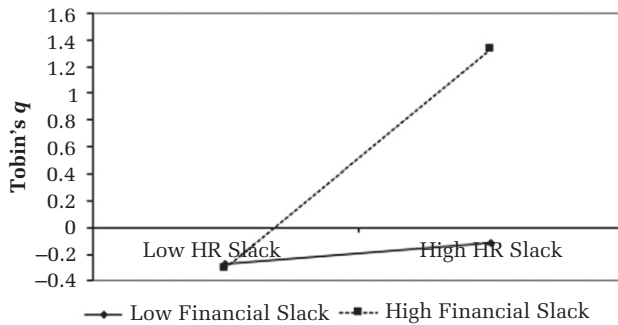
In our main analyses reported above, we tested our conceptual model using the framework proposed by Edwards and Lambert (2007). However, consistent with prior research examining a parallel theoretical model (Langfred, 2004), we also tested our model through a system of hierarchical regressions based on the four steps recommended by Baron and Kenny (1986). Importantly, this additional analysis allowed us to address concerns regarding endogeneity of two key variables: change in human capital investment and strategic change. We conducted a Durbin–Wu–Hausman test (Greene, 2003) to determine whether either of these variables was endogenous. The results of the test supported treating strategic change as an exogenous factor ($F = 1.61$, $p > .10$), but did not rule

out endogeneity for change in human capital investment ($F = 9.77$, $p < .01$).⁹ To account for the endogeneity of change in human capital investment, we employed a two-stage least squares panel estimation approach using instrumental variables. In the first stage of the model, we estimated the endogenous variable (i.e., change in human capital investment) using the same factors used to predict the dependent variable of interest, but with additional variables that served as instruments. We identified *cash and other balances due to deposits* and *noninterest revenues* as the instruments, as both were significantly related to change in human capital investment.

For an instrumental variable approach to correct for biases associated with endogeneity, instruments used in the first stage must be established as both valid and effective (Kennedy, 2008; Semadeni, Withers, & Certo, 2014). The validity of an instrument is based on its relevance and exogeneity (Semadeni et al., 2014). We assessed relevance by determining whether the addition of the instruments improved the overall fit and significance of the model estimating the endogenous variable. Comparing our initial model estimating change in

⁹ In addition to these tests, we conducted two additional analyses in response to questions raised by an anonymous reviewer about the relationship between strategic change and other relevant variables. First, we assessed whether HR slack is a significant predictor of strategic change. The results, not reported here but available upon request, showed that HR slack is not a statistically significant predictor of strategic change. Second, to rule out the possibility that our measure of strategic change simply captures firms' attempts to grow, we assessed the distribution of growth in our sample, which suggested that there was no significant difference in growth among firms in the strategic change and nonchange context. The results provide further evidence of strategic change as an exogenous factor.

FIGURE 3
Plot of the Interaction Between HR Slack and Financial Slack on Tobin's q , in the Context of Strategic Change



human capital investment (Model 1a) without the instruments (shown in Table 2) to the model including the instruments (shown in Table 4), the model fit statistic (χ^2) increases from 34,958 to 35,637. This change of 679 is statistically significant at the 1% level. Therefore, we can conclude that our instruments are relevant. We assessed exogeneity by examining whether the instruments were correlated with the residuals in the second-stage model (Semadeni et al., 2014). To test this, we estimated the second-stage models, obtained the residuals, and computed the correlation between the residuals and our instruments. The results showed that the correlation between both of the instruments and the second-stage residuals was not statistically significant ($r = 0.02$). Together, these results suggest that our instruments are both valid and effective.

Table 4 presents the results for both the models utilizing the instrumental variables technique. As shown in the table, among banks not engaged in strategic change, the effect of HR slack on Tobin's q is negative and statistically significant ($\beta = -0.215$, $p < .001$), but is positive and significant among banks engaged in strategic change ($\beta = 0.363$, $p < .01$). The difference between the estimates is statistically significant ($t = 4.202$, $p < .001$). Consistent with the results from our focal analyses, these results provide support for Hypothesis 1. To test Hypothesis 2, we examined whether financial slack predicts change in human capital investment. As shown in Table 4, while the relationship between financial slack and change in human capital investment is positive and statistically significant among banks not engaged in strategic change ($\beta = 0.018$, $p < .001$), the relationship is more positive among banks engaged in strategic change ($\beta = 0.027$, $p < .001$). The difference between these

estimates is statistically significant ($t = 4.024$, $p < .001$). To test Hypothesis 3, we include the interaction between change in human capital investment and HR slack in predicting Tobin's q . Consistent with the results from our focal analyses, the interaction is less positive among banks not engaged in strategic change ($\beta = 0.031$, $p < .01$), relative to banks engaged in strategic change ($\beta = 0.229$, $p < .001$). The difference between these estimates is also statistically significant ($t = 2.40$, $p < .05$). To test Hypothesis 4, we examined whether the interaction between HR slack and financial slack decreases (in both effect size and statistical significance) when the interaction between HR slack and change in human capital investment is added to the model. First, as shown in Table 4, the interaction between HR slack and financial slack is positive but not statistically significant among banks in the non-change context ($\beta = 0.009$, $p > .10$), but is positive and statistically significant among banks in the change context ($\beta = 0.016$, $p < .001$). Next, we entered the interaction between HR slack and change in human capital investment. As shown in the table, the effect of this interaction is positive and statistically significant for both the nonchange ($\beta = 0.032$, $p < .001$) and the strategic change ($\beta = 0.211$, $p < .001$) context. The addition of this interaction decreases the statistical significance of the interaction between HR slack and financial slack among firms in the strategic change context ($\beta = 0.011$, $p < .05$), and increases the statistical fit of the model ($\Delta\chi^2 = 37$, $p < .01$). A Sobel test provides additional support for mediation (Sobel $z = 7.99$, $p < .001$). Overall, these results are consistent with those reported in our focal analysis.

We also examined whether our results were robust to an alternative operationalization of strategic change. In our main analysis, we tested our hypotheses by estimating the models separately for banks according to whether they had or had not engaged in strategic change. While this approach allowed us to more easily interpret the complementary effects of HR slack and financial slack in the context of strategic change relative to in the nonchange context, it limited our ability to capture variance in these effects across levels of strategic change. To capture this variance, we reestimated our models using a continuous measure of strategic change. Results of this analysis are provided in Table 5 and are consistent with those obtained in our main analyses.

DISCUSSION

By examining the role of strategic change in determining the effects of HR slack and financial slack

TABLE 4
Regression Results for Moderated Mediation Using Instrumental Variables

Strategic Change Context	Tobin's q_{t+2}									
	Δ Human Capital Investment $_{t+1}$		No Strategic Change				Strategic Change			
	Model 1a	Model 1b	Model 2a	Model 3a	Model 4a	Model 5a	Model 2b	Model 3b	Model 3b	Model 4b
Constant	-1.697*** (0.017)	-1.618*** (0.026)	1.402*** (0.013)	1.401*** (0.013)	1.401*** (0.013)	1.401*** (0.014)	1.376*** (0.039)	1.375*** (0.039)	1.374*** (0.039)	1.373*** (0.040)
Charter	0.001 (0.001)	0.002 (0.001)	-0.006*** (0.001)	-0.006*** (0.001)	-0.006*** (0.001)	-0.006*** (0.001)	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
Geographic district	-0.002*** (0.000)	-0.001 (0.001)	0.004*** (0.000)	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Firm size	0.031*** (0.001)	0.023*** (0.002)	0.023*** (0.001)	0.023*** (0.001)	0.023*** (0.001)	0.023*** (0.001)	0.021*** (0.003)	0.021*** (0.003)	0.021*** (0.003)	0.021*** (0.003)
Prior Tobin's q	-0.009*** (0.000)	-0.008*** (0.000)	0.065*** (0.003)	0.065*** (0.003)	0.065*** (0.003)	0.065*** (0.003)	0.070*** (0.001)	0.070*** (0.001)	0.070*** (0.001)	0.070*** (0.001)
Risk profile	0.001*** (0.000)	0.001*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Δ Physical capital investment $_{t+1}$	0.003*** (0.001)	0.008*** (0.001)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)	0.004*** (0.001)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.003)
Prior average financial slack	-0.036*** (0.004)	0.002 (0.001)	0.044*** (0.004)	0.045*** (0.005)	0.044*** (0.004)	0.045*** (0.005)	0.627*** (0.115)	0.611*** (0.148)	0.612*** (0.148)	0.610*** (0.148)
Prior average HR slack	-0.006 (0.005)	-0.010 (0.009)	-0.046*** (0.005)	-0.042*** (0.006)	-0.042*** (0.006)	-0.040*** (0.007)	0.096*** (0.012)	0.148*** (0.034)	0.148*** (0.034)	0.146*** (0.023)
Prior human capital investment	0.009*** (0.001)	0.010*** (0.001)	-0.001*** (0.000)	-0.001*** (0.003)	-0.001*** (0.003)	-0.002*** (0.003)	-0.001*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)
Cash and balance due to deposits	-0.022* (0.010)	-0.030* (0.013)								
Noninterest revenues	-0.003*** (0.001)	-0.001*** (0.000)								
Δ Human capital investment $_t$			-0.011*** (0.000)	-0.011*** (0.000)	-0.011*** (0.000)	-0.011*** (0.000)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)
Financial slack $_t$	0.018*** (0.001)	0.027*** (0.002)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)	0.003 (0.002)	0.027 (0.022)	0.027 (0.022)	0.023 (0.022)
HR slack $_{t+1}$	0.008*** (0.001)	0.012*** (0.002)	-0.215*** (0.035)	-0.214*** (0.034)	-0.213*** (0.035)	-0.216*** (0.035)	0.363** (0.133)	0.347** (0.133)	0.347** (0.133)	0.348** (0.133)
HR slack \times Financial Slack			0.009 (0.006)	0.009 (0.006)	0.009 (0.006)	0.010 (0.019)				
HR slack \times Δ Human capital investment			0.031*** (0.002)	0.031*** (0.002)	0.032*** (0.002)	0.032*** (0.002)	0.229*** (0.010)	0.229*** (0.010)	0.229*** (0.010)	0.211*** (0.012)
χ^2	35.637	18.771	53.623	53.834	53.829	53.860	19.354	19.391	19.382	19.419
R^2	0.7122	0.7096	0.2859	0.2865	0.2862	0.2868	0.3643	0.3648	0.3647	0.3650

Notes: Robust standard errors reported in parentheses; $n = 38,249$ for no strategic change; $n = 19,079$ for strategic change; year dummies included in all models.

* $p < .05$
 ** $p < .01$
 *** $p < .001$

TABLE 5
Regression Results for Moderated Mediation Using Continuous Measure of Strategic Change

	Tobin's q_{t+2}							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-1.447*** (0.026)	-1.527*** (0.024)	1.530*** (0.021)	1.530*** (0.021)	1.528*** (0.021)	1.519*** (0.021)	1.522*** (0.021)	1.522*** (0.021)
Charter	0.004*** (0.001)	0.004*** (0.001)	-0.006*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)
Geographic district	-0.011*** (0.001)	-0.010*** (0.001)	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)
Firm size	0.070*** (0.002)	0.078*** (0.002)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)
Prior Tobin's q	-0.005*** (0.000)	-0.005*** (0.000)	0.076*** (0.000)	0.076*** (0.000)	0.076*** (0.000)	0.076*** (0.000)	0.076*** (0.000)	0.076*** (0.000)
Risk profile	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Δ Physical capital investment $_{t+1}$	0.007*** (0.000)	0.005*** (0.000)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)
Prior average financial slack	0.496*** (0.046)	0.427*** (0.46)	0.353*** (0.042)	0.355*** (0.042)	0.354*** (0.042)	0.354*** (0.042)	0.376*** (0.042)	0.366*** (0.042)
Prior average HR slack	-0.002 (0.005)	-0.006 (0.006)	-0.046*** (0.006)	-0.045*** (0.006)	-0.052*** (0.006)	-0.050*** (0.006)	-0.043*** (0.006)	-0.044*** (0.006)
Prior human capital investment $_t$	0.007*** (0.000)	0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Δ Human capital investment $_{t+1}$			0.061*** (0.008)	0.061*** (0.008)	0.056*** (0.008)	0.054*** (0.008)	0.060*** (0.008)	0.061*** (0.008)
Financial slack $_t$	0.027*** (0.008)	0.025*** (0.008)	0.052*** (0.008)	0.052*** (0.008)	0.051*** (0.008)	0.051*** (0.008)	0.053*** (0.008)	0.053*** (0.008)
HR slack $_{t+1}$	0.581*** (0.035)	0.524*** (0.036)	0.132** (0.040)	0.188*** (0.044)	0.190*** (0.045)	0.179*** (0.045)	0.187*** (0.044)	0.188*** (0.044)
Strategic change	-0.004*** (0.001)	-0.004*** (0.001)	-0.007*** (0.001)	-0.009*** (0.001)	-0.007*** (0.003)	-0.006*** (0.002)	-0.008*** (0.001)	-0.008*** (0.001)
HR slack \times Strategic change			0.117** (0.038)	0.117** (0.038)	0.114** (0.042)	0.114** (0.066)	0.229*** (0.059)	0.229*** (0.061)
HR slack \times Δ Human capital investment					0.025*** (0.007)	0.024** (0.008)		
HR slack \times Financial slack							0.014 (0.011)	0.004 (0.011)
Strategic change \times Δ Human capital investment					0.002 (0.002)	0.001 (0.002)		
Strategic change \times Financial slack		0.211*** (0.005)					0.010*** (0.002)	0.012*** (0.002)
Strategic change \times HR slack \times Δ Human capital investment						0.152* (0.068)		0.150* (0.070)
Strategic change \times HR slack \times Financial slack								1.106*** (0.178)
F-Statistic	36.531	36.612	47.287	47.380	47.428	47.441	47.808	47.932
R ²	0.5856	0.6098	0.2870	0.2890	0.2917	0.2935	0.2915	0.2942

Note: Robust standard errors reported in parentheses.

* $p < .05$

** $p < .01$

*** $p < .001$

on firm performance, we have advanced efforts to incorporate the role of context in determining the favorability of slack resources in organizations. Our results suggest that HR slack is more positively related to firm performance in the context of strategic change, and that this relationship is even stronger with increased levels of financial slack. Moreover, we address calls to examine the mechanisms through which slack creates value, demonstrating that firms' changes in their investments in human capital serve as a key mechanism through which financial slack complements HR slack in organizations pursuing strategic change.

Contributions

Our paper contributes to research on slack and resource management. On the topic of slack, we offer three key contributions. First, our unique focus on the strategic change context as a key contingency influencing the effects of slack accounts for the fact that firms' strategies are not static, and that periods of strategic transition generate unique requirements for the effective management of firms' resources. Moreover, we contend that the notion set forth in prior slack research that particular strategies benefit from slack resources as a general rule (i.e., indefinitely) (Cheng & Kesner, 1997; Mishina et al., 2004) is likely more reflective of the *resource intensiveness* of those strategies than of the long-term benefits of *slack* in those contexts. By shifting the focus from firms' pursuits of different strategies to the pursuit of strategic change, our study allows us to instead examine a concentrated window during which slack resources have a clear, identifiable purpose as a changing firm's resource requirements differ substantially from the firm's norm. From a contingency perspective, this presents a compelling illustration of fit—i.e., excess resources in a defined time period aligned with the increased resource requirements induced by a firm's pursuit of strategic change in the same time period.

Second, our findings related to the effect of HR slack highlight an important caveat to prior findings. Whereas prior research has suggested that HR slack is idiosyncratic and absorbed, and thus offers limited value beyond an organization's current operations (George, 2005; Sharfman et al., 1988), we argue and demonstrate that the strategic change context represents a setting that is in fact quite conducive to the benefits associated with excess employees. While we acknowledge that cognitive constraints may limit the redeployment options available for any *individual*

employee in the strategic change context, we advance the idea that HR slack allows firms the flexibility to allocate individuals to the roles in which their human capital is best suited—whether this is within the firm's current or change-oriented operations.

Third, through our examination of change in human capital investment as a mediator through which financial slack complements HR slack in the strategic change context, we have addressed calls for the identification of specific mechanisms through which slack creates value, and demonstrated support for the importance of context in shaping the utilization and combined benefits of multiple types of slack in organizations. In particular, in addition to demonstrating that HR slack is more positively related to firm performance in firms pursuing strategic change, our results suggest that financial slack can be used to increase investments in an organization's human capital, thereby further improving firm performance by increasing the value and fit of the firm's HR slack relative to the needs of the strategic change context. This is noteworthy—first, because it suggests that, unlike perspectives advanced in prior research (e.g., Lecuona & Reitzig, 2014; Mishina et al., 2004), the value of HR slack is not necessarily fixed, and second, because it highlights changes in human capital investment as a proximal mechanism through which firms can utilize slack to improve performance (Lecuona & Reitzig, 2014), as well as realize complementarities between different types of slack (Paeleman & Vanacker, 2015).

Our paper offers insights that connect the study of slack to research on resource management. The consideration of different types of slack within the context of strategic change, and the examination of change in investment in human capital as a mechanism through which slack may create distinct value, offer a more comprehensive assessment of the context in which slack is held and utilized. Moreover, with these foci on both the investment and deployment decisions associated with slack in the pursuit of strategic change, we offer an examination of how firms combine multiple resource management activities to create value in dynamic contexts, tapping into the very foundation of the resource management perspective (Sirmon & Hitt, 2009).

Limitations and Future Research Directions

Our study's limitations point to opportunities for future research. First, while our focus on the banking industry allowed us to eliminate noise

associated with examining firms in different industries and to test our theory in a context in which human and financial resources play critical roles in firms' success (Sirmon & Hitt, 2009), research assessing the generalizability of our findings in other industries—particularly outside the service context—is needed.

Second, although our additional unreported analysis using net income as an alternative measure of our dependent variable reflects the robustness of our findings to multiple measures of financial performance, our study does not speak to the effects of slack on other, nonfinancial indicators of firms' health or success. Future research would benefit from the examination of how the possession and management of slack resources contribute to more proximal performance outcomes (e.g., service quality, labor productivity) in the context of strategic change.

Third, as with most other research on strategic change, we are unable to pinpoint the exact timing of the decisions and implementation involved in firms' strategic change processes (Kunisch et al., 2017). Thus, we made decisions about the timing of measurement of focal variables based on the temporal sequencing—rather than on absolute time points—associated with our theory. Future research would benefit from the development of a finer-grained understanding and collection of more continuous data related to firms' strategic change pursuits.

Finally, although we took measures to mitigate concerns related to endogeneity, our data do not provide insights into why firms engage in strategic change or accumulate slack. A richer understanding of the organizational contexts surrounding the pursuit of change and the accumulation (and utilization) of slack would provide valuable insights into the relationships observed in the present study. Future research would benefit from a more intimate look into the decisions and activities that unfold within organizations involved in these processes.

CONCLUSION

We demonstrate that the strategic change context creates an environment in which excess employees (HR slack) have an identifiable and suitable purpose and thus positively affect firm performance—arguably by increasing a firm's capacity to maintain current operations while advancing growth in new markets. We further demonstrate that financial slack enhances the value associated with excess employees within this context, in part by providing the

means for a firm to increase investments in the human capital of its workforce—thereby improving the collective alignment of employees' abilities and motivation to the multiple requirements for effective strategic change. The strength of these conclusions would be enhanced by future research assessing the characteristics of firms' HR slack and demonstrating the generalizability of our findings to nonservice contexts.

REFERENCES

- Abowd, J. M., Kramarz, F., & Margolis, D. N. 1999. High wage workers and high wage firms. *Econometrica*, 67: 251–333.
- Allison, P. D. 1990. Change scores as dependent variables in regression analysis. *Sociological Methodology*, 20: 93–114.
- Amburgey, T. L., & Dacin, T. 1994. As the left foot follows the right? The dynamics of strategic and structural change. *Academy of Management Journal*, 37: 1427–1452.
- Ansoff, H. I. 1965. *Corporate strategy: Business policy for growth and expansion*. New York, NY: McGraw-Hill Books.
- Bamford, C. E., Dean, T. J., & McDougall, P. P. 2000. An examination of the impact of initial founding conditions and decisions upon the performance of new bank start-ups. *Journal of Business Venturing*, 15: 253–277.
- Barker, V. L., & Duhaime, I. M. 1997. Strategic change in the turnaround process: Theory and empirical evidence. *Strategic Management Journal*, 18: 13–38.
- Baron, R. M., & Kenny, D. A. 1986. The moderator–mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51: 1173–1182.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99–120.
- Batt, R. 2002. Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal*, 45: 587–597.
- Boeker, W. 1989. Strategic change: The effects of founding and history. *Academy of Management Journal*, 32: 489–515.
- Boeker, W. 1997. The influence of managerial characteristics and organizational growth. *Academy of Management Journal*, 40: 152–170.
- Bourgeois, L. J. 1981. On the measurement of organizational slack. *Academy of Management Review*, 6: 29–39.

- Bowden, E. V. 1980. *Revolution in banking*. Richmond, VA: Robert F. Dame Publishing.
- Bradley, S. W., Shepherd, D. A., & Wiklund, J. 2011. The importance of slack for new organizations facing tough environments. *Journal of Management Studies*, 48: 1071–1097.
- Buller, P. F., & McEvoy, G. M. 2012. Strategy, human resource management and performance: Sharpening line of sight. *Human Resource Management Review*, 22: 49–56.
- Burns, T., & Stalker, G. M. 1961. *The management of innovation*. London, U.K.: Tavistock.
- Chattopadhyay, P., Glick, W. H., & Huber, G. P. 2001. Organizational actions in response to threats and opportunities. *Academy of Management Journal*, 44: 937–955.
- Cheng, J., & Kesner, I. 1997. Organizational slack and response to environmental shifts. *Journal of Management*, 23: 1–18.
- Cyert, R. M., & March, J. G. 1963. *A behavioral theory of the firm*. Englewood, NJ: Free Press.
- DaDalt, P. J., Donaldson, J. R., & Garner, J. L. 2003. Will any *q* do? *Journal of Financial Research*, 26: 535–551.
- Deb, P., David, P., & O'Brien, J. 2017. When is cash good or bad for firm performance? *Strategic Management Journal*, 38: 436–454.
- Donaldson, L. 2001. *The contingency theory of the firm*. Thousand Oaks, CA: Sage Publishing.
- Edwards, J. R., & Lambert, L. S. 2007. Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12: 1–22.
- Fama, E. F. 1980. Agency problems and the theory of the firm. *Journal of Political Economy*, 1: 288–307.
- Ferris, D. L., Lian, H., Brown, D. J., & Morrison, R. 2015. Ostracism, self-esteem, and job performance: When do we self-verify and when do we self-enhance? *Academy of Management Journal*, 58: 279–297.
- Geiger, S. W., & Cashen, L. H. 2002. A multidimensional examination of slack and its impact on innovation. *Journal of Managerial Issues*, 14: 68–84.
- Geiger, S. W., & Makri, M. 2006. Exploration and exploitation innovation processes: The role of organizational slack in R&D intensive firms. *The Journal of High Technology Management Research*, 1: 97–108.
- George, G. 2005. Slack resources and the performance of privately held firms. *Academy of Management Journal*, 48: 661–676.
- Ginsberg, A. 1988. Measuring and modeling changes in strategy: Theoretical foundations and empirical directions. *Strategic Management Journal*, 9: 559–575.
- Greene, W. H. 2003. *Econometric analysis*. Upper Saddle, NJ: Prentice Hall Publishing.
- Greiner, L. E., & Bhambri, A. 1989. New CEO intervention and dynamics of deliberate strategic change. *Strategic Management Journal*, 10: 67–86.
- Hannan, M. T., & Freeman, J. 1984. Structural inertia and organizational change. *American Sociological Review*, 49: 149–164.
- Haveman, H. A. 1992. Between a rock and a hard place: Organizational change and performance under conditions of fundamental environmental transformation. *Administrative Science Quarterly*, 37: 48–75.
- Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Herold, D. M., Jayaraman, N., & Narayanaswamy, C. R. 2006. What is the relationship between organizational slack and innovation? *Journal of Managerial Issues*, 18: 372–392.
- Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. 2001. Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44: 13–28.
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. 1997. Technical and strategic human resources management effectiveness as determinants of firm performance. *Academy of Management Journal*, 40: 171–188.
- Iyer, D. N., & Miller, K. D. 2008. Performance feedback, slack, and the timing of acquisitions. *Academy of Management Journal*, 51: 808–822.
- Jensen, M. C., & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3: 305–360.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. 2012. How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55: 1264–1294.
- Kelly, D., & Amburgey, T. L. 1991. Organizational inertia and momentum: A dynamic model of strategic change. *Academy of Management Journal*, 34: 591–612.
- Kennedy, P. 2008. *A guide to econometrics*. Malden, MA: Wiley-Blackwell Publishing.
- Kim, D., & Santomero, A. M. 1988. Risk in banking and capital regulation. *Journal of Finance*, 43: 1219–1233.
- Kim, J. Y., & Miner, A. S. 2007. Vicarious learning from the failures and near-failures of others: Evidence from the

- U.S. commercial banking industry. *Academy of Management Journal*, 50: 687–714.
- Kor, Y. Y., & Leblebici, H. 2005. How do interdependencies among human-capital deployment, development, and diversification strategies affect firms' financial performance?. *Strategic Management Journal*, 26: 967–985.
- Kor, Y. Y., & Mahoney, J. T. 2005. How dynamics, management, and governance of resource deployments influence firm-level performance. *Strategic Management Journal*, 26: 489–496.
- Kraatz, M. S., & Zajac, E. J. 2001. How organizational resources affect strategic change and performance in turbulent environments: Theory and evidence. *Organization Science*, 12: 632–657.
- Kunisch, S., Bartunek, J. M., Mueller, J., & Huy, Q. N. 2017. Time in strategic change research. *Academy of Management Annals*, 11: 1005–1064.
- Kuusela, P., Keil, T., & Maula, M. 2017. Driven by aspirations, but in what direction? Performance shortfalls, slack resources, and resource-consuming vs. resource-freeing organizational change. *Strategic Management Journal*, 38: 1101–1120.
- Langfred, C. W. 2004. Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal*, 47: 385–399.
- Latham, S. F., & Braun, M. R. 2008. The performance implications of financial slack during economic recession and recovery: Observations from the software industry (2001–2003). *Journal of Managerial Issues*, 20: 30–50.
- Lawrence, P. R., & Lorsch, J. W. 1967. Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12: 1–48.
- Lecuona, J. R., & Reitzig, M. 2014. Knowledge worth having in excess: The value of tacit and firm-specific human resource slack. *Strategic Management Journal*, 35: 954–973.
- Lee, S. 2011. How financial slack affects firm performance. *Journal of Economic Research*, 16: 1–27.
- Levinthal, D. A., & March, J. G. 1993. The myopia of learning. *Strategic Management Journal*, 14: 95–112.
- Lungeanu, R., Stern, I., & Zajac, E. J. 2016. When do firms change technology-sourcing vehicles? The role of poor innovative performance and financial slack. *Strategic Management Journal*, 37: 855–869.
- Luo, C., Zhang, D., Luo, B., & Ge, J. 2017. Ambidextrous strategy and firm performance: The moderating effects of organizational slack and organizational life cycle. *Business and Management Studies*, 3: 1–11.
- Martinez, R. J., & Artz, L. 2006. An examination of firm slack and risk-taking in regulated and deregulated airlines. *Journal of Managerial Issues*, 18: 11–31.
- Miller, D., & Friesen, P. H. 1984. A longitudinal study of the corporate life cycle. *Management Science*, 30: 1161–1183.
- Miller, D., & Shamsie, J. 1996. The resource-based view of the firm in two environments: The Hollywood film studios from 1936 to 1965. *Academy of Management Journal*, 39: 519–543.
- Mintzberg, H., & Waters, J. A. 1982. Tracking strategy in an entrepreneurial firm. *Academy of Management Journal*, 25: 465–499.
- Mishina, Y., Pollock, T. G., & Porac, J. F. 2004. Are more resources always better for growth? Resource stickiness in market and product expansion. *Strategic Management Journal*, 25: 1179–1197.
- Mudambi, R., & Swift, T. 2014. Knowing when to leap: Transitioning between exploitative and explorative R&D. *Strategic Management Journal*, 35: 126–145.
- Myer, A. D. 1982. Adapting to environmental jolts. *Administrative Science Quarterly*, 4: 515–537.
- Nohria, N., & Gulati, R. 1996. Is slack good or bad for innovation? *Academy of Management Journal*, 39: 1245–1264.
- Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. 2014. Resource-based perspectives on unit-level human capital: A review and integration. *Journal of Management*, 40: 316–346.
- Oster, S. 1982. Intraindustry structure and the ease of strategic change. *Review of Economics and Statistics*, 64: 376–383.
- Paeleman, I., & Vanacker, T. 2015. Less is more, or not? On the interplay between bundles of slack resources, firm performance, and firm survival. *Journal of Management Studies*, 52: 819–848.
- Pennings, J. M., Lee, K., & Witteloostuijn, A. 1998. Human capital, social capital, and firm dissolution. *Academy of Management Journal*, 41: 425–440.
- Pfeffer, J. 1994. Competitive advantage through people. *California Management Review*, 36: 9–29.
- Pfeffer, J., & Salancik, G. R. 1978. *The external control of organizations*. New York, NY: New York Publishing.
- Ployhart, R. E., Van Iddekinge, C. H., & Mackenzie, W. I. 2011. Acquiring and developing human capital in service contexts: The interconnectedness of human capital resources. *Academy of Management Journal*, 54: 353–368.
- Powell, T. C. 1992. Organizational alignment as competitive advantage. *Strategic Management Journal*, 13: 119–134.

- Rajagopalan, N., & Spreitzer, G. M. 1997. Toward a theory of strategic change: A multi-lens perspective and integrative framework. *Academy of Management Review*, 22: 48–79.
- Ramaswamy, K. 1997. The performance impact of strategic similarity in horizontal mergers: Evidence from the U.S. banking industry. *Academy of Management Journal*, 40: 697–715.
- Reilly, G., Nyberg, A. J., Maltarich, M., & Weller, I. 2014. Human capital flows: Using context-emergent turnover (CET) theory to explore the process by which turnover, hiring, and job demands affect patient satisfaction. *Academy of Management Journal*, 57: 766–790.
- Rose, P. S. 1988. Characteristics of merging banks in the United States: Theory, empirical results, and implications for public policy. *Review of Business and Economic Research*, 24: 1–19.
- Semadeni, M., Withers, M. C., & Certo, T. 2014. The perils of endogeneity and instrumental variables in strategy research: Understanding through simulations. *Strategic Management Journal*, 35: 1070–1079.
- Sgourev, S. V., & Lent, W. 2017. When too many are not enough: Human resource slack and performance at the Dutch East India Company (1700–1795). *Human Relations*, 70: 1293–1315.
- Sharfman, M. P., Wolf, G., Chase, R. B., & Tansik, D. A. 1988. Antecedents of organizational slack. *Academy of Management Review*, 13: 601–614.
- Sirmon, D. G., & Hitt, M. A. 2009. Contingencies within dynamic managerial capabilities: Independent effects of resource investment and deployment on firm performance. *Strategic Management Journal*, 30: 1375–1394.
- Skaggs, B. C., & Youndt, M. 2004. Strategic positioning, human capital, and performance in service organizations: A customer interaction approach. *Strategic Management Journal*, 25: 85–99.
- Sirmon, D. G., Gove, S., & Hitt, M. A. 2008. Resource management in dyadic competitive rivalry: The effects of resource bundling and deployment. *Academy of Management Journal*, 51: 919–935.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. 2007. Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32: 273–292.
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. 2011. Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37: 1390–1420.
- Smith, K. G., & Grimm, C. M. 1987. Environmental variation, strategic change and firm performance: A study of railroad deregulation. *Strategic Management Journal*, 8: 363–376.
- Stemper, R. G. 1990. *The guide to successful consumer banking strategy*. New York, NY: Wiley Publishing.
- Symeonidou, N., & Nicolaou, N. 2018. Resource orchestration in startups: Synchronizing human capital investments, leveraging strategy and founder startup experience. *Strategic Entrepreneurship Journal*, 12: 194–218.
- Tan, J., & Peng, M. W. 2003. Organizational slack and firm performance during economic transitions: Two studies from an emerging economy. *Strategic Management Journal*, 24: 1249–1263.
- Van de Ven, A. H., & Poole, M. S. 1995. Explaining development and change in organizations. *Academy of Management Review*, 20: 510–540.
- Vanacker, T., Collewaert, C., & Zahra, S. A. 2017. Slack resources, firm performance, and the institutional context: Evidence from privately held European firms. *Strategic Management Journal*, 38: 1305–1328.
- Voss, G. B., Sirdeshmukh, D., & Voss, Z. G. 2008. The effects of slack resources and environmental threat on product exploration and exploitation. *Academy of Management Journal*, 51: 147–164.
- Wan, W. P., & Yiu, D. W. 2009. From crisis to opportunity: Environmental jolt, corporate acquisitions, and firm performance. *Strategic Management Journal*, 30: 791–801.
- Wang, H., Choi, J., Wan, G., & Dong, J. Q. 2016. Slack resources and the rent generating potential of firm-specific knowledge. *Journal of Management*, 42: 500–523.
- Zajac, E. J., & Shortell, S. M. 1989. Changing generic strategies: Likelihood, direction, and performance implications. *Strategic Management Journal*, 10: 413–430.



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