

# IS MY FIRM-SPECIFIC INVESTMENT PROTECTED? OVERCOMING THE STAKEHOLDER INVESTMENT DILEMMA IN THE RESOURCE-BASED VIEW

ROBERT E. HOSKISSON  
ENI GAMBETA  
COLBY D. GREEN  
TOBY X. LI  
Rice University

The resource-based view posits that firms achieve competitive advantage from value creation through firm-specific investments held by key stakeholders: employees, suppliers, and customers. Shareholder-dominant (agency) theory holds that all residual income claimant rights belong to shareholders, circumscribing other key stakeholders' ability to appropriate value from their investment. However, recent enhancements to stakeholder theory grounded in property rights suggest that such stakeholders may need protection for implicit residual claims. A central purpose of this article is to build a model of the protection devices used to ensure these implicit rights. Individual *ex ante* devices such as stakeholder ownership only partially incentivize stakeholders' firm-specific investments because they are subject to two types of uncertainties—behavioral and environmental—and individual devices aimed at reducing one type of uncertainty may exacerbate the other. We therefore expand on efforts to establish a stakeholder theory of strategic management by proposing an integrated model of protection devices, which seeks to overcome the incentive dilemma in reducing both uncertainties by reducing barriers to stakeholder firm-specific investment. Our model also explores the conflicts and complementarities associated with device implementation. Finally, we discuss theoretical and practical implications, as well as future research opportunities associated with our model.

Incentivizing stakeholders to make firm-specific investments (FSIs) is a central issue in the resource-based view (RBV). According to the RBV (Barney, 1991), a firm achieves sustained competitive advantage through unique bundles of resources that are often created by key stakeholder FSIs (Wang & Barney, 2006), thereby allowing the firm to enjoy efficiencies vis-à-vis other firms.<sup>1</sup> The firm needs

stakeholders to make FSIs within the firm to obtain a resource-based competitive advantage; therefore, incentives for stakeholders to make FSIs are an important foundation for the RBV. The fundamental question of how to incentivize stakeholders to make FSIs remains central to any theory of competitive advantage, given the dilemma surrounding them. As Coff and Raffiee explain, "A dilemma exists because the very same reasons that firms want employees [or other stakeholders] to develop firm-specific skills may simultaneously make employees [or other stakeholders] reluctant to do so" (2015: 328). By definition, FSIs are more valuable to the focal firm than to other firms.

As a result, the firm can engage in behavioral opportunism vis-à-vis its stakeholders. The firm can appropriate value and quasi-rents using its bargaining position, since stakeholders, once having made an FSI, cannot obtain value from outside the focal firm. This potential for holdup can disincentivize stakeholders from committing their FSIs *ex ante*. Protections for stakeholders are therefore required. Related insights have led to recent efforts to shore up the theoretical link between stakeholders and the value creation–appropriation

---

All authors contributed equally in developing this manuscript. We are grateful for feedback provided by Jeff Harrison and Heli Wang on earlier drafts of the paper. We also acknowledge the helpful and developmental feedback provided by former associate editor Mike Pfarrer and three anonymous reviewers.

---

<sup>1</sup> We acknowledge that value creation is possible through other theoretical approaches, such as entrepreneurial activity and creative destruction (e.g., Makadok, 2010), but our focus is on sustained competitive advantage as emphasized in the RBV. Additionally, we acknowledge that sustained competitive advantage in the RBV can also be achieved through monopoly rents—that is, a monopolistic position a firm enjoys over a resource (Peteraf, 1993). However, we are specifically dealing with the case where such rents are generated through an FSI, since this is the condition in which the "FSI dilemma" is manifested.

problem (Asher, Mahoney, & Mahoney, 2005; Klein, Mahoney, McGahan, & Pitelis, 2012; Mahoney, 2012; Stout, 2012) in which the firm is characterized as a "nexus of explicit and implicit contracts" (Mahoney, 2012: 162) or even a "nexus of firm-specific investments" (Blair & Stout, 1999: 275). As applied to the RBV, this view of the firm invites an examination of the prominent protections needed to induce key stakeholders to make FSIs.

Several protection devices have been proposed to alleviate and resolve the stakeholder FSI dilemma, using various theoretical lenses in economics and finance (e.g., Grossman & Hart, 1986; Hart & Moore, 1990; Rajan & Zingales, 1998; Williamson, 1975, 1985), corporate law (e.g., Blair & Stout, 1999, 2001), and human capital (e.g., Becker, 1964; Lazear, 2009) theories. However, because of different assumptions or emphases on a particular stakeholder group (Clark, 1985), scholars from different fields have generally proposed protection devices in isolation that are partial solutions to incentivizing stakeholders to make FSIs. In this article we are not so ambitious as to unify these disparate bodies of literature and theories, nor is it our intention to simply review the plethora of protection devices that have been documented. However, consideration of how prominent devices work together is necessary to understand value creation through multistakeholder FSIs.

A central purpose of this article is to contribute to the RBV by examining how firms can incentivize key stakeholders in investing in the firm to derive FSI-based competitive advantage. Building on different perspectives, we contribute to the RBV, as well as to an emerging stakeholder theory of strategic management, by developing a framework of contractual and noncontractual devices and demonstrating how they induce stakeholder FSIs by protecting their ability to appropriate value. Likewise, our theory provides a foundation for the development of a governance theory for stakeholders, which ultimately allows firm prescription for an idiosyncratic mix of protection devices, depending on the firm's situation.

In developing our integrated framework, we first categorize the protection devices into two groupings, according to the assumptions made by previous researchers from a variety of fields: (1) whether threats to the stakeholder's value appropriation can be addressed *ex ante* (prior to investment) or *ex post* (following investment) and (2) whether threats to the stakeholder's value

appropriation arise primarily from *behavioral* uncertainty or *environmental* uncertainty. Second, we examine the effects of these protection devices on the FSIs of the three primary stakeholder groups in the firm's value chain: employees, suppliers, and customers. This categorization allows us to examine the devices' interaction with respect to the primary sources of the FSI dilemma (behavioral or environmental uncertainty), as well as with respect to each of the primary firm stakeholders.

Our integrated theoretical framework yields three novel theoretical contributions. First, we demonstrate that each of these devices, taken in isolation, is insufficient to overcome the dilemma of stakeholder FSI because each *ex ante* device individually creates counteractive effects on the two types of uncertainties. *Ex ante* devices intended to reduce behavioral uncertainty, for instance, simultaneously increase stakeholders' exposure to environmental uncertainty. Likewise, protections to reduce stakeholder exposure to environmental uncertainty entail their own trade-offs in increasing stakeholder behavioral uncertainty. Firms may then be stuck in a "trap" where alleviating one type of stakeholder uncertainty aggravates another source of uncertainty for FSI. Thus, the stakeholder FSI dilemma remains unresolved, limiting realized firm value.

Second, drawing insight from the RBV that firms face causal ambiguity *internal* to the firm, we develop a theory of how *ex post* devices can be integrated with *ex ante* devices to provide a resolution to the FSI dilemma and overcome the incentive trap associated with *ex ante* devices alone. These *ex post* devices are critical for facilitating and ensuring stakeholder FSI property rights essential for value creation. Thus, our integrated framework develops arguments that highlight the need for understanding why firms need to implement multiple *ex ante* and *ex post* protection devices that work in concert for stakeholders.

Third, the implications of this model are that an appropriate mix of *ex ante* and *ex post* protection devices can be designed by the focal firm, depending on its idiosyncratic conditions. In short, our model provides the framework necessary to conduct a case-specific analysis of appropriate protection devices in the stakeholder theory of strategic management to engage its relevant stakeholders in maximizing competitive advantage (Mahoney, 2012: 161). In the next

section we provide more detail regarding our overall theoretical arguments and introduce our model.

### THEORETICAL BACKGROUND AND MODEL DEVELOPMENT

When a firm's stakeholders make investments in firm-specific assets, they contribute to the firm's unique bundles of resources (e.g., Coff & Krscynski, 2011; Wang & Barney, 2006). According to the RBV, these unique and valuable bundles of resources generate a sustained competitive advantage for the firm (Barney, 1991). However, FSI is a concept that predates the RBV in many economic subdisciplines, such as transaction cost economics (TCE; Williamson, 1975) and human capital theory (Becker, 1964). Further, as far back as Barnard (1938) and, subsequently, Simon (1952), there have been strong suggestions that firms need to provide "inducements for contribution" by stakeholders.

Although FSIs can be beneficial from the perspective of both the investing firm and the stakeholder, a conflict between these two parties becomes apparent: either the firm or the stakeholder benefits from FSIs largely to the extent that one party can hold the other hostage and appropriate the quasi-rents generated from the investment. Value is created when stakeholders make FSIs because these investments are difficult to imitate, which allows the firm to avoid factor market competition for the investment and, thus, generate economic rents (Barney, 1986, 1991). However, this inability of stakeholders to transfer the value of their investments in factor markets may subject the stakeholder to firm holdup and an inability to appropriate value ex post. Anticipating this problem, stakeholders may be unwilling ex ante to make sufficient FSIs for value creation in the first place. On the other hand, as holders of value-generating FSIs, stakeholders may increase their bargaining power over the focal firm (Coff, 1999; Porter, 1980; Williamson, 1975, 1985). The result can also be mutual holdup, which can at times be beneficial in preventing either side from taking advantage of the other, but it may not universally resolve the multitude of appropriation and adaptation issues related to FSIs (Williamson, 1983: 537).

The challenge of resolving the FSI dilemma for stakeholders is central to various economic (Alchian & Demsetz, 1972; Grossman & Hart, 1986; Hart & Moore, 1990; Jensen & Meckling, 1976;

Rajan & Zingales, 1998; Williamson, 1975, 1985), legal (Blair & Stout, 1999, 2001), and human capital (Becker, 1964; Lazear, 2009; Wasmer, 2006) theories. In fact, this challenge can be considered one of the primary issues in theories of the firm.<sup>2</sup> Alchian and Demsetz (1972) were among the first to formulate the problem of multiple investing "stakeholders," who faced the problem of mutual holdup and uncertainty surrounding value appropriation and generation (although the problem had also been identified earlier by Coase [1937]). Various theoretical solutions have been proposed since then. Agency theory (Jensen & Meckling, 1976) proposes that the solution to incentivizing all stakeholders to exert effort in the firm can be resolved ex ante by drawing up complete contracts, which allocate ownership and residual claimant rights, thus resolving the problem and leaving no need to consider ex post holdups. This approach has been criticized and extended by incomplete contract theory (Grossman & Hart, 1986; Hart & Moore, 1990), which highlights the fact that contracts are almost never ex ante complete and ex post holdups are ubiquitous. Incomplete contract theory scholars argue that ex post solutions must be found to the holdup problem related to stakeholder FSI. One such solution is to assign property (decision) rights to one party that retains the ability to resolve ex post holdup. From this perspective, two parties agree to make FSIs knowing that they cannot resolve the dilemma ex ante, but authority is given to one particular party to resolve emerging issues (e.g., Carson & John, 2013).

However, this approach assumes that decision rights can be efficiently allocated ex ante, an assumption that has received significant criticism because it does not consider the possibility that such property rights may be inefficiently allocated (Carson & John, 2013; Tirole, 1999). This criticism is particularly relevant to the RBV, where causal ambiguity *internal* to the organization implies that none of the actors may know ex ante what the value of their contribution may be or how it will evolve. Among the viable solutions is the assignment of decision rights to a "mediating hierarchy" empowered to protect stakeholder interests and resolve their disputes ex post (Blair & Stout, 1999), and whose effectiveness relies on its fiduciary responsibility and legal case precedent to protect

<sup>2</sup> The primary goal of these theories, however, is explaining the boundaries of the firm, rather than explaining sustained competitive advantage, which is the central objective of the RBV (Barney, 1991).

stakeholder interests (Blair, 2005; Clark, 1985). These theoretical perspectives have spawned a large body of literature in various fields, in which these theoretical arguments have been developed into specific devices for inducing a particular stakeholder group to make FSIs. However, because of the varying natures of the disciplines and their assumptions, most of these devices (described in subsequent sections) are considered in isolation and are aimed at overcoming specific aspects of the FSI dilemma for specific stakeholders.

Emerging research toward a stakeholder theory of strategic management draws on property rights theory to argue that stakeholders' FSIs may generate a "residual interest that is not *ex ante* contractually bargained over and it is not *ex post* perfectly allocated" (Mahoney, 2012: 155). This new stakeholder theoretical approach extends the original stakeholder theory formulation (Freeman, 1984), as well as its instrumental form (Harrison, Bosse, & Phillips, 2010), by incorporating property rights insights from the theories discussed above, and it recognizes the firm as a "nexus of firm-specific investments" (Blair & Stout, 1999: 275) from which value appropriation issues stemming from FSIs affect the overall firm value. This emergent literature, thus, has begun to demonstrate the value of a property rights-influenced stakeholder perspective within the RBV.

This property rights-based stakeholder approach has provided a foundation from which to develop a more coherent and unified framework of protection devices that contribute to a firm's competitive advantage and realized value creation. While the theoretical link between the RBV and stakeholder FSI and the associated protections aimed at incentivizing such investments have been developed, much of the literature has focused on either providing piecemeal solutions or listing multiple solutions from multiple theories. However, aggregating these devices into an undifferentiated list has been criticized for its broadness and lack of clarity (Blair, 2005; Klein et al., 2012). When the solutions are offered piecemeal, it is unclear why multiple devices may be needed for multiple stakeholders (or the same stakeholder). Among the challenges is reconciling the need to fairly distribute property rights to the deserving invested parties and RBV's assumption of causal ambiguity that makes identifying those deserving parties difficult. Property rights protections for key stakeholders are therefore needed, but they provide only partial solutions

to alleviating stakeholders' appropriation concerns. Reliance on these property rights protections can even exacerbate those concerns and, hence, can be counterproductive to incentivizing stakeholder FSI and depress overall firm value creation. What is needed is a comprehensive theoretical model detailing how individual devices affect each other in complementary and conflicting ways and, more important, how they can work in concert to resolve the FSI dilemma for stakeholders. Creating such a model can help close the "economic gap between 'potential' and 'realized values'" (Kim & Mahoney, 2002: 225) and can ultimately generate a sustained competitive advantage.

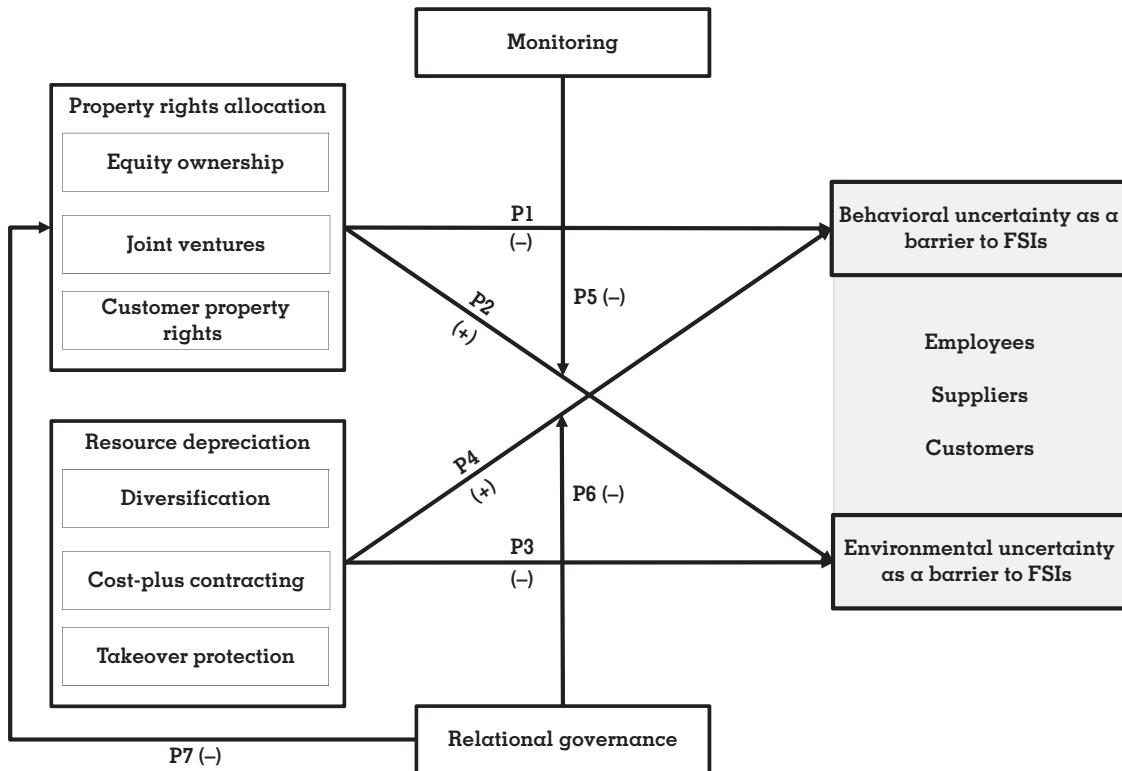
The model in Figure 1 is intended to address these gaps in the theory. We consider the path through which each of the proposed protection devices induces stakeholder groups (employees, suppliers, and customers) to make FSIs by either reducing the stakeholder's behavioral uncertainty or reducing its exposure to environmental uncertainty. Many individual solutions have focused primarily on behavioral uncertainty and have devoted less attention to the equally important environmental uncertainty around the actual realized value of the investment. Overall, we demonstrate why the individual piecemeal approach is insufficient to address both sources of uncertainty, and, likewise, we explore why firms need to consider the interplay of these devices in reducing each type of uncertainty for multiple stakeholders.

As previously mentioned, making an FSI exposes the firm's stakeholders to several uncertainties, thus necessitating the provision of various protective devices to incentivize their FSI engagement and continuity. Uncertainty describes a situation in which information about future states of the world is lacking because the probabilities of outcomes are difficult to calculate or impossible to imagine (Knight, 1921). The uncertainties surrounding FSI are central to the economic theories previously described. For example, TCE describes the FSI dilemma as arising broadly from behavioral and/or environmental uncertainties (Krishnan, Geyskens, & Steenkamp, 2016; Williamson, 1985). These uncertainties have been alluded to since the work of Becker (1964) and can be more precisely found in Hashimoto (1981).

### **Behavioral Uncertainty and FSI**

*Behavioral uncertainty*, on the one hand, is *ex ante* uncertainty about the postinvestment

**FIGURE 1**  
Protection Devices That Promote Stakeholder FSI



behavior of the firm (Hashimoto, 1981: 475; Poppo, Zhuo, & Li, 2016; Schepker, Oh, Martynov, & Poppo, 2014; Wang & Barney, 2006). Such uncertainty exists when the focal stakeholder lacks the ability to determine how the firm will behave after the stakeholder makes an FSI. For example, the possibility that the firm may terminate an employee after making an FSI, or that the firm may appropriate the entire value of the investment, constitutes firm-opportunistic behavior. High uncertainty about a firm's opportunistic behavior reduces the stakeholder's willingness to make an FSI. Employees, for example, will be reluctant to commit ex ante to invest in an FSI acquired through effort and time and forgoing other opportunities if doubts exist that future managerial actions may deprive them of fruits generated by their investments.

### Environmental Uncertainty and FSI

*Environmental uncertainty*, on the other hand, refers to ex ante uncertainty about the value of the investment itself (Hashimoto, 1981: 478; Wang &

Barney, 2006: 470). Such uncertainty exists when it is difficult to determine what the eventual value created by the FSI will be, given the inability to accurately predict future states of the world. Such uncertainty may arise from shifts in the technological and political landscape, changes in market demand or composition of rivalry, or even rare events that create unforeseeable shocks. Unexpected or unpredictable changes in the environment may reduce or eliminate the potential value of an investment; thus, the stakeholder who invested time and energy in generating the investment may be left with no (or reduced) value to appropriate and may have nowhere else to re-deploy this investment since it is firm specific. Such uncertainty is determined by factors often outside the firm's control, so the effect of the protection devices is to reduce the stakeholders' exposure to such environmental "shocks." For example, although the firm may not be able to do much about demand uncertainty, it can take steps ex ante to reduce the exposure of stakeholders to demand uncertainty. However, environmental uncertainty may not always be exogenous. For

example, stakeholders face environmental uncertainty when they cannot accurately determine the impact of managerial actions on the value of the FSI or the firm as a whole. Thus, environmental uncertainty threatens stakeholder FSIs because unforeseen conditions or misdirected managerial action may reduce the potential for value capture.

Behavioral and environmental uncertainties are the primary hazard barriers that need to be addressed by the firm to incentivize stakeholder FSIs. We examine how common devices proposed in the extant literature address each type of uncertainty for the primary stakeholders, creating conflict among the effects the devices might have on the two types of uncertainties, and we assess how these devices might also complement each other.

### DEVICES PROTECTING STAKEHOLDER FSI

As illustrated in Figure 1, we organize devices from the extant literature into categories along two dimensions. First, we categorize devices according to the *stage* (relative to the FSI) in which the device functions. We group these devices into *ex ante* and *ex post* devices; *ex ante* devices reassure the stakeholder who is making the FSI by laying out the rules of value appropriation prior to the FSI decision, whereas *ex post* devices reassure stakeholders by providing for an *ex post* bargaining process after the decision to make an FSI and also reassure them that the firm will not unilaterally expropriate their investment. Second, we categorize devices according to the type of uncertainty (behavioral or environmental) they are intended to reduce. Overall, we focus on the stakeholders most likely to make valuable FSIs that are members of the firm's value chain—that is, employees, suppliers, and customers (Wang, Barney, & Reuer, 2003).

#### Ex Ante Property Rights Allocation Devices

The problem of reducing behavioral uncertainty for stakeholder FSIs is generally resolved by a set of protection devices that can broadly be characterized as property rights allocation devices (see Figure 1). The most common of these property rights allocation devices include high levels of employee equity ownership (i.e., residual claims to firm profits; Wang, He, & Mahoney, 2009), long-term contracts (e.g., alliances) and joint ventures

for critical suppliers making FSIs (Lumineau & Henderson, 2012; Williamson, 1985), and cooperatives for customers (Hansmann, 1988). The protection devices in this category share the common mechanism of providing a "stake"—a property right in the firm—to the relevant stakeholder (Wang et al., 2003). These property rights provide *ex ante* reassurance that the firm will not engage opportunistically and reduce behavioral uncertainty by decreasing the firm's ability to hold "hostage" stakeholder FSIs. Below we explain in greater detail how the most common devices reduce behavioral uncertainty for each stakeholder.

**Equity ownership and profit-sharing plans.** Equity ownership provides residual claimant property rights to employees, giving them an *ex ante* contractual guarantee that they are entitled to and will receive a particular share of the value that is generated within the firm, therefore helping alleviate behavioral uncertainty by removing the possibility that managers may unilaterally decide to withhold value generated from their FSI (French, 1987; Grossman & Hart, 1986). This protection device is an economic-based solution built on property rights theory (Barzel, 1989; Demsetz, 1967; Libecap, 1989). Employee equity ownership may also be agreeable to other shareholders because it induces FSIs and, thus, maximizes firm value. Employee equity ownership can be provided through several formal and informal channels, such as employee share ownership plans, 401k contribution plans, or open market purchases of a firm's stock by individual employees. Although there is some evidence that these incentives may increase shirking (Klor, Kube, Winter, & Zultan, 2014), employee equity ownership and profit sharing have been shown to help encourage and safeguard human capital FSIs (Azfar & Danninger, 2001; Robinson & Zhang, 2005), as well as to positively moderate the relationship between such investment and firm performance (Wang et al., 2009).

**Joint ventures and long-term contracts.** The creation of a joint venture (Kogut, 1988) with a supplier making an FSI provides the supplier with an explicit ownership stake in the focal investment. Joint venturing reassures the supplier that the relationship will continue until value is created and that the supplier will appropriate value commensurate with its equity stake. This reassurance is valuable for the supplier because the firm can behave opportunistically, such as terminating its relationship with the supplier or

switching to other suppliers (e.g., Kang, Mahoney, & Tan, 2009). Such a solution, of course, also benefits the firm in reducing its behavioral uncertainty relative to FSI, as argued in TCE (Williamson, 1985). An alternative approach is to create special contract provisions that promote coordination when appropriation rights are in question. Although not extending explicit property rights to suppliers, this protection similarly protects suppliers by reducing the risk of opportunistic behavior (Poppo et al., 2016). While TCE emphasizes the role of control in contractual provisions, some evidence suggests that contracts emphasizing coordination (over control) promote cooperative negotiations, even amid opportunistic behavior, by facilitating communication and information sharing when disputes arise *ex post* (Lumineau & Henderson, 2012).

**Customer property rights.** Like other stakeholders, customers also make FSIs under incomplete contracts, in the form of purchases that require expensive search and switching costs (Brush, Dangol, & O'Brien, 2012; Porter, 1980). In this scenario customers face considerable behavioral uncertainty by the firm, from two sources. First, information asymmetry exists between the firm and the customer regarding the true quality or value of the product being sold. The firm may know the true quality dimensions of the product, for example, but may exaggerate the quality in marketing the product. Customers, however, can only discover the true product quality *ex post*, after the purchase. This threat reduces customers' willingness to purchase, which can degenerate into what Akerlof (1970) described as a "market for lemons," and this can further decrease customer investments. In short, customers face the possibility that the firm may be exaggerating the value of its products in which customers may be making long-lasting, firm-specific commitments.

Second, customers making such an FSI as purchasing a specific software package, which requires a large time and learning investment, face the possibility that the firm may discontinue support, updates, or the entire product line. This second problem, in essence, is uncertainty over whether the firm will unilaterally decide to drop the customer. Both of these sources of behavioral uncertainty faced by customers have been acknowledged in the literature (e.g., Hart & Moore, 1996).

The solution for addressing behavioral uncertainty for customers, as with stakeholders, is to

provide property rights or residual control rights to FSI-making customers. This governance device provides solutions to both sources of behavioral uncertainty for such customers by reducing the information asymmetry while increasing the ability of customers to control the actions of the firm. The informational asymmetry surrounding quality is resolved because customers who have ownership in the firm can partially control inputs in making the products they purchase (Hansmann, 1988). Customers, through their residual control rights, can also encourage policies that maximize both the quality they receive and returns to the firm, as opposed to a situation in which the firm simply tries to maximize profits by focusing on the "marginal consumer rather than the average consumer" (Hart & Moore, 1998: 42).<sup>3</sup> Additionally, assigning property rights to customers resolves the issue of a continued long-term relationship between the firm and customers making FSIs, because customers, as shareholders, have a vested interest in voting for such continuity, particularly since in most such governance arrangements, such as cooperatives, shares are nontransferable and so customers and firms are tied (Ferrier & Porter, 1991). While assigning property rights to customers may seem rare, this practice is relatively common in particular industries, including agricultural markets (e.g., farmers' co-ops), retail customer cooperatives (e.g., REI), mutual insurance companies (e.g., USAA, Amica, Northwestern Mutual, TIAA), and consumer banking (i.e., credit unions). These property rights allocation devices targeting employees, suppliers, or customers reduce *ex ante* behavioral uncertainty and foster greater FSI incentive.

*Proposition 1: The provision of property rights allocation devices to employee, supplier, and customer stakeholders decreases the hazard associated with ex ante behavioral uncertainty.*

**Conflicting effects.** The devices outlined above reduce behavioral uncertainty by imposing costs on the firm if it behaves opportunistically, but

<sup>3</sup> In a firm owned by outside owners seeking to maximize firm profits, its quality-price trade-off will be made on the basis of attracting the marginal consumer who is not currently a customer of the firm, whereas existing customers in a customer-owned firm may focus more on providing quality for existing customers.

their effect on stakeholders' exposure to ex ante environmental uncertainty is less obvious. Such ex ante devices may increase stakeholders' exposure to environmental uncertainty because this ownership increases their risk bearing, thus creating a counterbalancing effect on stakeholders' willingness to make FSIs. For instance, as employees are compensated with more equity ownership, their compensation becomes more subject to market fluctuations often associated with environmental changes. This phenomenon is similar to that observed with executive stock compensation (Miller, Wiseman, & Gomez-Mejia, 2002), whereby greater stock compensation increases the risk bearing of the executive and, thus, creates a disincentive to take greater firm risk. For example, in IPOs where environmental uncertainty exists, managers prefer greater fixed compensation as opposed to firm equity (Beatty & Zajac, 1994). Consequently, employee FSIs may depend on the degree to which the firm substitutes fixed wage compensation for equity compensation (Blasi, Freeman, & Kruse, 2016). Similarly, profit-sharing plans have the consequence of tying part of the compensation to environmental shocks (Azfar & Danninger, 2001: 620). From the firm's perspective, such arrangements are beneficial in maintaining flexibility in the face of "sticky" wages (wages that do not change much in the face of volatility), but this increased firm flexibility exposes employees to increased environmental uncertainty.

Similar arguments apply to the firm's suppliers. Although joint ventures and long-term contracts promote cooperation between the firm and its suppliers by reducing behavioral uncertainty, they also increase the supplier's exposure to unforeseen changes in the environment that reduce or eliminate the value being created by the FSI, such as sudden demand shocks or technological developments. The supplier's equity stake in the focal joint venture cannot be easily traded in the secondary market. Thus, the risk-sharing function of joint ventures that reduces behavioral uncertainty related to FSIs also increases the supplier's exposure to environmental uncertainty. Similarly, long-term contracts tie a supplier to a firm's income stream, exposing it to similar idiosyncratic risk. Although long-term contracts generally include decision rules to account for unforeseen environmental changes, such complex decision rules may serve as a disincentive for a supplier to enter into such contracts because

they could signal a high risk of environmental uncertainty (Jap & Ganesan, 2000) and are costly to negotiate. Although not as problematic as joint ventures, long-term contracts nonetheless may increase exposure to environmental uncertainty.

Assigning property rights to customers similarly increases their exposure to environmental uncertainty and may reduce their willingness to make FSIs. The reasons for this reluctance could be twofold. First, being owners in the firm that they patronize, customers are now also exposed to market shocks affecting the firm, because "investing in a firm that one also patronizes can itself increase risk . . . [since] the returns are likely to be highly correlated" (Hansmann, 1988: 289). In contrast with outside owners who can easily sell their stock, customer-owned firms typically restrict their ability to sell stock (Ferrier & Porter, 1991; Porter & Scully, 1987). Thus, the partial vertical integration between customer and firm precludes the possibility that customers will sell the firm's stock and increases their exposure to firm-specific environmental uncertainty. Finally, customer-owned firms may be unable to achieve economies of scale because participation is restricted to a smaller pool of both users and owners (e.g., USAA allows only current or past military personnel to join their insurance pool), potentially making the firm more susceptible to unexpected negative environmental shocks (Ferrier & Porter, 1991; Porter & Scully, 1987).

Thus, for employees, suppliers, and customers, the allocation of property rights has conflicting effects on incentives to make FSIs. While it reduces behavioral uncertainty, it may also increase the stakeholder's exposure to environmental uncertainty.

*Proposition 2: The provision of property rights allocation devices to employee, supplier, and customer stakeholders increases the hazard associated with ex ante environmental uncertainty.*

### **Ex Ante Resource Depreciation Devices**

The property rights allocation devices discussed thus far generally are intended to reduce stakeholders' behavioral uncertainty; however, they largely also have the opposite effect of increasing stakeholders' exposure to environmental uncertainty. Such exposure, which may negatively affect the value of the underlying firm asset and create an unforeseen loss of value,



remains not only unresolved but also may be aggravated when the firm relies only on ex ante property rights allocation devices. Additional ex ante devices are therefore needed to specifically reduce exposure to environmental uncertainty, or the uncertainty surrounding the value to be created.

Several protection devices have been proposed in the literature that serve to buffer the firm against environmental uncertainty. The most salient include diversification (Wang & Barney, 2006), cost-plus contracting (Lusch & Brown, 1996), and takeover protection (Wang, Zhao, & He, 2016). These devices share a common mechanism to increase stakeholders' willingness to make FSIs: they buffer the firm against environmental uncertainty, reducing the threat of resource depreciation. As with ex ante property rights allocation devices, these ex ante resource depreciation devices may be insufficient to unilaterally incentivize FSIs because of their conflicting effects on behavioral uncertainty. Additionally, while ex ante property rights allocation devices generally apply to individual stakeholder groups (since they need to assign such rights to a particular stakeholder), resource depreciation devices generally (with the exception of cost-plus contracts) work for multiple stakeholder groups, since they buffer against external environmental uncertainty for the whole firm.

**Diversification.** Diversification is a protection device that can reduce stakeholders' exposure to FSI environmental uncertainty. Shareholders may oppose diversification because they can sufficiently reduce their exposure to idiosyncratic risk by holding a diversified equity portfolio. As a result, finance scholars have demonstrated that shareholders discount excessive diversification (e.g., Lang & Stulz, 1994), although this conclusion is not without critique (Miller, 2006; Villalonga, 2004). More recent research suggests that diversification needs to be evaluated on a firm-by-firm basis to determine its value-creating nature. Mackey, Barney, and Dotson (2017) demonstrated that there is no universal "diversification discount"; rather, firms can be rational in their choice to diversify while maximizing firm value. Therefore, the rational decision to diversify may have benefits for the firm in terms of value created in idiosyncratic situations. One rational motivation for diversification is to reduce stakeholder exposure to environmental uncertainty and, thus,

incentivize FSIs (Wang & Barney, 2006); in the absence of such protection, FSIs by relevant stakeholders may decrease (Wang et al., 2003).<sup>4</sup>

Diversification may reduce stakeholders' exposure to FSI environmental uncertainty in two ways. First, particularly for employees, diversification can reduce employment risk by creating internal labor markets in the firm (diversified units) that are not subject to the same industry environment. These internal markets allow employees to retain some value from their FSIs by moving horizontally and transferring their FSI knowledge within the firm (to alternate and related business units) if the original project loses value because of industry-specific idiosyncratic conditions (Tate & Yang, 2015; Wang & Barney, 2006). Thus, even if the external environment changes in unforeseeable ways, employees' FSIs are partially protected if their value is unexpectedly reduced in one setting by allowing them to transfer some of the value internally within the firm. For example, an employee might make firm-specific knowledge investments in a unique enterprise resource planning (ERP) software customized for the firm's own use. If the firm is a single-product firm, an unforeseen environmental change may render the single product obsolete, threatening the firm's survival and the employee's ability to capture value from the FSI. In contrast, if the firm diversifies into multiple products, industries, or geographies, the same unforeseen environmental change would render the same product obsolete, but it may not affect others. In this case the employee's FSI is protected because the knowledge is transferrable across firm divisions.

Second, diversification can reduce the volatility of the firm's income streams, thereby reducing uncertainty over its future value or projects. This is particularly important because volatility in the firm's financial performance may discourage stakeholders (including employees, suppliers, and customers) from making FSIs (Bromiley, Miller, & Rau, 2001; Cornell & Shapiro, 1987). For

---

<sup>4</sup> Diversification has long been recognized in economics as an important organizational form for reducing exposure to environmental uncertainty when parties are tied to investments. For example, McCloskey (1976) described the organization of a medieval British village in which farmers diversified their strips of farmland both in crop type and location to reduce exposure to the natural environment, increasing survival even though total production may have been reduced.

example, Alvarez & Marsal, a professional service firm whose founding business focused on restructuring firms in financial distress, has diversified into several additional service businesses. Corporate restructuring per se may be highly volatile for firms like Alvarez & Marsal, because their business grows rapidly and unexpectedly during recessions and dwindles in periods of economic boom. Being focused on a single service—for example, corporate restructuring—could lead to highly volatile and unpredictable income streams for such firms and could reduce employee willingness to make FSIs. This has led Alvarez & Marsal to diversify into related businesses, such as performance improvement consulting and private equity funding (Chekler, 2015). Given its service diversification strategy, the firm can shift human capital among these areas. For instance, in the recent energy market downturn, the firm's restructuring business has seen accelerating income, while its management consulting arm has been decelerating. As such, the firm has shifted human capital among projects in the service businesses and, thus, has maintained employment levels. From an employee's perspective, the firm's diversified service portfolio reduces the risk of job loss owing to market conditions that reduce demand for their current line of work. As a result, the employee's exposure to exogenous environmental uncertainty is reduced and the employee is more willing to make FSIs.

As with employees who may be more willing to make FSIs as a firm's income stream diversifies beyond one particular industry or product market, suppliers and customers also may become more willing to supply firm-specific equipment or make firm-specific purchases when they have stronger assurance that the firm is less susceptible to unforeseen value depreciation (e.g., Dou, Hope, & Thomas, 2013). For example, a supplier may be reluctant to invest in a firm-specific ERP system (as opposed to a generic software system) that links its operations with that of the focal firm, if the focal firm's financial well-being depends on a single product market or industry. Unforeseeable downturns could bankrupt the firm, leading to value loss of the supplier's investment and a cessation of the relationship. In contrast, if the focal firm's financial well-being can be smoothed by diversifying into other product markets or industries, the supplier may be more willing to make FSIs because the focal firm is less exposed

to idiosyncratic industry or product market shocks.

A similar logic applies to customers. In keeping with the ERP example, suppose the focal firm produces ERP software and attempts to sell the software to another firm. The seller that is more financially stable, robust, and immune to unforeseen environmental shocks will be more likely to maintain product support and will be more likely to be perceived as a reliable long-term supplier for the customer. Overall, boards of directors, recognizing the value of stakeholder FSIs (Blair & Stout, 2001; Wang & Barney, 2006), may allow more diversification than might be desirable for shareholders alone, in order to incentivize value-creating stakeholder FSIs by smoothing the firm's future value and income streams.

**Cost-plus contracting.** A similar resource depreciation device aimed specifically at suppliers exists in cost-plus contracting, where the focal firm agrees to compensate the supplier at a fixed percentage above its costs. This approach reduces exposure to environmental uncertainty for suppliers considering an FSI. While the supplier may not know all the unforeseeable environmental changes and associated costs, once it decides to make an FSI, it is assured that its costs, within limits, will be recouped (Jap & Ganesan, 2000).

In essence, the cost-plus contract shifts the exposure to environmental uncertainty from the supplier to the firm (Arrow, 1962); hence, the firm must be willing and able to bear the excess risk by largely absorbing the unforeseen costs associated with the supplier's FSI. Increasing supplier incentives in making an FSI through this ex ante contracting device is popular in settings where a supplier is required to make extensive firm-specific R&D. Examples include automobile manufacturing (Klein, Crawford, & Alchian, 1978), construction (Bajeri & Tadelis, 2001), and military projects (Arrow, 1962; Laffont & Tirole, 1993). In all of these industries, suppliers' FSI is required, since projects are often highly firm specific and idiosyncratic.

**Takeover protection.** One source of environmental uncertainty is the market for corporate control. During challenging economic periods, the threat of a takeover is heightened for a firm. While some empirical evidence suggests that takeover protection is used as a tool to promote managerial job security at the expense of shareholders (Mahoney & Mahoney, 1993), there is reason to

believe that firms may benefit from takeover protection (Chemmanur, Paeglis, & Simonyan, 2011).

A corporate takeover often involves aggressive cost cutting by incoming management and can be a substantial source of uncertainty for stakeholders regarding appropriation value from their FSI (Wang et al., 2016). For instance, the threat of takeover jeopardizes the ongoing viability of existing projects as they are reevaluated and potentially cancelled by the incoming management, even after employees make their FSI (Agrawal & Knoeber, 1998). The possible threat of a future takeover can also alter the risk profiles of managers, making them more short-term oriented and, thus, reducing the quality of long-term investment decisions (Kacperczyk, 2009). Consequently, without *ex ante* takeover protection in place, investments with short-term returns are preferred over investments in long-term projects such as internal R&D, which requires greater human capital FSI. Thus, the uncertainty surrounding the threat of takeover may have detrimental effects on a stakeholder's willingness to make an FSI. For employees, this exposure to uncertainty may reduce FSIs because of postmerger integration, in which employees can be severely hurt by aggressive layoffs compared to expected long-term relationships (O'Shaughnessy & Flanagan, 1998). Additionally, during takeovers, contracts between the firm and employees may be violated, such as a reversion of employee pension plans (Pontiff, Shleifer, & Weisbach, 1990). If the focal firm is taken over and an employee is laid off, the full or partial value of that employee's FSI may be lost. Therefore, the provision of antitakeover devices may help foster a more long-term orientation in the firm by shielding it from external market pressures (Chemmanur et al., 2011).

Suppliers face similar challenges under the threat of takeover. Firms that are taken over, especially through hostile means, are also likely to strain relations with their suppliers, especially long-term ones, in their tendencies to drive down costs (Shleifer & Summers, 1988). As noted by Fee and Thomas, "Those suppliers that are terminated subsequent to a customer merger experience negative and significant abnormal returns at the merger announcement and significant cash-flow deterioration post-merger" (2004: 425). Thus, takeover protections may overcome this threat and increase suppliers' willingness to make FSIs.

Customers may also be hurt in the absence of such a protection device. If the focal firm is aggressively taken over by a rival, the newly merged firm may have greater monopoly power to increase prices at customers' expense (Stigler, 1964). Takeovers also disrupt the firm's efforts to build and maintain long-term relationships with customers who expect consistency in products and services (Cremers, Nair, & Peyer, 2008). For instance, when the firm relies on large purchases from a few customers, significant product customization is often involved that requires knowledge transfer and FSI from these customers. The threat of takeover disrupts this sensitive relationship by jeopardizing customers' confidence in the firm's ability to consistently deliver products, services, or maintenance (Cen, Dasgupta, & Sen, 2015). Takeover protections reduce this threat and protect the value of customers' FSIs. Historical governance differences between the United States and Japan offer an example: Japan's weaker markets for corporate control reduce employment risk and increase long-term commitment and subsequent FSIs, which might explain Japanese advantages in production and process improvements (Hoskisson, Yiu, & Kim, 2004).

Overall, the resource depreciation devices previously described are aimed directly at reducing exposure to environmental uncertainty for all three key FSI stakeholders. Thus, they serve as an important complementary device to the property rights allocation devices described in the previous section, which generally increase exposure to environmental uncertainty.

*Proposition 3: The provision of ex ante resource depreciation devices to employee, supplier, and customer stakeholders decreases their exposure to the hazard associated with environmental uncertainty.*

**Conflicting effects.** Although these resource depreciation devices are aimed specifically at reducing stakeholder exposure to environmental uncertainty in making FSIs, they may have the opposite effect of increasing behavioral uncertainty. None of these devices in isolation provides sufficient protection to stakeholders, because, in general, with reduced exposure to one type of uncertainty, there is increased exposure to another.

Diversification, as argued above, is geared toward reducing exposure to environmental

uncertainty; however, it may also increase behavioral uncertainty for stakeholders and, thus, does not sufficiently overcome the FSI dilemma in isolation. One explanation is that diversification increases the firm's size, scope, and geographic dispersion. Such changes create internal labor markets and smooth income volatility, which reduce stakeholder exposure to environmental uncertainty. However, these same traits also increase the firm's bargaining power over its stakeholders in two important ways: monopsony power and monopoly power. The firm becomes a "price setter" rather than a "price taker" in both factor and product markets.

Monopsony is the existence of this condition in labor markets, whereby the firm has greater bargaining power over its employees (Goux & Maurin, 1999; Manning, 2003, 2010), allowing the firm to reduce wages unilaterally as the firm's greater scope and market reach enable it to avoid labor market competition (Wang & Barney, 2006). Diversification into new markets also creates greater barriers to entry for new competitors in those markets (Wernerfelt, 1984), which can reduce alternative employment opportunities for employees outside the firm (Goux & Maurin, 1999; Manning, 2003). This dual effect of limited employment mobility and the firm's wage-setting ability increases employees' behavioral uncertainty in the diversified firm. The firm is both bigger and has more power, and managerial authority over employees increases accordingly. Empirical evidence suggests that as the focal firm expands in scope through vertical integration, decision making becomes more centralized (Hill & Hoskisson, 1987; Brahm & Tarzijan, 2016), which increases stakeholder dependence on managerial authority.

In addition, diversification imbues the firm with greater monopoly power over suppliers and customers, allowing it to obtain more favorable terms at stakeholders' expense. Several reasons exist for this outcome. For instance, as the firm diversifies, it is less reliant on the supplier, whose bargaining power is therefore diminished (Kogut, 1985). In this scenario the mutual hostage situation (in which the focal firm and the supplier make codependent FSIs; Williamson, 1996) is reduced as the supplier's investment becomes relatively less important to the focal firm (Kang et al., 2009). Also, increased industry concentration and increased firm size through diversification decrease the threat of new entrants (Spence, 1979; Wernerfelt, 1984) and increase mutual

forbearance with competitors (Gimeno, 1999; Gimeno & Woo, 1996; Montgomery, 1994). This decreasing competition increases the firm's monopoly power to set prices at the expense of suppliers and customers (Stigler, 1964). Hence, both suppliers and customers face a smaller set of alternatives and a more powerful focal firm, thus increasing their behavioral uncertainty.

Cost-plus contracting also has the counteracting effect of increasing suppliers' behavioral uncertainty. The same effect that reduces suppliers' exposure to environmental uncertainty works in reverse on behavioral uncertainty. By shifting the hazard of unforeseen environmental changes from the supplier to the firm, these contracts force the firm to increase pressure, monitoring, and involvement in the supplier's activities (Arrow, 1962: 626). Through a cost-plus contract, the supplier is freed from the consequences of unexpected cost shocks and has no incentive to reduce costs or invest efficiently. In this scenario information asymmetry exists between the supplier (who knows its costs) and the focal firm (Laffont & Tirole, 1993). The firm must therefore attempt to reduce this asymmetry by more closely monitoring the supplier's efforts and retaining a greater ability to enact changes during the investment process (Bajeri & Tadelis, 2001). In short, because the firm agrees to shift the risk of environmental uncertainty from the supplier to itself, it must also negotiate greater flexibility for intrusion into the supplier's activities, opening up the supplier to a potentially more capricious firm and thereby increasing its behavioral uncertainty.

Similar arguments can be developed with regard to takeover protection. Shielding the firm from the market for corporate control reduces the behavioral uncertainty faced by managers, but it increases behavioral uncertainty for the firm's key stakeholders. Although takeover protection protects the firm's underlying value and associated FSIs by shielding it from the market for corporate control (with accompanying short-termism) during periods of volatility, such protection also provides firm managers with greater authority to act in their own self-interest (Mahoney & Mahoney, 1993; Mahoney, Sundaramurthy, & Mahoney, 1996, 1997). Takeover protection allows managers to be less disciplined and more self-serving, which exposes stakeholders to their whims regarding strategic decisions. This hazard is salient to employees

because they are directly tied to the firm throughout the value creation process. However, suppliers and customers similarly experience increased behavioral uncertainty. The increased managerial self-serving behavior made possible by takeover protections raises the possibility that managers act opportunistically against suppliers or customers as they seek to capture greater rents for themselves. Overall, the resource depreciation devices of diversification, cost-plus contracting, and takeover protection increase behavioral uncertainty for stakeholders making FSIs.

*Proposition 4: The provision of resource depreciation devices to employee, supplier, and customer stakeholders increases the hazard associated with ex ante behavioral uncertainty.*

### Ex Post Moderating Protection Devices

Our theoretical model to this point indicates that firms using ex ante protection devices cannot engage in only one type of "solution" to the FSI dilemma because none is individually sufficient to address both sources of stakeholder uncertainty. Ex ante property rights allocations help to reduce stakeholders' behavioral uncertainty but generally increase exposure to environmental uncertainty. In contrast, ex ante resource depreciation devices help stakeholders reduce their exposure to environmental uncertainty but generally increase their exposure to behavioral uncertainty. A trade-off therefore is created when using these protection devices: generally, decreasing one type of uncertainty increases the other. This allows for the possibility that firms may create an incentive impasse in attempting to foster stakeholder FSI. Thus, the question, "How can firms overcome this trap?" arises.

In this section we examine ex post devices that come into play after the decision to invest has been made. We propose that these devices serve to help firms overcome such a trap by interacting with the ex ante devices to mitigate the counteractive effects of either type of uncertainty. Hence, we highlight the need for firms to use ex post devices, since the ex ante devices themselves are inadequate to resolve this dilemma. We focus on the following two types of ex post devices proposed in the literature: (1) monitoring by third parties and (2) relational governance and trust-based relationships.

**Monitoring by third parties.** Many scholars argue that monitoring by an external third party is a paramount ex post device for incentivizing stakeholders to make FSIs (Blair & Stout, 1999, 2001; Rajan & Zingales, 1998). This argument is derived from incomplete contract theory, which argues that in cases where two or more parties make FSIs, ownership (control rights) should be given to the FSI-making stakeholder whose investment is most critical (Grossman & Hart, 1986). Rajan and Zingales (1998) expanded on this insight by arguing that ownership alone is insufficient and can even disincentivize FSI—first, by giving one party greater bargaining power over the other and, second, by allowing the owning party to sell its shares and, thus, extract value without needing to invest in FSI. Rajan and Zingales (1998) proposed that the solution is for parties making FSIs to agree to relinquish ownership rights (and their ability to hold one another hostage) to an independent third party *not making FSIs*.

Blair and Stout (1999, 2001) expanded on this insight by arguing that the board of directors (BOD) is the legal entity serving this function in a firm. The BOD serves as a neutral body (or "mediating hierarchy") empowered to "allocate the resulting production, and mediate disputes among team members over that allocation" (Blair & Stout, 2001: 251). This view is supported by legal precedent: the BOD has a fiduciary responsibility to the entire firm, rather than to shareholders only (Clark, 1985), which allows it to act based on each stakeholder's contribution to value creation. Thus, in a very real way the BOD's legal fiduciary duty is to manage all stakeholders. These economic and legal arguments represent a clear divergence from the principal-agent model of corporate governance, where the BOD's role is to act as a mediating hierarchy to resolve conflicts between parties in the firm in order to maximize realized firm value creation, rather than to simply maximize shareholder wealth.

However, monitoring by a third party, being the legal obligation of the BOD, is a "second-best solution" (Blair & Stout, 1999: 255) and is called upon when ex ante devices fail to resolve holdup problems. As such, monitoring is inherently an ex post device (Osterloh & Frey, 2006: 329). The prohibitive cost (in time and capital) of monitoring makes it an impractical solution for day-to-day stakeholder coordination. Thus, monitoring does not replace or substitute for ex ante devices but, rather, moderates their effectiveness.

In this section we argue that monitoring serves as an important moderator to ex ante property rights allocation devices, which, as described earlier, may increase stakeholder exposure to environmental uncertainty. Because third-party monitors have as their duty the allocation of resources and resolution of disputes over such allocations (Blair & Stout, 2001), they can serve as an important moderator to counter the negative effects of property rights allocation devices regarding environmental uncertainty. The BOD may serve as an ex post resolution device for stakeholders to argue their case to the third-party monitors over the allocation of the value realized ex post, or the importance of shielding critical stakeholders making FSI from unforeseen environmental change. Thus, the BOD functions as an internal court of law in which stakeholders seek recourse when ex ante contracts fail and argue their case for a favorable judgment.

The effects of a recession on realized stakeholder value from FSI provide an example of how ex post third-party monitoring may function as a moderator for ex ante property rights allocation devices. During a recession, a firm may be tempted to terminate a costly R&D project in order to shore up the firm's short-term performance. Employees with an FSI linked to this project, however, would see the full value of their investment destroyed. However, they also will have ex ante property rights in the firm, either in the form of stock ownership or other explicit or implicit rights, and therefore the right to appeal to the "mediating hierarchy" of the BOD. In such a scenario employees might appeal to the BOD to recognize the long-term value of the R&D project and why continuing it may be beneficial, or they may seek to renegotiate the project time frame or scope. In essence, they may appeal to the BOD, ex post, to shield employees making an FSI from the effects of the recession, instead of simply shielding the shareholders and, by doing so, maximize FSI in the firm, as well as long-term value creation.

The same may apply to suppliers who have joint ventures or long-term contracts with the firm, since the firm may be equally tempted, in this example of a recession, to terminate such activities in the hope of short-run benefits. Customers, likewise, may face the challenge of having marginal products discontinued or services no longer provided, despite customer FSI. However, the BOD in these latter two cases may not be as

credible an ex post moderator, since suppliers and customers are external to the firm and may not have the ability to get the firm's BOD to hear their case. However, we next describe conditions and possible solutions where partial resolution could exist for both of these stakeholders.

Rajan and Zingales (1998) and Blair and Stout (1999, 2001) laid out the economic and legal arguments for the role of ex post monitors as a device for resolving the FSI dilemma. However, several limitations may be apparent when considering the assumptions of the RBV. A central tenet of the RBV is that causal ambiguity, or imperfect observability for both internal and external observers, contributes to sustained competitive advantage from FSIs (Barney, 1991). How can third-party monitors, therefore, achieve impartial or fair ex post allocative decisions under such assumptions? Are some third-party monitors better equipped than others for this task? The third-party monitors proposed by Rajan and Zingales (1998: 424) resolve the holdup problem owing to their "remoteness from the production process" in that they are third parties without ownership rights. However, this same remoteness may inhibit their ability to discern the importance of shielding stakeholders from environmental uncertainty, as apparent in the previous R&D example. Evidence suggests that despite their best intentions and a legal obligation to be impartial (cf. Blair & Stout, 2006: 737), BODs have considerable discretion in decisions and are often biased in favor of shareholders (Thompson, 2016). Even if a BOD is able to carry out its fiduciary duty to represent stakeholders fairly (Blair, 2005; Clark, 1985), it may lack the necessary information and incentives to make optimal decisions that protect stakeholder investments (Hansmann & Kraakman, 2001).

One possible solution to the apparent pro-shareholder bias of third-party monitors may be to place stakeholder representatives on the BOD, such as employee representatives (e.g., Klein et al., 2012; Osterloh & Frey, 2006). However, this would violate the assumptions of Rajan and Zingales (1998) by placing undue power in the hands of one FSI-making party—what Hansmann and Kraakman (2001) characterized as changing the BOD from a mediating hierarchy to an "unmediated coalition" that pursues its own priorities to the detriment of other stakeholders associated with the firm. In addition, evidence from countries where the practice of employee representation on the BOD is common indicates

that such BODs are also biased toward shareholders (Adams, Licht, & Sagiv, 2011). Thus, there is a tension in the requirements for providing a credible ex post moderating role from the BOD. On the one hand, directors should be impartial judges that can fairly resolve ex post conflicts. On the other hand, directors need to have sufficient knowledge about the firm and its internal ambiguities and unobservables to resolve such conflicts. The solution proposed by Klein et al. (2012) and Osterloh and Frey (2006), while important in resolving the "sufficient knowledge" part of the equation, conflicts with the "impartiality" part of the equation, since these stakeholder representatives on the BOD would likely be partial toward the desires of their specific stakeholder group.

One class of monitors, however, may fulfill both these requirements to a greater extent and provide a credible ex post monitor within the RBV framework. Specifically, dedicated institutional investors may serve this role by having a greater ability to evaluate stakeholder FSI causal ambiguity and nonobservability within the firm, relative to "generic" third-party monitors, while also not making an FSI themselves. Dedicated institutional investors typically pursue a buy-and-hold strategy for the firms they own (David, O'Brien, Yoshikawa, & Delios, 2010; David, Yoshikawa, Chari, & Rasheed, 2006) and are known as "relational investors" that build relational capital with their firms' stakeholders (Bhagat, Black, & Blair, 2004), which can facilitate information gathering. This is in contrast with "transient" institutional owners, who sell their positions because of short-term market pressures (Brickley, Lease, & Smith, 1988; Connelly, Tihanyi, Certo, & Hitt, 2010). Dedicated institutional investors are an important and growing influence in corporate governance (Aguilera, Desender, Bednar, & Lee, 2015; Connelly, Hoskisson, Tihanyi, & Certo, 2010).

This class of third-party monitors may be preferred under the assumptions of RBV for two important reasons. First, dedicated institutional investors rely more heavily on strategic controls rather than financial controls in ex post evaluation decisions (Connelly, Hoskisson, Tihanyi, & Certo, 2010), thus allowing them a deeper insight into the value creation process within a firm. Strategic controls imply that such investors do not simply take into account, ex post, financial information regarding firm or stakeholder performance; rather, they consider the firm's broader,

strategic, long-term actions and rationale (Baysinger & Hoskisson, 1990). This provides an important mechanism in reducing the negative consequences of ex ante property rights allocation to stakeholders. If unforeseen environmental changes negatively affect the value of stakeholders' FSI, dedicated institutional investors have the ability to rationalize ex post the necessary stakeholder FSI protection from such unforeseen change. In the previous example of the R&D project under recession, dedicated institutional investors and their elected BOD members will have a deeper understanding of the firm's strategy and insight into the specific R&D project in question, and why its continuation may enhance long-term value creation (Hoskisson, Hitt, Johnson, & Grossman, 2002). Dedicated institutional investors often have dedicated analysts who study the firm and its industry over a long term. This additional insight may allow them to make fairer decisions in shielding stakeholders from environmental uncertainty compared to other monitors. In essence, dedicated institutional investors may make a firm-specific investment in understanding the focal firm's strategy, even if not an FSI in value creation itself.

The second reason why dedicated institutional investors may be the preferred third-party monitors in this case is the buy-and-hold strategy they follow. By maintaining a long-term equity position in the firm, they shield the firm from short-term market pressures that may develop in the environment. Transient investors, for example, may divest or exit the firm at the sign of an environmental shock that would negatively affect the firm's value or the value of one of its projects. This action would exacerbate the effect of unexpected environmental shocks by depressing the firm's market valuation. Dedicated investors, by their very nature, would be less likely to undertake such an action and, thus, partially shield the firm and its stakeholders from market fluctuations. By having a long-term focus and long-term equity stake in the firm, they have similar incentives as the firm's stakeholders and managers. Dedicated institutional investors (and, by extension, the BOD members they elect) also serve as more credible ex post monitors for external stakeholders, such as suppliers and customers. They are better able and more likely to recognize the need to shield important FSI-making suppliers and customers, compared to a generic monitor. In short, third-party monitors, particularly from dedicated

institutional investors, serve as an important ex post moderator to ex ante property rights allocation devices by providing a credible ex post device to resolve value allocation issues if unexpected environmental shocks occur.

*Proposition 5: The provision of ex post monitoring devices involving BODs and dedicated institutional investors in support of employee, supplier, and customer stakeholders will negatively moderate the effects of the ex ante devices such that it will reduce the effect of property rights allocation devices on environmental uncertainty.*

**Relational governance and trust-based relationships.** A noncontractual device that can be used to facilitate the ex post renegotiations process is relational governance. In pursuing relational governance, the firm and its stakeholders employ informal self-enforcing safeguards (e.g., trust), rather than formal safeguards, such as monitoring (Dyer & Singh, 1998). Building trust between the firm and its stakeholders is an effective device that facilitates bargaining among parties after contractual conditions are specified ex ante (Harrison et al., 2010; Poppo et al., 2016). Relational governance, particularly for firms willing to emphasize stakeholder value creation rather than only shareholder value, can mitigate the problems created by ex ante contracting with all stakeholder groups. In particular, relational governance and trust can serve to mitigate the behavioral uncertainty concerns associated with ex ante resource depreciation devices.

As previously argued, ex ante resource depreciation devices serve to shield stakeholders from environmental uncertainty mainly by transferring or diversifying firm risk. However, this also has the counteracting effect of increasing stakeholders' behavioral uncertainty, since the firm has greater power and bargaining position vis-à-vis the stakeholders. It is obvious that when the firm is a trusted partner, such trust serves to mitigate stakeholder behavioral uncertainty. As trust is created through repeated transactions between parties, trust and positive relations develop over time (Barney & Hansen, 1994). Once trust is created, deviations from it can also be sanctioned (e.g., Fatas, Morales, & Ubeda, 2010). Even if a firm has higher bargaining power over its stakeholders, trust can serve as an ex post moderator to reassure stakeholders that the firm will not use its

higher bargaining power to extract greater quasi-rents.

For example, if a firm builds a reputation as a fair and caring employer (Barney & Hansen, 1994) that does not expropriate value from its employees or reduce wages, the monopsony power problem of diversification may be alleviated. Similarly, a firm with a history of not taking advantage of suppliers alleviates behavioral uncertainty for suppliers (Poppo et al., 2016). A similar logic holds for cost-plus contracting, which induces greater exposure to behavioral uncertainty since the firm reserves greater ability to redefine the terms of the contract to maintain flexibility. Jap and Ganesan (2000), for instance, demonstrated that cost-plus contracts with suppliers do not serve to incentivize FSI, unless the firm emphasizes trust and relational governance devices. For example, even though a firm may enjoy greater monopoly power owing to diversification, and potentially greater propensity to act in a self-serving manner owing to anti-takeover devices, if the firm builds a reputation as having the best interests of its customers at heart, it may signal that it will not unilaterally raise customer prices.

*Proposition 6: The provision of ex post relational governance and trust-based relationship devices to employee, supplier, and customer stakeholders will negatively moderate the effects of the ex ante devices such that it will reduce the effect of resource depreciation devices on behavioral uncertainty.*

In addition to acting as a moderating effect on ex ante resource depreciation devices, trust and relational governance may also directly affect the importance of ex ante property rights allocation devices. Through recursive transactions between parties, the firm and relevant stakeholders develop trust with each other and learn to internalize values and principles that can minimize future opportunistic behaviors (Barney & Hansen, 1994). They can also serve to reduce the emphasis on ex ante property rights allocation devices, since such devices need not be all-encompassing or highly detailed because both parties trust each other not to expropriate value. Each party may choose not to behave opportunistically because, according to Barney and Hansen (1994), the costs of opportunism outweigh the benefits. In addition, as the firm and its stakeholders become more



embedded in their social network through repeated transactions, violating trust can have social costs, such as lost firm legitimacy (Hill, 1990). For instance, Reuer and Ariño (2007) examined how repeated alliance partnerships between two firms lead to a reduction in ex ante contractual complexity, since repeated transactions alleviate behavioral uncertainty between the two parties. However, such repeated transactions do not replace and negate the need for ex ante contracts altogether; they simply serve to lessen their importance. A firm contracting with a supplier no longer needs to create overly complex ex ante contracts; with some trust developed with the particular supplier (and vice versa), ex ante contracts can be more “boilerplate” and open to ex post renegotiations, since ex ante behavioral uncertainty for both parties is less severe.

*Proposition 7: The provision of ex post relational governance and trust-based relationship devices to employee, supplier, and customer stakeholders provides feedback reducing the importance of ex ante property rights allocation devices in reducing behavioral uncertainty.*

## DISCUSSION

Stakeholders making FSIs are a critical source of the resource-based competitive advantage theorized in the RBV. However, FSIs exhibit characteristics that make stakeholders subject to increased hazards of firm holdup, firm expropriation of value, and idiosyncratic environmental risk associated with the underlying value of such investments. Thus, stakeholders face both behavioral and environmental uncertainty over their FSIs, which, if left unresolved, can be a source of FSI disincentive, limiting firms’ ability to achieve competitive advantage. In this article we seek to extend our theoretical understanding of how firms resolve or reduce the dilemma of incentivizing stakeholder FSI.

Various devices to protect stakeholders from the hazards associated with FSI have been proposed through diverse theoretical lenses, both in a piecemeal fashion and as an undifferentiated list. We develop a model incorporating a set of devices that can effectively incentivize stakeholders’ FSI, and we examine the conflicts and complementarities among these protection devices. First, we consider the different sources of

hazards related to FSI for stakeholders: behavioral and environmental uncertainty. Second, we group the extant set of devices proposed by multiple theories into categories by the manner (ex ante and ex post) in which they resolve each of these sources of hazards. Thus, the framework developed in this article highlights important limitations to piecemeal solutions or broad-scope stakeholder approaches to this problem, because each set of ex ante devices explicitly targets the hazards primarily related to one type of uncertainty yet produces conflicting effects for the other type of uncertainty. Hence, firms may find themselves in a trap, where they cannot ameliorate both uncertainties for stakeholders simultaneously by relying explicitly on ex ante devices. We then argue that firms must consider an appropriate “mix” of devices that work both ex ante and ex post to overcome this potential impasse and address both main hazards faced by stakeholders making FSIs.

The framework developed in this article makes important theoretical contributions both to the RBV and to the emerging property rights-based stakeholder theory of strategic management, which is focused on the importance of stakeholders as a source of firm competitive advantage. First, although prior theoretical work stemming from the RBV has highlighted the importance of providing protection for stakeholders’ value appropriation in FSI (e.g., Wang & Barney, 2006), this article expands on the concept by examining the set of such devices in a comprehensive framework. When viewed as a set of potentially contradictory or complementary devices—property rights allocation devices, resource depreciation devices, ex post monitoring, and relational governance—a clearer picture emerges of the firm’s challenges in managing its stakeholder relationships, which serve as a foundation for achieving a resource-based competitive advantage.

Second, although stakeholder theory grounded in property rights (incomplete contract) theory has elevated stakeholders’ implicit residual claimant status, including both implicit and explicit contracts in the nexus that is the firm (Mahoney, 2012; Mahoney & Kor, 2015), and, thus, has brought stakeholders to the forefront of a firm’s competitive advantage, it has mostly done so with a broad brush and does not incorporate how protection devices work together in an overall framework. Given RBV’s assumption of causal ambiguity, managing property rights effectively requires

a complementary set of protection devices that work both *ex ante* and *ex post* of the FSI. Our framework highlights that it may be insufficient or even counterproductive to focus simply on protecting a stakeholder's value appropriation as far as FSI is concerned. This is a multifaceted problem as evidenced by the multiple sources of value appropriation problems (stemming from behavioral or environmental uncertainty); therefore, the appropriate mix of devices is more important to consider in the firm-stakeholder relationship than a general approach to "protecting" stakeholders.

### Complementarity and Substitution Between Devices

Our model builds on prior work to demonstrate the multiple complementarities and substitutions among the protection devices (e.g., Rediker & Seth, 1995; Seth & Bowden, 1997; Sundaramurthy, 1996; Sundaramurthy, Mahoney, & Mahoney, 1997). One obvious implication of our device framework is that an appropriate and idiosyncratic mix of devices may be determined for a particular firm. Drawing on our framework, theoretical and practical implications can be drawn to determine the gaps in a firm's protection devices or to examine if a firm is relying on *too many* devices in an effort to reduce uncertainties for its stakeholders, which could be resolved through less costly means. For example, *ex ante* property rights allocation devices together with *ex post* monitoring by BODs may sufficiently reduce both behavioral and environmental uncertainty necessary for stakeholder FSI. As a result, the focal firm with such devices would be engaging in unnecessary and expensive *ex ante* resource depreciation devices and *ex post* trust-based relationships. Additionally, firms may find that developing trust may be more demanding or costly than simply providing stakeholders with an ownership stake in the firm, particularly when environmental uncertainty is perceived to be low.

The degree to which a firm will substitute between device alternatives depends partly on whether behavioral or environmental uncertainty is more salient to stakeholders. For example, if it is environmental uncertainty, then a more appropriate (and less costly) mix of devices may involve *ex ante* resource depreciation devices combined with *ex post* relational governance. Stakeholders can also be heterogeneous in their exposure to each type of uncertainty, which may

create conflict among the groups. Determining the costs, the appropriate levels, and the point of substitution and managing potential conflicts may all be empirical questions. Nonetheless, our model highlights where such opportunities may exist for efficient use of protection devices to reduce FSI-related uncertainty and promote value creation.

### Opportunities for Future Research

Our model suggests that the salience of the two types of uncertainties faced by stakeholders depends on the context. Behavioral uncertainty can have greater importance in some contexts, such as in the presence of weak institutions or weak firm governance. In contrast, environmental uncertainty is a greater concern for stakeholders in other contexts, such as high-tech industries or industries subject to frequent shocks (Beatty & Zajac, 1994). As such, studies are needed that examine varying contextual factors and the types of devices required.

While we have sought to highlight the most salient protection devices noted in the extant literature, future research could explore other possible devices that may promote FSI. Williamson (1985) proposed unionization (as a hierarchy) to help employees making FSIs to bargain collectively for better *ex ante* contracts. Similarly, business group participation may promote supplier and customer FSIs (Chang & Hong, 2000). Warranties are an *ex ante* device that can help customers differentiate product quality by providing a strong signal that a firm will not act opportunistically by deliberately misrepresenting information (Spence, 1977) and will therefore help to avoid a market breakdown (Akerlof, 1970). Warranties provide the customer with a near property right claim related to the product for the duration of the warranty period. In addition to reducing behavioral uncertainty, warranties are unique in that they also reduce customers' exposure to *ex ante* environmental uncertainty by serving as a form of insurance against future product failure (Chu & Chintagunta, 2011; Heal, 1977). However, warranties may be limited and not fully backed by the offering firm and, thus, may also affect relational governance.

Another set of protection devices worthy of future research includes *ex ante* bonding devices, such as those pertaining to franchise systems. A franchisee provides collateral (posts a bond) by

making franchise-specific investments that deter the franchisee from free-riding or shirking on quality, and thereby debasing the franchise brand name. There is also fear of termination of the contract and the loss incurred in loss of such investment. Such *ex ante* bonding serves to benefit the whole franchise system (Williamson, 1985).

Finally, future research can enhance our model by examining the contagion effects among stakeholders. Protection devices that directly affect one stakeholder group may have secondary effects on other stakeholders. For example, positive treatment of one stakeholder group alleviates uncertainty for another group and leads to increased commitment by the observing treatment of other groups owing to positive reputation spillover effects among stakeholders (Cording, Harrison, Hoskisson, & Karsten, 2014; de Luque, Washburn, Waldman, & House, 2008). As more stakeholder groups make FSIs, these benefits continue to increase.

This prediction is consistent with the implicit assumption of instrumental stakeholder theory that advocates an initial minimal level of attention to primary stakeholders in order to strengthen subsequent commitments from them as well as other groups. While some protections may lead the targeted stakeholders to make FSIs, they can indirectly discourage other stakeholder groups from doing so. For example, because of distributional conflicts among stakeholders (Garcia-Castro & Aguilera, 2015; Lieberman, Garcia-Castro, & Balasubramanian, 2017) some devices generate negative contagion in that they exacerbate negative-sum outcomes in which some stakeholders are able to capture a bigger share at the expense of others, thus reducing FSI. The use of equity ownership for employees can disincentivize external stakeholders from making FSIs by heightening their concerns over unfair internal stakeholder value appropriations; that is, employees experience informational advantages relative to external stakeholders, thereby allowing a greater share of *ex post* value appropriation (Coff & Lee, 2003). Similarly, top executives can receive additional compensation and ownership, which can create potential tension with other stakeholder groups who become concerned about unfair appropriation (Dial & Murphy, 1995). Future research can extend our understanding of the interaction between stakeholders in our framework.

In conclusion, we hope that our theoretical model will inspire research on this important

topic and will likewise facilitate better practices leading to more effective stakeholder protection devices in facilitating stakeholder FSI and associated resource-based competitive advantage. Although our focus is on stakeholder appropriation protection devices, we believe that, ultimately, a system of governance is needed that focuses on all stakeholders and does not narrowly focus only on shareholder requirements. Such a system would more realistically represent the nature of resource-based competitive advantage, whereby all stakeholders are represented more clearly as a firm and its stakeholders co-evolve together (e.g., Kapoor & Lee, 2013).

## REFERENCES

- Adams, R. B., Licht, A. N., & Sagiv, L. 2011. Shareholders and stakeholders: How do directors decide? *Strategic Management Journal*, 32: 1331-1355.
- Agrawal, A., & Knoeber, C. 1998. Managerial compensation and the threat of takeover. *Journal of Financial Economics*, 47: 219-239.
- Aguilera, R., Desender, K., Bednar, M. K., & Lee, J. H. 2015. Connecting the dots: Bringing external corporate governance into the corporate governance puzzle. *Academy of Management Annals*, 9: 483-573.
- Akerlof, G. 1970. The market for lemons: Qualitative uncertainty and market mechanism. *Quarterly Journal of Economics*, 84: 488-500.
- Alchian, A. A., & Demsetz, H. 1972. Production, information costs, and economic organization. *American Economic Review*, 62: 777-795.
- Arrow, K. J. 1962. Economic welfare and the allocation of resources for invention. In Universities-National Bureau Committee for Economic Research and the Committee on Economic Growth of the Social Science Research Councils (Eds.), *The rate and direction of inventive activity: Economic and social factors*: 609-626. Princeton, NJ: Princeton University Press.
- Asher, C. C., Mahoney, J. M., & Mahoney, J. 2005. Towards a property rights foundation for a stakeholder theory of the firm. *Journal of Management and Governance*, 9: 5-32.
- Azfar, O., & Danninger, S. 2001. Profit-sharing, employment stability, and wage growth. *Industrial & Labor Relations Review*, 54: 619-630.
- Bajeri, P., & Tadelis, S. 2001. Incentives versus transaction costs: A theory of procurement contracts. *RAND Journal of Economics*, 32: 387-407.
- Barnard, C. I. 1938. *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Barney, J. B. 1986. Strategic factor markets: Expectations, luck and business strategy. *Management Science*, 32: 1231-1241.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.

- Barney, J. B., & Hansen, M. H. 1994. Trustworthiness as a source of competitive advantage. *Strategic Management Journal*, 15(S1): S175–S190.
- Barzel, Y. 1989. *Economic analysis of property rights*. Cambridge: Cambridge University Press.
- Baysinger, B., & Hoskisson, R. E. 1990. The composition of boards of directors and strategic control: Effects on corporate strategy. *Academy of Management Review*, 15: 72–87.
- Beatty, R. P., & Zajac, E. J. 1994. Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings. *Administrative Science Quarterly*, 39: 313–335.
- Becker, G. S. 1964. *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- Bhagat, S., Black, B. S., & Blair, M. M. 2004. Relational investing and firm performance. *Journal of Financial Research*, 27: 1–30.
- Blair, M. M. 2005. Closing the theory gap: How the economic theory of property rights can help bring stakeholders back into theories of the firm. *Journal of Management and Governance*, 9: 33–40.
- Blair, M. M., & Stout, L. A. 1999. A team production theory of corporate law. *Virginia Law Review*, 85: 248–328.
- Blair, M. M., & Stout, L. A. 2001. Trust, trustworthiness, and the behavioral foundations of corporate law. *University of Pennsylvania Law Review*, 149: 17–35.
- Blair, M. M., & Stout, L. A. 2006. Specific investments: Explaining anomalies in corporate law. *Journal of Corporate Law*, 31: 719–744.
- Blasi, J., Freeman, R., & Kruse, D. 2016. Do broad-based employee ownership, profit sharing and stock options help the best firms do even better? *British Journal of Industrial Relations*, 54: 55–82.
- Brahm, F., & Tarzijan, J. 2016. Toward an integrated theory of the firm: The interplay between internal organization and vertical integration. *Strategic Management Journal*, 37: 2481–2502.
- Brickley, J. A., Lease, R. C., & Smith, C. W. 1988. Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20: 267–292.
- Bromiley, P., Miller, K. D., & Rau, D. 2001. Risk in strategic management research. In M. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *The Blackwell handbook of strategic management*: 308–325. Malden, MA: Wiley-Blackwell.
- Brush, T. H., Dangol, R., & O'Brien, J. P. 2012. Customer capabilities, switching costs, and bank performance. *Strategic Management Journal*, 33: 1499–1515.
- Carson, S. J., & John, G. 2013. A theoretical and empirical investigation of property rights sharing in outsourced research, development and engineering relationships. *Strategic Management Journal*, 34: 1065–1085.
- Cen, L., Dasgupta, S., & Sen, R. 2015. Discipline or disruption? Stakeholder relationships and the effect of takeover threat. *Management Science*, 62: 2820–2841.
- Chang, J. C., & Hong, J. 2000. Economic performance of group-affiliated companies in Korea: Intragroup resource sharing and internal business transactions. *Academy of Management Journal*, 43: 429–448.
- Chekler, J. 2015. Alvarez & Marsal to launch investment-management arm. *Wall Street Journal*, March 24: <http://www.wsj.com/articles/alvarez-marsal-to-launch-investment-management-arm-1427228274>.
- Chemmanur, T. J., Pæglis, I., & Simonyan, K. 2011. Management quality and antitakeover provisions. *Journal of Law and Economics*, 54: 651–692.
- Chu, J., & Chintagunta, P. K. 2011. An empirical test of warranty theories in the U.S. computer server and automobile markets. *Journal of Marketing*, 75(2): 75–92.
- Clark, R. C. 1985. Agency theory versus fiduciary duties. In J. W. Pratt & R. J. Zeckhauser (Eds.), *Principals and agents: The structure of business*: 55–79. Cambridge, MA: Harvard Business School Press.
- Coase, R. H. 1937. The nature of the firm. *Economica*, 4: 386–405.
- Coff, R. W. 1999. When competitive advantage doesn't lead to performance: The resource-based view and stakeholder bargaining power. *Organization Science*, 10: 119–133.
- Coff, R. W., & Kryscynski, D. 2011. Drilling for micro-foundations of human capital-based competitive advantage. *Journal of Management*, 37: 1429–1443.
- Coff, R. W., & Lee, P. M. 2003. Insider trading as a vehicle to appropriate rent from R&D. *Strategic Management Journal*, 24: 183–190.
- Coff, R. W., & Raffiee, J. 2015. Toward a theory of perceived firm-specific human capital. *Academy of Management Perspectives*, 29(3): 326–341.
- Connelly, B. L., Hoskisson, R. E., Tihanyi, L., & Certo, S. T. 2010. Ownership as a form of corporate governance. *Journal of Management Studies*, 47: 1561–1589.
- Connelly, B. L., Tihanyi, L., Certo, S. T., & Hitt, M. A. 2010. Marching to the beat of different drummers: The influence of institutional ownership on competitive actions. *Academy of Management Journal*, 53: 723–742.
- Cording, M., Harrison, J. S., Hoskisson, R. E., & Karsten, J. 2014. Walking the talk: A multistakeholder exploration of organizational authenticity, employee productivity, and post-merger performance. *Academy of Management Perspectives*, 28(1): 38–56.
- Cornell, B., & Shapiro, A. C. 1987. Corporate stakeholders and corporate finance. *Financial Management*, 16: 5–14.
- Cremers, K. J. M., Nair, V. B., & Peyer, U. 2008. Takeover defenses and competition: The role of stakeholders. *Journal of Empirical Legal Studies*, 5: 791–818.
- David, P., O'Brien, J., Yoshikawa, T., & Delios, A. 2010. Do shareholders or stakeholders appropriate the rents from corporate diversification? The influence of ownership structure. *Academy of Management Journal*, 53: 636–654.
- David, P., Yoshikawa, T., Chari, M. D., & Rasheed, A. 2006. Strategic investments in Japanese corporations: Do foreign portfolio owners foster underinvestment or

- appropriate investment? *Strategic Management Journal*, 27: 591–600.
- de Luque, M. S., Washburn, N. T., Waldman, D. A., & House, R. J. 2008. Unrequited profit: How stakeholder and economic values relate to subordinates' perceptions of leadership and firm performance. *Administrative Science Quarterly*, 53: 626–654.
- Demsetz, H. 1967. Toward a theory of property rights. *American Economic Review*, 57: 347–359.
- Dial, J., & Murphy, K. J. 1995. Incentive, layoffs and value creation at General Dynamics. *Journal of Financial Economics*, 37: 261–314.
- Dou, Y., Hope, O. K., & Thomas, W. B. 2013. Relationship-specificity, contract enforceability, and income smoothing. *Accounting Review*, 88: 1629–1656.
- Dyer, J., & Singh, H. 1998. The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23: 660–679.
- Fatas, E., Morales, A. J., & Ubeda, P. 2010. Blind justice: An experimental analysis of random punishment in team production. *Journal of Economic Psychology*, 31: 358–373.
- Fee, C. E., & Thomas, S. 2004. Sources of gains in horizontal mergers: Evidence from customer, supplier, and rival firms. *Journal of Financial Economics*, 74: 423–460.
- Ferrier, G. D., & Porter, P. K. 1991. The productive efficiency of U.S. milk processing cooperatives. *Journal of Agricultural Economics*, 42(2): 161–173.
- Freeman, R. E. 1984. *Strategic management: A stakeholder approach*. Englewood Cliffs, NJ: Prentice Hall.
- French, J. L. 1987. Employee perspectives on stock ownership: Financial investment or mechanism of control? *Academy of Management Review*, 12: 427–435.
- Garcia-Castro, R., & Aguilera, R. V. 2015. Incremental value creation and appropriation in a world with multiple stakeholders. *Strategic Management Journal*, 36: 137–147.
- Gimeno, J. 1999. Reciprocal threats in multimarket rivalry: Staking out "spheres of influence" in the U.S. airline industry. *Strategic Management Journal*, 20: 101–128.
- Gimeno, J., & Woo, C. Y. 1996. Hypercompetition in a multimarket environment: The role of strategic similarity and multimarket contact on competitive de-escalation. *Organization Science*, 7: 322–341.
- Goux, E., & Maurin, E. 1999. Persistence of inter industry wage differentials: A reexamination using matched worker-firm panel data. *Journal of Labor Economics*, 17: 492–533.
- Grossman, S. J., & Hart, O. D. 1986. The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy*, 94: 691–719.
- Hansmann, H. 1988. Ownership of the firm. *Journal of Law, Economics, & Organization*, 4: 267–304.
- Hansmann, H., & Kraakman, R. 2001. The end of history for corporate law. *Georgetown Law Journal*, 89: 439–468.
- Harrison, J., Bosse, D., & Phillips, R. A. 2010. Managing for stakeholders, stakeholder utility functions and competitive advantage. *Strategic Management Journal*, 31: 58–74.
- Hart, O., & Moore, J. H. 1990. Property rights and the nature of the firm. *Journal of Political Economy*, 98: 1119–1158.
- Hart, O., & Moore, J. H. 1996. The governance of exchange: Members' cooperatives versus outside ownership. *Oxford Review of Economic Policy*, 12(4): 53–69.
- Hart, O., & Moore, J. H. 1998. *Cooperatives vs. outside ownership*. Working Paper No. 6421, National Bureau of Economic Research, Cambridge, MA.
- Hashimoto, M. 1981. Firm-specific capital as a shared investment. *American Economic Review*, 71: 475–482.
- Heal, G. 1977. Guarantees and risk-sharing. *Review of Economic Studies*, 44: 549–560.
- Hill, C. W. L. 1990. Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory. *Academy of Management Review*, 15: 500–513.
- Hill, C. W. L., & Hoskisson, R. E. 1987. Strategy and structure in the multiproduct firm. *Academy of Management Review*, 12: 331–341.
- Hoskisson, R. E., Hitt, M. A., Johnson, R. A., & Grossman, W. 2002. Conflicting voices: The effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies. *Academy of Management Journal*, 45: 697–716.
- Hoskisson, R. E., Yiu, D., & Kim, H. 2004. Corporate governance systems: Effects of capital and labor market congruency on corporate innovation and global competitiveness. *Journal of High Technology Management Research*, 15: 293–315.
- Jap, S. D., & Ganesan, S. 2000. Control mechanisms and the relationship life cycle: Implications for safeguarding specific investments and developing commitment. *Journal of Marketing Research*, 37: 227–245.
- 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.
- Kacperczyk, A. 2009. With greater power comes greater responsibility? Takeover protection and corporate attention to stakeholders. *Strategic Management Journal*, 30: 261–285.
- Kang, M. P., Mahoney, J. T., & Tan, D. 2009. Why firms make unilateral investments specific to other firms: The case of OEM suppliers. *Strategic Management Journal*, 30: 117–135.
- Kapoor, R., & Lee, J. M. 2013. Coordinating and competing in ecosystems: How organizational forms shape new technology investments. *Strategic Management Journal*, 34: 274–296.
- Kim, J., & Mahoney, J. T. 2002. Resource-based and property rights perspectives on value creation: The case of oil field unitization. *Managerial and Decision Economics*, 23: 225–245.
- Klein, B., Crawford, R. G., & Alchian, A. A. 1978. Vertical integration, appropriable rents, and the competitive contracting process. *Journal of Law and Economics*, 21: 297–326.

- Klein, P., Mahoney, J. T., McGahan, A., & Pitelis, C. 2012. A property rights approach for a stakeholder theory of the firm. *Strategic Organization*, 10: 304–315.
- Klor, E. F., Kube, S., Winter, E., & Zultan, R. I. 2014. Can higher rewards lead to less effort? Incentive reversal in teams. *Journal of Economic Behavior & Organization*, 97: 72–83.
- Knight, F. 1921. *Risk, uncertainty and profit*. Boston: Houghton Mifflin.
- Kogut, B. 1985. Designing global strategies: Profiting from operating flexibility. *Sloan Management Review*, 27(1): 27–38.
- Kogut, B. 1988. Joint ventures: Theoretical and empirical perspectives. *Strategic Management Journal*, 9: 319–332.
- Krishnan, R., Geyskens, I., & Steenkamp, J.-B. 2016. The effectiveness of contractual and trust-based governance in strategic alliances under behavioral and environmental uncertainty. *Strategic Management Journal*, 37: 2521–2542.
- Laffont, J. J., & Tirole, J. 1993. *A theory of incentives in procurement and regulation*. Cambridge, MA: MIT Press.
- Lang, L., & Stulz, R. 1994. Tobin's q, corporate diversification and firm performance. *Journal of Political Economy*, 102: 1248–1280.
- Lazear, E. P. 2009. Firm-specific human capital: A skill-weights approach. *Journal of Political Economy*, 117: 914–940.
- Libecap, G. D. 1989. *Contracting for property rights*. Cambridge: Cambridge University Press.
- Lieberman, M. B., Garcia-Castro, R., & Balasubramanian, N. 2017. Measuring value creation and appropriation in firms: The VCA model. *Strategic Management Journal*, 38: 1193–1211.
- Lumineau, F., & Henderson, J. E. 2012. The influence of relational experience and contractual governance on the negotiation strategy in buyer-supplier disputes. *Journal of Operations Management*, 30: 382–395.
- Lusch, R. F., & Brown, J. R. 1996. Interdependency, contracting, and behavior in marketing channels. *Journal of Marketing*, 60(4): 19–38.
- Mackey, T. B., Barney, J. B., & Dotson, J. P. 2017. Corporate diversification and the value of individual firms: A Bayesian approach. *Strategic Management Journal*, 38: 322–341.
- Mahoney, J. M., & Mahoney, J. T. 1993. An empirical investigation of the effects of corporate charter anti-takeover amendments on stockholder wealth. *Strategic Management Journal*, 14: 17–31.
- Mahoney, J. M., Sundaramurthy, C., & Mahoney, J. T. 1996. The differential impact on stockholder wealth of various anti-takeover provisions. *Managerial and Decision Economics*, 17: 531–549.
- Mahoney, J. M., Sundaramurthy, C., & Mahoney, J. T. 1997. The effects of corporate anti-takeover provisions on long-term investment: Empirical evidence. *Managerial and Decision Economics*, 18: 349–365.
- Mahoney, J. T. 2012. Towards a stakeholder theory of strategic management. In J. E. Ricart Costa & J. M. Rosanas Marti (Eds.), *Towards a new theory of the firm: Humanizing the firm and the management profession*: 153–182. Bilbao: Fundación BBVA.
- Mahoney, J. T., & Kor, Y. Y. 2015. Advancing the human capital perspective on value creation by joining capabilities and governance approaches. *Academy of Management Perspectives*, 29(3): 296–308.
- Makadok, R. 2010. The interaction effect of rivalry restraint and competitive advantage on profit: Why the whole is less than the sum of the parts. *Management Science*, 56: 356–372.
- Manning, A. 2003. *Monopsony in motion: Imperfect competition in the labor market*. Princeton, NJ: Princeton University Press.
- Manning, A. 2010. The plant size-place effect: Agglomeration and monopsony in labour markets. *Journal of Economic Geography*, 10: 717–744.
- McCloskey, D. 1976. English open fields as behavior towards risks. *Research in Economic History*, 1: 124–171.
- Miller, D. J. 2006. Technological diversity, related diversification, and firm performance. *Strategic Management Journal*, 27: 601–619.
- Miller, J. S., Wiseman, R. M., & Gomez-Mejia, L. R. 2002. The fit between CEO compensation design and firm risk. *Academy of Management Journal*, 45: 745–756.
- Montgomery, C. A. 1994. Corporate diversification. *Journal of Economic Perspectives*, 8(3): 163–178.
- O'Shaughnessy, K. C., & Flanagan, D. J. 1998. Determinants of layoff announcements following M&As: An empirical investigation. *Strategic Management Journal*, 19: 989–999.
- Osterloh, M., & Frey, B. S. 2006. Shareholders should welcome knowledge workers as directors. *Journal of Management & Governance*, 10: 325–345.
- Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14: 179–191.
- Pontiff, J., Shleifer, A., & Weisbach, M. S. 1990. Reversions of excess pension assets after takeovers. *RAND Journal of Economics*, 21: 600–613.
- Poppo, L., Zhuo, K. Z., & Li, J. J. 2016. When can you trust “trust”? Calculative trust, relational trust, and supplier performance. *Strategic Management Journal*, 37: 724–741.
- Porter, M. E. 1980. *Competitive strategy*. New York: Free Press.
- Porter, P. K., & Scully, G. W. 1987. Economic efficiency in cooperatives. *Journal of Law and Economics*, 30: 489–512.
- Rajan, R. G., & Zingales, L. 1998. Power in a theory of the firm. *Quarterly Journal of Economics*, 113: 387–432.
- Rediker, K. J., & Seth, A. 1995. Boards of directors and substitution effects of alternative governance mechanisms. *Strategic Management Journal*, 16: 85–99.
- Reuer, J. J., & Ariño, A. 2007. Strategic alliance contracts: Dimensions and determinants of contractual complexity. *Strategic Management Journal*, 28: 313–330.
- Robinson, A. M., & Zhang, H. 2005. Employee share ownership: Safeguarding investments in human capital. *British Journal of Industrial Relations*, 43: 469–488.
- Schepker, D. J., Oh, W., Martynov, A., & Poppo, L. 2014. The many futures of contracts: Moving beyond structure and

- safeguarding to coordination and adaptation. *Journal of Management*, 40: 193–225.
- Seth, A., & Bowden, S. 1997. Regression analysis and governance. In M. Ghertman, J. Obadia, & J. Arregle (Eds.), *Statistical models for strategic management*: 279–308. Norwell, MA: Kluwer Academic.
- Shleifer, A., & Summers, L. H. 1988. Breach of trust in hostile takeovers. In A. J. Auerbach (Ed.), *Corporate takeovers: Causes and consequences*: 33–56. Chicago: University of Chicago Press.
- Simon, H. A. 1952. A comparison of organization theories. *Review of Economic Studies*, 20: 40–48.
- Spence, M. 1977. Consumer misperceptions, product failure and producer liability. *Review of Economic Studies*, 44: 561–572.
- Spence, M. 1979. Investment strategy and growth in a new market. *Bell Journal of Economics*, 10: 1–19.
- Stigler, G. J. 1964. A theory of oligopoly. *Journal of Political Economy*, 72: 44–61.
- Stout, L. A. 2012. *The shareholder value myth: How putting shareholders first harms investors, corporations, and the public*. San Francisco: Berrett-Koehler.
- Sundaramurthy, C. 1996. Corporate governance within the context of antitakeover provisions. *Strategic Management Journal*, 17: 377–394.
- Sundaramurthy, C., Mahoney, J. M., & Mahoney, J. T. 1997. Board structure, antitakeover provisions, and stockholder wealth. *Strategic Management Journal*, 18: 231–245.
- Tate, G. A., & Yang, L. 2015. The human factor in acquisitions: Cross-industry labor mobility and corporate diversification. *SSRN*, March 16: <http://ssrn.com/abstract=2578636>.
- Thompson, R. B. 2016. Anti-primacy: Sharing power in American corporations. *Business Lawyer*, 71: 381–425.
- Tirole, J. 1999. Incomplete contracts: Where do we stand? *Econometrica*, 67: 741–781.
- Villalonga, B. 2004. Diversification discount or premium? New evidence from the business information tracking series. *Journal of Finance*, 59: 479–506.
- Wang, H., & Barney, J. B. 2006. Employee incentives to make firm-specific investment: Implications for resource-based theories of corporate diversification. *Academy of Management Review*, 31: 466–476.
- Wang, H., Barney, J. B., & Reuer, J. 2003. Stimulating firm-specific investment through risk management. *Long Range Planning*, 36: 49–59.
- Wang, H., He, J., & Mahoney, J. T. 2009. Firm-specific knowledge resources and competitive advantage: The roles of economic and relationship-based employee governance devices. *Strategic Management Journal*, 30: 1265–1285.
- Wang, H., Zhao, S., & He, J. 2016. Exogenous increase in takeover protection and firm knowledge accumulation strategy. *Strategic Management Journal*, 37: 2393–2412.
- Wasmer, E. 2006. General versus specific skills in labor markets with search friction and firing costs. *American Economic Review*, 96: 811–831.
- Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5: 171–180.
- Williamson, O. 1975. *Markets and hierarchies*. New York: Free Press.
- Williamson, O. 1983. Credible commitments: Using hostages to support exchange. *American Economic Review*, 70: 519–540.
- Williamson, O. 1985. *The economic institutions of capitalism*. New York: Free Press.
- Williamson, O. 1996. *The mechanisms of governance*. New York: Oxford University Press.

**Robert E. Hoskisson** ([robert.hoskisson@rice.edu](mailto:robert.hoskisson@rice.edu)) holds the George R. Brown Chair of Strategic Management at Rice University's Jones School of Business. He received his Ph.D. from University of California, Irvine. His research topics include corporate and international strategy, corporate governance, strategic entrepreneurship, acquisitions and divestitures, business groups, and IPOs.

**Eni Gambeta** ([eni.gambeta@rice.edu](mailto:eni.gambeta@rice.edu)) is a doctoral candidate in strategic management at Rice University's Jones School of Business. His research interests include firm-specific investment, strategic human capital, and innovation strategy.

**Colby D. Green** ([colby.d.green@rice.edu](mailto:colby.d.green@rice.edu)) is a doctoral candidate in strategic management at Rice University's Jones School of Business. His research falls within the nonmarket strategy domain, with a special interest in the outcomes of corporate political activities.

**Toby X. Li** ([toby.li@rice.edu](mailto:toby.li@rice.edu)) is a doctoral candidate in strategic management at Rice University's Jones School of Business. He studies organizational and partnership learning.

Copyright of Academy of Management Review is the property of Academy of Management and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.