

RECONSIDERING THE BALANCE: SOCIAL AND HUMAN CAPITAL IN FIRM STRATEGIC RENEWAL

Dr. Emily Marie Foster

University at Buffalo, Buffalo, NY 14260, USA

Abstract: *This paper delves into the intricate dynamics of social and human capital as integral intangible assets in organizational strategy and competitive advantage. Traditionally, these capitals have been viewed as complementary, synergistic elements within firms' capabilities. However, when faced with strategic vulnerability, some firms may shift their perspective, treating social and human capital as potential substitutes rather than complementary assets. Additionally, a concept of equifinality exists, suggesting that different firms may anticipate diverse outcomes regarding the impact of these capitals on strategic renewal. The paper's core objective is to develop a comprehensive theory that explains the conditions under which firms may adopt a "substitution strategy." This strategy involves a significant reliance on social capital to develop and renew capabilities, potentially at the expense of human capital development. The framework presented in this theory encompasses various factors that drive the adoption of the substitution strategy at both inter-firm and firm levels. It also establishes a critical link between this strategic choice and long-term firm competitiveness and performance. Notably, the paper argues that adopting the substitution strategy, while initially appearing benign, can hinder a firm's ability to create and capture value from externally-sourced capabilities in the long run.*

Keywords: *Social Capital, Human Capital, Intangible Organizational Assets, Substitution Strategy, Firm Competitiveness*

Introduction

The strategy and organizational literature identifies social capital and human capital as the two major forms of intangible organizational assets that underlie the competitive advantage of firms (Nahapiet and Ghoshal, 1998; Kor and Leblebici, 2005). Past research in this area typically frames social and human capital as complementary building blocks of firms' competitive capabilities (Adler and Kwon, 2002). However, perceptions of difference in the cost and speed of developing and deploying these two types of capital imply that in situations of strategic vulnerability, firms might discount their complementary nature and conceive of them as substitutes. Moreover, organizational actors may also espouse expectations of equifinality regarding the ultimate impact of social and human capital in the renewal of their capabilities and core competencies, further suggesting that the two types of capital may be treated as substitutes by some firms in their attempts at strategic renewal (Burgelman, 1983; Agarwal and Helfat, 2009).

In this paper, I develop a theory for explaining when and how firms may adopt the 'substitution strategy'— i.e. choose to rely extensively on their social capital in developing and renewing their capabilities at the expense of adequate attention to their human capital. Such substitution manifests

itself as an increased ratio of external access of capabilities (by deploying the firm's social capital) to internal development (by developing and deploying the firm's human capital). The proposed theoretical framework includes potential drivers of the adoption of the substitution strategy at different organizational levels, i.e. inter-firm level and firm level. The theory also incorporates a link between such a strategic choice and long-term firm competitiveness and performance based on the rationale that adopting the substitution strategy, though seemingly harmless in the short-run, hurts the firm in the long-run by contributing to the firm's growing inability to create and capture value from externally-sourced capabilities.

Extant research argues that in order to successfully renew their capabilities and maintain their competitiveness, firms rely on a combination of internal development and external access (Capron and Mitchel, 2009; Helfat et al., 2006). The balanced attention to internal development while attempting external access equips the firm with the required absorptive capacity to assimilate and integrate externally sourced components of competitive capabilities (Cohen and Levinthal, 1991). However, the conditions that firms face in internal and external capability sourcing tend to differ significantly, particularly in terms of the inertia that characterizes their underlying processes (Lee, Lee, and Pennings, 2001).

For instance, when attempting to externally source their required capabilities by allying with or acquiring a firm that possesses those capabilities, firms have the choice of switching alliance partners or considering different acquisition targets if the process is not successful (Dussagge, Garrette, and Mitchel, 2000). But, the same cannot be argued for internal development as it is carried out by deploying the firm's in-house human capital in combination with the firm's routines, both of which are path-dependent and develop gradually making them less responsive to sudden, drastic changes (Nelson and Winter, 1982).

The fundamental argument here is that such a difference in the inertia of the processes through which firms engage in internal development and external access of capabilities is likely to contribute to the appeal of increasing the firm's ratio of external access to internal development for some firms when responding to a need for strategic renewal.

A basic argument of this paper is that unbalanced reliance on external sources may negatively impact the effective integration and the long-term value creation potential of the externally-accessed components of capabilities. To illustrate, one might think of the example of a 'lazy eye' disorder (officially known as amblyopia) that affects some children where the brain partially or wholly ignores input from one eye, leading to its diminishing ability over time. The most common treatment for this visual disorder is to force the use of the lazy eye by patching the good eye. In other words, as long as the good eye remains accessible, the brain increasingly relies on its function and further ignores the condition of the lazy eye. A disproportionate increase in the external accessing of required capabilities by a struggling firm aiming for strategic renewal is tantamount to letting the brain increase its reliance on the good eye while ignoring the lazy eye, which leads to the long-term overall deterioration of the child's vision.

The proposed theory holds strong implications for multiple streams of strategy and organizational literature. First, this study contributes to an ongoing discussion on the downsides of social capital (Edelman et al., 2002; Gargiulo and Benassi, 1999; Villena, Revilla, and Choi, 2011). Occasionally,

research has cautioned against the downsides of alliances and networks, or the ‘dark side’ of social capital (Gargiulo and Benassi, 1999). Research generally celebrates external collaborations and social capital as essential sources of competitive advantage through which firms gain access to and leverage resources essential to their competitiveness (Adler and Kwon, 2002; Coleman, 1988; Chung, Singh, and Lee, 2000; Eisenhardt and Shoonhoven, 1996; Park, Chen, and Gallagher, 2002). However, several aspects of incorporating social capital and interorganizational relationships in firms’ strategies have already been cautioned against. Gargiulo and Benassi (1999), for instance, argued that strong ties to cohesive contacts limit the manager's ability to keep control on the composition of his network and jeopardize his adaptability to adapt to changing task environments. Similarly, Edelman et al. (2002) questioned the notion that the accumulation of social capital has a proportionate positive effect on the performance of projects in organizations. This study joins this stream of research by highlighting the long-term impacts of the substitution strategy as an intriguing mechanism behind the adverse effects of overreliance on social capital.

This study also contributes to the research on the enablers and impediment of the thriving of human capital in firms (Galunic and Anderson, 2000; Kor and Leblebici, 2005). Particularly, the proposed theory helps to answer the baffling question of why some firms do not invest adequately in the enhancement of their human capital despite all the evidence for its pivotal role in the firm’s competitiveness and prosperity. Prior research has provided some interesting answers to this question, including the fear of employee mobility and contribution to competitors’ position after receiving the investments and trainings at the focal firm (Coff, 1997). The answer suggested here is one that implicates strategic choices motivated by short-termism and the pursuit of readilyavailable remedies to the firm’s capability deficiencies by increasing reliance on external sources at the risk of disturbing the quintessential balance between external and internal sources of capabilities.

Theory Development

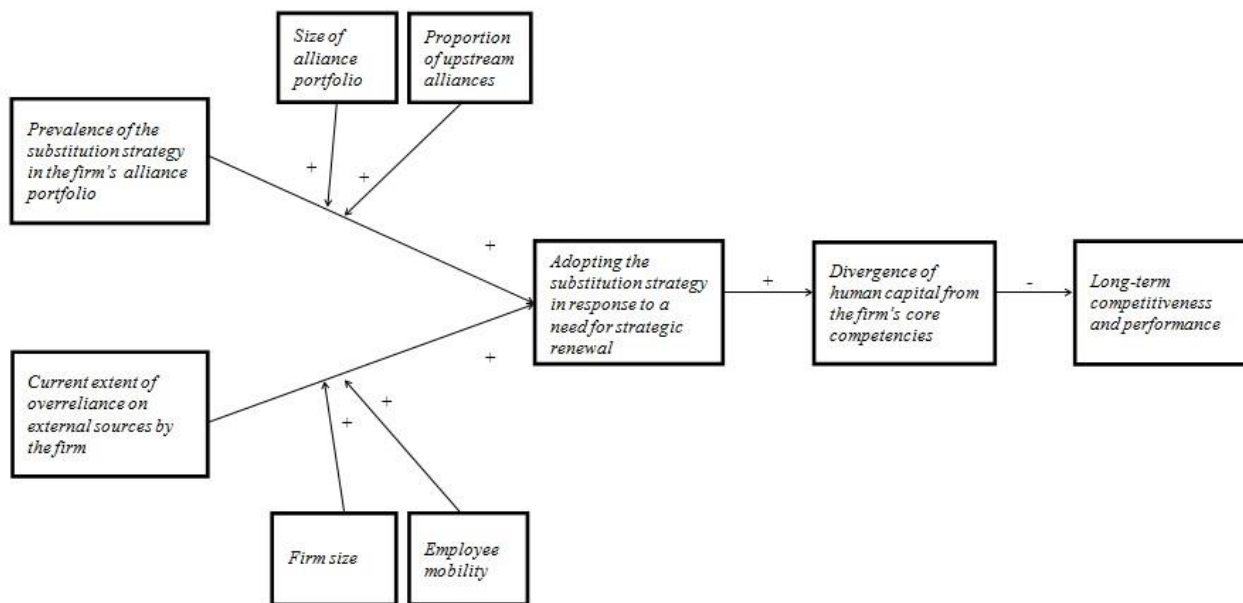
Past research has shown that firms rely on combinations of internal and external resources and capabilities to maintain or enhance their competitiveness (Pfeffer and Salancik, 1978; Zaheer and Bell, 2005; Capron and Mitchel, 2009). We know, for instance, that internal R&D and external knowledge acquisition are complementary activities that if implemented properly will increase firms’ innovative capabilities (Cassiman and Veugelers, 2006). In fact, the ability to combine internal and external innovative capabilities has been argued to be a critical element of competitive advantage particularly in industries characterized by a fast rate of growth (Rigby and Zook, 2002). Research has also highlighted the necessity of maintaining a balance between the internal and external sourcing of competitive capabilities as each source offers unique advantages that are best harnessed in conjunction. Externally-developed capabilities offer the advantage of timeliness and spare the firm the troubles of having to reinvent the wheel (Zaheer and Bell, 2005).

Internally-developed capabilities, on the other hand, not only help firms in screening the external environment for possible external sources, they also facilitate the effective assimilation of those capabilities and help integrate them into the firm’s core competencies (Arora and Gambardella, 1994). Whereas the external access of capabilities is carried out by deploying the firm’s social capital, internal development is mainly achieved by developing and deploying the firm’s human capital. Therefore, increased reliance on external sources of capabilities at the expense of sufficient internal development

by a firm when devising a strategy to respond to a need for strategic renewal can be interpreted as an instance of the substitution of social capital for human capital.

I begin the theory development by tracing the antecedents of the adoption of the substitution strategy at two distinct organizational levels: the inter-firm and the firm level. I then move on to propose a link between the adoption of the substitution strategy and long-term firm performance, a relationships mediated by the divergence of the firm's human capital from the firm's core competencies.

Figure 1 summarizes the proposed theoretical framework.



Antecedents at the inter-firm level

Firms' decision to adopt the substitution strategy may be facilitated by enabling strategic behavior within their social structure such as the prevalence of this strategic choice among their alliance partners. Strong inclination among a firm's current alliance partners toward external sourcing at the expense of sufficient internal development of capabilities is likely to make the substitution strategy more attractive to the firm. Research has long argued that interorganizational networks facilitate the spread of institutional norms of acceptable behavior (Guler, Guillen, and MacPherson, 2002). By observing other members of their social system organizations try to understand what practices are acceptable and effective. Research has shown, for instance, that firms are more likely to change their governance structure or corporate strategies, engage in mergers and acquisitions, or advocate a particular policy when their top executives are connected to leaders and decision makers of other firms that engage in similar actions (Westphal, Gulati, and Shortell, 1997). The effect of such social mechanisms of establishing the appropriateness of a strategy is stronger the higher the uncertainty surrounding its outcome and impacts. The normative and mimetic isomorphism resulting from the social cohesion and conformity pressure inherent in the structure and content of social networks reduces the uncertainty and increases the attractiveness of a given strategic choices for member firms.

Institutional theory suggests that the diffusion of norms is fastest when social actors are perceived as peers. For example, Galaskiewicz and Wasserman (1989) in their study of charitable contributions of business corporations to non-profit organizations found that corporations are likely to give more money to a nonprofit that was previously funded by companies that have interpersonal ties between their top managers and decision makers and the firm's boundary-spanning personnel. Similarly, Haunschild (1993) examined the influence of interorganizational imitation on corporations' decision to engage in corporate acquisitions, and found that managers imitate the acquisition activities of other corporations with which they maintain board interlock relationships. We also know, thanks to an extensive body of literature, that interorganizational relationships among peer firms facilitate the diffusion and adoption of innovations (Westphal et al., 1997; Abrahamson and Rosenkopf, 1997).

A high ratio of external access to internal development of competitive capabilities among a firm's peers represented in the firm's alliance portfolio is likely to function as a signal that increasing the firm's reliance on external sources in response to a need for strategic renewal is more likely to be perceived as conforming to the acceptable norms of behavior. This is particularly important since those partners will likely also be the firm's go-to choice in its attempt to externally source the required capabilities. As a result, the substitution strategy is likely to become more attractive to the firm.

Moreover, the predictions of the Behavioral Theory of the Firm (Cyert and March, 1963) with regard to the nature of organizations' response to performance decline provide further insight into the logic for the increased attractiveness of the substitution strategy when the firm's alliance partners are likely to sanction such a strategic choice. According to the behavioral theory, when an organization falls below the aspiration level of a goal variable, decision makers within the organization initiate a problemistic search for a solution to restore performance. Further empirical research in this tradition has shown that organizations respond to low performance by making various types of strategic and operational changes that – satisfice the organizational goals based on aspiration levels (Simon, 1955; Greve, 2008). When compared to the rival theory of optimizing, satisficing requires the discovery of the first plausible

solution rather than the optimal one, and hence, entails radically lower costs which appears as its main appeal to organizational decision makers (Winter, 2000). Firms faced with a need for strategic renewal are more likely to see the substitution strategy as a satisficing solution when their alliance partners are also more inclined toward external access at the expense of adequate internal development of competitive capabilities. In other words, the increased likelihood of social acceptance among peers and potential external sources of capabilities makes the substitution strategy a more satisficing solution compared to other alternatives including making costly internal investments to maintain a proportionate level of internal development. Therefore,

Proposition 1: The prevalence of the substitution strategy (i.e. disproportionate reliance on external sources of competitive capabilities) among a firm's alliance partners will increase the possibility that the firm adopts the substitution strategy in reaction to a need for strategic renewal.

Moreover, the size of alliance portfolio is likely to enhance the enabling effect of the social acceptance of the substitution strategy by the firm's alliance partners. Specifically, a large alliance portfolio implies that the social acceptance toward increased reliance on external sources is sanctioned by a larger group of the firm's peers strengthening the resulting pressure for mimetic and normative isomorphism. A large alliance portfolio also offers higher visibility for the accepted norms of behavior by firms (Haveman, 1993). That is, while actions of firms in a small group may not be strong enough to generate mimetic isomorphism, an increase in the size of the group also increases the visibility of common actions as well as the strength of mimetic isomorphism based on those actions. A large size of the alliance portfolio also implies that the strategy of disproportionate reliance on external sources has withstood a bigger number of trials further assuring the firm about its perceived effectiveness. Therefore,

Proposition 2: The size of alliance portfolio will enhance the enabling effect of the prevalence of the substitution strategy among the firm's alliance partners on the adoption of the substitution strategy by the firm in reaction to a need for strategic renewal.

The content of inter-firm ties as manifested by the proportion of upstream alliances in the firm's alliance portfolio may also enhance the main effect of alliance partners. Upstream alliances typically function as joint platforms for developing new knowledge, technology, and subsequently, new capabilities (Hess and Rothaermel, 2011). They also function as channels for learning and acquiring partners' knowledge and capabilities (Mowery, Oxley, and Silverman, 1996). Thus, as interorganizational structures for joint creation of capabilities, upstream alliances are particularly important in explaining the diffusion of social norms prevalent among the network members regarding the strategic choices for sourcing capabilities. That is, high proportion of upstream alliances in a firm's alliance portfolio implies that the firm's ties to its partners are more likely to act as conduits for the diffusion of norms held by those partners regarding the acceptability of increasing the firm's reliance on external sources for capabilities. Therefore, the firm is likely to have a stronger perception of the institutional norms regarding the sourcing of required capabilities, increasing the possibility of acting upon such perception to legitimize its strategic choice when faced with the need for strategic renewal. Therefore,

Proposition 3: The proportion of upstream alliances in the alliance portfolio will enhance the enabling effect of the prevalence of the substitution strategy among the firm's alliance partners on the adoption of the substitution strategy by the firm in reaction to a need for strategic renewal.

Antecedents at the firm level

The development process of capabilities inside firms tends to be gradual and path-dependent (Helfat and Peteraf, 2003). The path and duration of the process of capability development is a function of multiple organizational elements including the expertise present in the development team and the initial directions chosen to explore.

Hence, firms often realize the outcome of their investments in internal capability development well after the initial decision to invest is made and implemented. In other words, maintaining a sufficient stock of internally developed capabilities requires maintaining an adequate flow of internal investments dedicated to the capability development process without expectations of immediate return. A high current ratio of external access to internal development by the firm is indicative of the lack of such adequate flow of internal investments in capability development.

Moreover, the path-dependence of the internal development process implies that the firm's current reluctance to invest in adequate internal development is driven by the past levels of such investments and is likely to also drive the future levels. In other words, the firm's current unwillingness to make sufficient internal investments is expected to lead to its future unwillingness, making the substitution strategy more attractive to the firm when in need of strategic renewal.

Prior research has highlighted the key role played by managerial cognitive representations in constraining an organization's behavior in the face of radical shifts in the industry, and subsequently, the development of requisite capabilities. Tripsas and Gavetti (2000), for instance, in their study of the Polaroid Corporation's struggles with the transition to digital photography, found that managerial cognition intensified the inertial forces against organizational change by restricting and directing the technology development activities aimed at the development of new digital capabilities. In a similar vein, I argue that current reliance on external sources of capabilities is symptomatic of an outward managerial mindset regarding the supply of requisite capabilities, and that such an outward mindset is likely to prevail due to the forces of organizational inertia (Hannan and Freeman, 1984) and the inherently gradual nature of the internal capability development process. Therefore,

Proposition 4: The greater the current extent of a firm's overreliance on external sources of capabilities, the higher the possibility that the firm adopts the substitution strategy in reaction to a future need for strategic renewal.

Furthermore, research has shown that organizational inertia increases with size, leading to the expectation that larger firms will be subjected to stronger inertial forces further compelling them to maintain the status quo of reliance on external sources for their capability requirements. Prior literature has shown that firm size is a determinant of organizational inertia (Miller and Chen, 1994). The rigid routines and complex hierarchy that often characterizes larger organizations is believed to be a major obstacle in the way of organizational change. Size makes the need for change harder to detect and makes it costlier. Therefore, larger firms are more likely to be inclined toward repeating entrenched strategies that have become ingrained in the firm's bureaucratic procedures. Firm size is also likely to increase the managers' confidence in their ability to resist change by repeating previously tested strategies. Thus,

managers at larger firms that are already pursuing the substitution strategy will likely find the substitution strategy even more attractive in the future. Therefore,

Proposition 5: Firm size will enhance the effect of the current extent of overreliance on external sources of capabilities on the possibility that the firm adopts the substitution strategy in reaction to a future need for strategic renewal.

Finally, the inertial force of the firm's current extent of overreliance on external sources of capabilities is also likely to be enhanced by the firm's employee mobility. Particularly, employee mobility amplifies the influence of the outward mindset of the firm's managers by creating an overall impression of the organization and its human capital as being a low-potential target for receiving the firm's limited stock of attention and investments toward developing new capabilities. This argument is further informed by prior research that has shown that organizations with advanced capabilities risk losing their competitive position in the market when they suffer key employee mobility (Aime et al., 2009). Thus, faced with a high rate of employee mobility, the firm's managerial decision processes are more likely to be shaped by the existing externally-oriented mindset leading to an increased preference for maintaining the status quo in terms of the firm's capability sourcing strategies. Therefore,

Proposition 6: Employee mobility will enhance the effect of the current extent of overreliance on external sources of capabilities on the possibility that the firm adopts the substitution strategy in reaction to a future need for strategic renewal.

Long-term consequences of the substitution strategy

Long-term performance impacts of the substitution strategy are rooted in the divergence of the knowledge and expertise of the firm's human capital from what constitutes the firm's core competencies.

Specifically, the adoption of the substitution strategy inevitably leads to decreased attention to and investments in the maintenance and enhancement of the firm's human capital. As the firm fails to adequately invest in the continuous development of in-house human capital and opts for increased reliance on external sources, employees are likely to interpret such lack of attention as a signal that their continued commitment to the firm may come at the expense of their individual careers. As a result, they are likely to be increasingly driven by their individual desire to seek career-enhancing opportunities instead of fully committing to initiatives aimed at sustaining the firm's core competencies. In other words, as a result of the firm's adoption of the substitution strategy the employees' knowledge and expertise will likely gradually drift away from the firm's core knowledge and technologies.

Prior research has emphasized the need for organizations to carefully consider the long-term human capital implications of their decision to rely on external sources. Mayer, Somaya, and Williamson (2012), for instance, found that as a result of a firm's outsourcing decisions human capital advantages can accrue to the firm's suppliers, rather than the firm itself, weakening the firm's future capabilities. Therefore, short-term cost-benefit analyses typically driving firms' decision to rely on external sources need to be supplemented with considerations of potential implications for the long-term trajectory of the development of the firm's human capital. Failure to incorporate such long-term considerations tends to manifest itself as a widening divide between the interests and skills of employees and those relevant to the firm's core competencies. Therefore, *Proposition 7: The adoption of the substitution*

strategy in reaction to a need for strategic renewal leads to the long-term divergence of knowledge and expertise present in the firm's human capital from what constitutes the firm's core competencies. Finally, the divergence of the firm's human capital from the firm's core competencies caused by the firm's adoption of the substitution strategy will have an adverse effect on firm performance in the long run. Particularly, such divergence not only weakens the supply of internally-developed capabilities to sustain and enhance the firm's core competencies, it also contributes to the firm's inability to take full advantage of externally-sourced capabilities. Firms require a combination of internal development and external access of competitive capabilities to succeed (Capron and Mitchel, 2009; Helfat et al., 2006). External access allows the firm to partially supply its requisite knowledge and technology without having to reinvent the wheel. Internal development ensures that the firm builds and maintains the foundation necessary to assimilate the externally-accessed components of capabilities. The absorptive capacity created through engaging in sufficient internal development provides the firm with a continued ability to effectively incorporate the external components into the firm's innovation and product development routines (Cohen and Levinthal, 1991).

However, the long-term expertise gap caused by the adoption of the substitution strategy leads to the firm's failure to build and enhance the required foundation for assimilating and fully benefiting from externally accessed capabilities. This argument is in line with prior research that has argued that excessive outsourcing can decrease organizational learning and weaken the firm's long-term capacity to internalize external knowledge (Mayer et al., 2012). Absorptive capacity is necessarily entwined with the firm's human capital implying that the expertise gap created by the firm's strategic choice is likely to also attenuate the performance benefits available to the firm from external capabilities. Therefore, *Proposition 8: The internal gap caused by the adoption of the substitution strategy in reaction to a need for strategic renewal will hurt the firm's competitiveness and performance in the long run.*

Discussion and Implications

Extant research has long argued that firms need to balance their attention to and reliance on the internal development and the external access of capabilities to gain and sustain competitive advantage (Helfat et al., 2006; Capron and Mitchel, 2009). Yet, despite its potentially crucial consequences, a systematic investigation of the antecedents and consequences of firms' strategic choice to ignore this critical balance is conspicuously absent in the literature. This study takes a first step by proposing a theoretical framework that incorporates constructs at both the inter-firm and the firm level to explain the possibility of deviating from the state of balance toward a disproportionate reliance on external sources of capabilities. Inherent in the proposed theory is the logic that the conduit for the external access of capabilities is the firm's social capital while the engine driving their internal development and deployment is the firm's human capital. Thus, firms' adoption of the strategy of overreliance on external sources of capabilities in response to a need for strategic renewal can conceptually be equated to the substitution of social capital for human capital. The undesired impacts of this strategy, though probably not tangible in the short run, will indeed surface in the long run as a widening gap between the expertise present in the firm's human capital and what constitutes its core competencies, in turn hurting long-term competitiveness and performance.

The proposed theory advances an institutional and path-dependent logic for explaining the antecedents of firms' strategic choice to substitute social capital for human capital in their capability development

and strategic renewal efforts. The inertial forces that enable this choice are neither static, nor isolated from the firm's social context. To the contrary, such forces follow a dynamic, path-dependent, and socially-enabled process making them hard to resist. This study further highlights the necessity of supplementing short-term cost-benefit calculations in the sourcing of firm capabilities with long-term considerations about potential impacts on the firm's human capital and in turn, on its ability to deploy and benefit from externally-sourced capabilities.

This study contributes to an ongoing discussion on the 'dark side of social capital' (Benassi and Gargiulo, 1999; Edelman et al., 2002) — i.e. the idea that the benefits of social capital for firms are not unconstrained and that research needs to further explore the contingencies and boundary conditions surrounding those benefits. Benassi and Gargiulo (1999), for instance, argued that strong ties to cohesive contacts limit the manager's ability to keep control on the composition of his network and jeopardize his adaptability to changing task environments.

Similarly, Edelman et al. (2002) questioned the notion that the accumulation of social capital has a positive and proportionate effect on the performance of projects in organizations and found a host of less beneficial aspects to utilizing social capital. This study joins this stream of research by uncovering one of the intriguing mechanisms underlying such less beneficial aspects — i.e. the tendency to substitute social capital for human capital.

Research on the enablers and impediment of the thriving of human capital in firms is also informed by the proposed theoretical framework (Galunic and Anderson, 2000; Kor and Leblebici, 2005). Particularly, this study helps to untangle some firms' baffling reluctance to invest in the enhancement of their human capital especially given its pivotal role in the firm's competitiveness and prosperity. The answer revealed here is one that involves strategic choices motivated by short-termism and the pursuit of less resource-intensive responses to the firm's need for strategic renewal. Particularly, the proposition that firms' predisposition to rely on external sources tends to persist due the forces of organizational inertia and hardened managerial cognition may hold important clues to the persistent lack of appropriate attention to and investment in firms' human capital.

External collaboration implies the involvement of external partners whose intentions for granting the focal firm access to their stock of capabilities merits special attention (Ahuja, 2000). Particularly, one might argue that potential alliance partners would be less motivated to engage in capability sharing with the focal firm fearing disproportionate contributions due to the focal firm's internal deficiencies reflected in its need for strategic renewal. Similar concerns are present in any instance of inter-firm collaboration where the parties have disparate capabilities and performances. Prior research has attempted to decode this puzzling situation by exploring potential benefits for partners collaborating with seemingly inferior firms. This research has observed that when facing performance decline, firms are likely to engage in inter-firm collaborations to gain access to additional resources from partners that can help improve their performance (Hitt et al., 2000; Morrow et al., 2007), and that partners with deteriorating performance tend to capture a disproportionate amount of value created collaboratively (Das, Sen, and Sengupta, 1998). However, this literature has also shown that inferior partners tend to give more concessions to partners, a fact that may explain those partners' willingness to engage in such seemingly less beneficial collaborations. Ahuja, Polidoro, and Mitchell (2009), for instance, suggested the existence of incentives for central firms to collaborate with less embedded partners, including the

central firm's ability to secure more favorable terms of trade in the form of a majority ownership. In addition to enjoying a position of power and a majority ownership, potential partners may also be attracted to such collaborations for reasons such as access to proprietary knowledge and technology. Famous instances include the collaborations between incumbent pharmaceutical companies and young biotechnology firms that possessed the new radical technology, but were obviously inferior to their large partners in terms of financial performance and market share (Rothaermel and Boeker, 2008). Moreover, resource complementarities between firms might also drive potential partners to collaborate with a seemingly inferior partner with the expectation that the pooled resources can create more value than the sum of value created by individual firm resources (Nohria and Garcia-Pont, 1991; Chung et al., 2000).

References

- Abrahamson E, Rosenkopf L. 1997. Social network effects on the extent of innovation diffusion: A computer simulation. *Organization Science*8: 289-309.
- Agarwal R, Helfat CE. 2009. Strategic renewal of organizations. *Organization Science* 20(2): 281–293.
- Adler PS, Kwon S-W. 2002. Social capital: Prospect for a new concept. *Academy of Management Review*27: 17-40.
- Ahuja G. 2000. The duality of collaboration: inducements and opportunities in the formation of interfirm linkages. *Strategic Management Journal* March Special Issue 21: 317–343.
- Ahuja G, Polidoro F, Mitchell W. 2009. Structural homophily or social asymmetry? The formation of alliances by poorly embedded firms. *Strategic Management Journal* 30(9): 941–958.
- Aime F, Johnson S, Ridge JW, Hill AD. 2010. The routine may be stable but the advantage is not: Competitive implications of key employee mobility. *Strategic Management Journal*31: 75–87.
- Arora A, Gambardella A. 1994. Evaluating technological information and utilizing it: Scientific knowledge, technological capability and external linkages in biotechnology. *Journal of Economic Behavior & Organizations*24(1): 91-114.
- Burgelman RA. 1983. A model of the interaction of strategic behavior, corporate context and the concept of strategy. *Academy of Management Review*8: 61-70.
- Cassiman B, Veugelers R. 2006. In search of complementarity in innovation strategy: Internal R&D and external knowledge acquisition. *Management Science*52: 68–82.
- Chung S, Singh H, Lee K. 2000. Complementarity, status similarity and social capital as drivers of alliance formation. *Strategic Management Journal* 21(1): 1–22.

- Coff RW. 1997. Human assets and management dilemmas: Coping with hazards on the road to resourcebased theory. *Academy of Management Review*22: 374-402.
- Cohen WM, Levinthal DA. 1990. Absorptive capacity: a new perspective on learning and innovation. *AdministrativeScienceQuarterly*35(1):128–152.
- Cyert RM, March JG. 1963. *A Behavioral Theory of the Firm*. Prentice Hall, Englewood Cliffs, NJ.
- Das S, Sen PK, Sengupta S. 1998. Impact of strategic alliances on firm valuation. *Academy of Management Journal* 41:27–41.
- Dussauge P, Garrette B, Mitchell W. 2000. Learning from competing partners: Outcomes and durations of scale and link alliances in Europe, North America and Asia. *Strategic Management Journal*21: 99-126.
- Edelman L, Bresnen M, Newell S, Scarbrough H, SwanJ. 2002. The darker side of social capital. 3rdEuropean Conference on Knowledge, Learning and Capabilities, Athens, Greece.
- Eisenhardt KM, Schoonhoven CB. 1996. Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms. *Organization Science* 7: 136–150.
- Galaskiewicz J, WassermanS. 1989. Mimetic processes within an interorganizational field: An empirical test. *Administrative Science Quarterly*34: 454-479.
- Galunic DC, Anderson E. 2000. From security to mobility: generalized investments in human capital and agent commitment. *OrganizationScience*11: 1–20.
- Gargiulo M, Benassi M. 1999. The Dark Side of Social Capital. in *Corporate Social Capital and Liability*, edited by Roger Leenders and Shaul Gabbay. Boston: Kluwer. 298-322
- Greve HR. 2008. A behavioral theory of firm growth: sequential attention to size and performance goals. *Academy of Management Journal*51: 476-494.
- Guler I, Guillen M, MacPherson JM. 2002. Global competition, institutions and the diffusion of organizational practices: The international spread of the ISO 9000 quality certificates. *Administrative Science Quarterly*47: 207–232.
- Hannan MT., Freeman J. 1984. Structural inertia and organizational change. *American Sociological Review*49: 149-164.
- Haunschild PR. 1993. Interorganizational imitation: The impact of interlocks on corporate acquisition activity. *Administrative Science Quarterly*38: 564-592.

- Haveman HA. 1993. Follow the leader: Mimetic isomorphism and entry into new markets. *Administrative Science Quarterly*38: 593-627.
- Helfat CE, Finkelstein S, Mitchell W, Peteraf MA, Singh H, Teece DJ, Winter SG. 2006. *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Blackwell, New York.
- Helfat CE, Peteraf MA. 2003. The dynamic resource based view: Capabilities life cycles. *Strategic Management Journal*24: 997-1010.
- Hess AM, Rothaermel FT. 2011. When are assets complementary? Star scientists, strategic alliances, and innovation in the pharmaceutical industry. *Strategic Management Journal*32(8): 895–909.
- Hitt MA, Dacin MT, Levitas E, Arregle JL, Borza A. 2000. Partner selection in merging and developed market contexts: resource-based and organizational learning perspectives. *Academy of Management Journal*43: 449–467.
- Kor YY, Leblebici H. 2005. How do interdependencies among human-capital deployment, development, and diversification strategies affect firms' financial performance? *Strategic Management Journal*26(10): 967– 985.
- Lee C, Lee K, Pennings JM. 2001. Internal capabilities, external networks, and performance: A study on technology-based ventures. *Strategic Management Journal*22: 615-640.
- Mayer KJ, Somaya D, Williamson IO. 2012. Firm-Specific, Industry-Specific, and Occupational Human Capital and the Sourcing of Knowledge Work. *Organization Science* 23(5): 1311-1329.
- Miller D, Chen M-J. 1994. Sources and consequences of competitive inertia: A study of the U.S. airline industry. *Administrative Science Quarterly*39: 1-23.
- Morrow JL, Sirmon DG, Hitt MA, Holcomb TR. 2007. Creating value in the face of declining performance: firm strategies and organizational recovery. *Strategic Management Journal*28(3): 271–283.
- Nahapiet J, Ghoshal S. 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*23: 242-266.
- Nohria N, Garcia-Pont C. 1991. Global strategic linkages and industry structure. *Strategic Management Journal Summer Special Issue* 12: 105–124.
- Pfeffer J, Salancik GR. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. New York, NY, Harper and Row.
- Rigby D, Zook C. 2002. Open-market innovation. *Harvard Business Review*, 80(10) 80-89.

Rothaermel FT, Boeker W. 2008. Old technology meets new technology: Complementarities, similarities, and alliance formation. *Strategic Management Journal* 29(1): 47-77.

Simon HA. 1955. A behavioral model of rational choice. *Quarterly Journal of Economics* 69: 99–118.

Tripsas M, Gavetti G. 2000. Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal* 21: 1147-1162.

Villena VH., Revilla E, Choi TY. 2011. The dark side of buyer–supplier relationships: a social capital perspective. *Journal of Operations Management* 29: 561–576.

Westphal JD, Gulati R, Shortell SM. 1997. Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption. *Administrative Science Quarterly* 42: 366-394.

Winter SG. 2000. The satisficing principle in capability learning. *Strategic Management Journal* Special Issue 21(10–11): 981–996.

Zaheer A, Bell GG. 2005. Benefiting from network position: firm capabilities, structural holes and performance. *Strategic Management Journal* 26(9): 809–825.