Alok Kumar, Jan B. Heide, & Kenneth H. Wathne

Performance Implications of Mismatched Governance Regimes Across External and Internal Relationships

This article examines how a manufacturer's governance of an external supplier relationship affects its performance toward a downstream retail customer. In line with sociological and economic theory, a manufacturer's reliance on supplier norms and incentives, respectively, promotes performance. However, the performance effect of each external governance mechanism weakens in the presence of a different governance regime within the manufacturer firm itself. Specifically, internal incentives weaken the effect of external norms, and internal norms weaken the effect of external incentives. From a practical standpoint, these findings point to the difficulty of managing sets of relationships that involve different parties and mechanisms. From a theoretical standpoint, they point to the complex interplay between social norms and economic incentives in driving performance outcomes.

Keywords: governance, interfirm relationships, formal relationships, informal relationships, incompatible governance mechanisms, performance

A manufacturer's relationships with its supply chain partners are important for its overall strategy. For example, relationships with upstream suppliers may contribute significantly to a firm's marketing initiatives toward downstream customers. However, industry observation suggests that high-performing supply chain relationships do not emerge on their own (Narayanan and Raman 2004). Rather, they require some form of a "visible hand" (Smith 1776), or explicit governance efforts to reduce the friction inherent in interactions between self-interested parties (Williamson 2005).

Prior research has shown the different ways a visible hand can be deployed. For example, research grounded in sociological theory and contract law has focused on the use of informal social norms (e.g., Heide and John 1992; Noordewier, John, and Nevin 1990). Other lines of research have built on the rational choice tradition from economics to consider the use of formal incentives of various kinds (e.g., Bergen, Dutta, and Walker 1992; Lal and Staelin 1986).

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According to extant theory, norms and incentives are ideal types of governance mechanisms (Bradach and Eccles 1989; Ouchi 1980), and both are capable in principle of promoting performance. However, although much has been learned about governance in recent years, most of the current knowledge is based on the observed effects of particular mechanisms within the context of *individual* relationships. Although such a focus is consistent with extant theory, which emphasizes the "transaction" as the unit of analysis (Commons 1934; Williamson 1996), marketing exchanges frequently involve *multiple* relationships that are connected in various ways (Hutt, Reingen, and Ronchetto 1988; Palmatier, Scheer, and Steenkamp 2007).

In this article, our goal is to extend the existing literature on relationship governance in two ways. First, we consider the possibility that a manufacturer's governance efforts toward an upstream supplier have performance implications in a downstream customer relationship. Specifically, the stronger the norms or incentives in the focal supplier relationship, the closer is the upstream coordination, and the greater is the manufacturer's ability to respond to downstream market conditions. From a practical standpoint, this suggests that a firm's dyadic relationship-building efforts are associated with economies that go beyond the dyad in question.

Second, we explore whether these performance effects depend on how functional areas and relationships within the manufacturer firm itself are governed. Importantly, the processes and workflows that constitute a manufacturer's relationship with an external supplier (e.g., product design, delivery) also involve departments and relationships within the firm itself (e.g., merchandising, product design, sales).

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These internal relationships and the relevant boundary personnel are also subject to governance mechanisms, such as norms and incentives. However, a firm's internal governance arrangements do not necessarily mirror its external ones (Bacharach, Bamberger, and Sonnenstuhl 1996). This raises the question of what happens when supply chain workflows are subject to different governance regimes across external and internal relationships.

We posit that a different governance regime within the manufacturer firm itself weakens the performance effects that follow from the use of norms and incentives toward an upstream supplier. This is because individual governance mechanisms possess different interaction logics or decision-making properties (Heide and Wathne 2006; Messick 1999), and when different mechanisms are combined across relationships, the resultant governance mismatches cause performance losses.

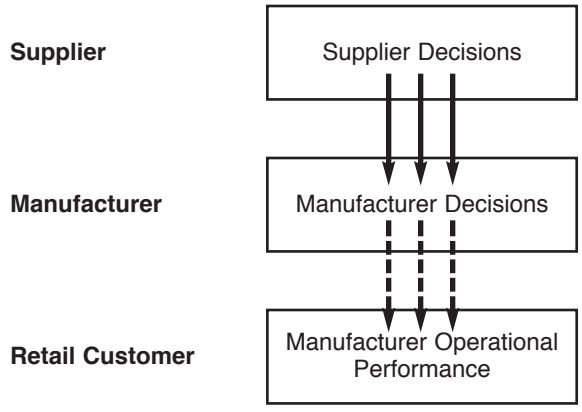
We test our hypotheses with an empirical study in the apparel industry. From a theoretical standpoint, our findings reveal sources of friction between some commonly studied governance mechanisms, and they inform the ongoing research agenda on the interaction between social norms and economic incentives (Granovetter 2005; Kreps 1997). From a practical standpoint, we derive guidelines for relationship management that acknowledge both (1) how performance follows from the use of individual governance mechanisms *within* a particular relationship and (2) how governance mismatches *across* relationships weaken these effects. In general, our findings suggest that limiting the focus of a firm's governance decisions to individual mechanisms and relationships is potentially misleading.

We organize the article as follows: In the next section, we present the theoretical framework and research hypotheses. Then, we describe the research method used to test the hypotheses and the empirical results. Finally, we discuss the study's implications and offer topics for further research.

Theoretical Framework

Figure 1 shows the relationships among a manufacturer (e.g., Perry Ellis), an upstream supplier (e.g., Imago), and a downstream retail customer (e.g., Macy's). We focus on the manufacturer's operational performance in relation to the downstream retailer, as reflected in a range of service outputs, such as delivery quality, cycle time, and order accuracy (Bucklin 1966). As Figure 1 shows, a manufacturer's performance toward a retail customer is the outcome of a series of generic workflows (e.g., product design, manufacturing, sales, delivery) that involve both (1) the upstream supplier and (2) different functional areas and boundary personnel within the manufacturer firm itself (e.g., in purchasing, merchandising, and sales).

FIGURE 1
Conceptual Framework



Although a supply chain is a unique competitive unit or an "organized behavior system" (Alderson 1957), the goals of the parties that constitute the system, whether they are external or internal to a particular firm, are not necessarily aligned on a consistent basis. Transaction cost theory (e.g., Williamson 2005) suggests that interactions between exchange partners may involve opportunism. This requires the use of so-called governance mechanisms toward the focal parties, whose purpose is to influence their ongoing decision making and ensure that the overall workflow delivers performance in relation to the end customer.

Drawing on different academic disciplines, prior research has identified the different forms of governance mechanisms. For example, research grounded in sociological theory and contract law has emphasized the role of informal arrangements and relational contracts based on social norms. In contrast, economic theory, in particular its "rational choice" branch (Becker 1976), has emphasized the role of formal incentives. We consider how manufacturers can use each mechanism in their supplier relationships to enhance performance. Next, we consider how the presence of an incompatible governance regime within the manufacturer firm itself weakens these effects.

Manufacturer–Supplier Relationship: First-Order Effects

Research in sociology (e.g., Granovetter 2005; Uzzi 1997) describes a "homo sociologicus" whose behavior is "pushed from behind" by informal rules or social norms. Similarly, research on contract law (e.g., Macneil 1980) shows how decisions, even between business partners, are influenced by implicit expectations of various kinds. For example, interfirm relationships frequently involve solidarity norms, defined as bilateral expectations that a high value is placed on the relationship itself (Heide and John 1992). The focal point for such norms is the relationship as a whole—that is, a single maximizing unit (Macneil 1980) with shared roles.

In a supply chain context (see Figure 1), the decisions subjected to solidarity norms include product design, quality, and delivery. For example, consider a situation in which market conditions require adaptations to the supplier's delivery schedule. Solidarity norms promote performance in such situations because their informal quality induces cooperation even when the terms of exchange between the parties are incomplete. Adjustments are made without elaborate documentation of individual roles and tasks, and explicit cost–benefit linkages need not be established for each activity *ex ante* because the parties agree to tolerate, within reason, short-term inequities in the interest of the relationship as a whole.

Uzzi's (1997, p. 51) qualitative study provides examples of how established norms enable apparel suppliers and manufacturers to quickly reach mutual understandings and make decisions because, as one informant noted, "we are all in the same boat." In general, the stronger the solidarity norms between a manufacturer and a supplier, the more closely aligned are the relevant goals, and the higher is the likelihood that the supplier's ongoing decision making will promote manufacturer performance. Thus:

> H_1: The stronger the solidarity norms in the (upstream) supplier relationship, the greater is the manufacturer's (downstream) performance.

In contrast with the sociological perspective on governance, economic theories of relationships, such as transaction cost and agency theory, embrace the assumption of a self-interested "homo economicus" whose decisions are "pulled from the front" by cost–benefit calculations of their likely consequences. In turn, this assumption has led to an emphasis on formal governance mechanisms, such as economic incentives.

A manufacturer can create supplier incentives by paying a price premium for the focal product. A price premium refers to a price that exceeds the marginal costs or, equivalently, the competitive market price for a particular quality level (Klein and Leffler 1981). The effect of paying a price premium is to create a self-enforcing "contract" tied to the value of future transactions (Rao and Monroe 1996). When such a contract is in place, cooperative supplier actions ensure a continued revenue stream, and opportunistic actions, to the extent that they cause relationship termination, produce a revenue loss.

Importantly, incentives promote supplier support for the relationship depending on their formal and explicit quality. In contrast with the incomplete contracting logic of a solidarity norm, an incentive regime requires that the parties clearly specify individual roles, tasks, and performance levels (e.g., with regard to product specifications and delivery schedule) as a basis for administering the incentives in question.

The greater the incentives the manufacturer makes available to the supplier, the greater is the likelihood that the supplier's decisions support the manufacturer's strategy. When market conditions necessitate supplier cooperation, as we described previously, the possibility of price premiums tied to future sales increases the likelihood that the supplier will perform the necessary activities and that the manufacturer's downstream performance will be enhanced. Thus:

> H_2: The greater the incentives in the (upstream) supplier relationship, the greater is the manufacturer's (downstream) performance.

Hereinafter, we refer to the performance implications of the individual governance mechanisms expressed in H_1 and H_2 as first-order effects. Figure 2 graphically illustrates the hypotheses. Importantly, although these hypotheses involve individual governance mechanisms, they also involve complex, multilevel processes. Specifically, they build on previous research (Wuyts et al. 2004) to suggest that a firm's efforts to organize a particular (upstream) relationship could have spillover effects in a different one (i.e., in a downstream customer relationship).

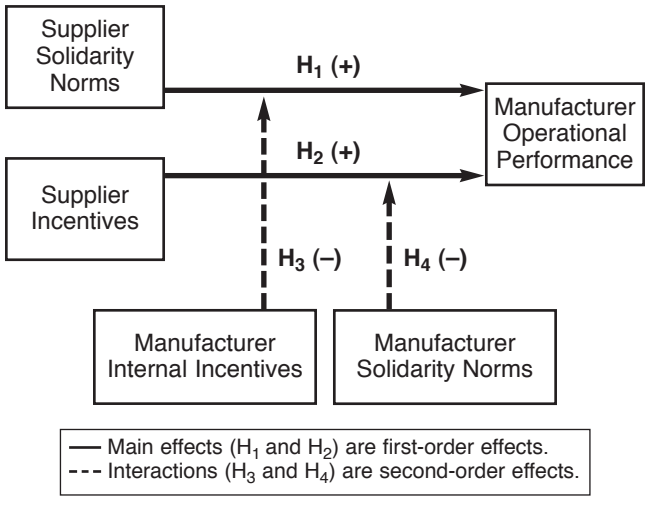
In the next section, we discuss how these effects weaken when the focal mechanisms coexist with a different governance regime within the manufacturer firm itself. We refer to such scenarios as second-order effects (see Figure 2).

Constellations of External and Internal Governance Mechanisms: Second-Order Effects

The focus of a manufacturer's upstream governance efforts is on a supplier's decisions. Although these efforts can influence manufacturer performance, the external supplier's decisions represent only a part of the overall input. According to Choi, Dooley, and Rungtusanatham (2001), a defining feature of extended supply chains is the need to manage larger workflows that involve multiple firms and parties, including different functional areas and boundary personnel within a manufacturing firm (e.g., merchandising and sales).

Importantly, the relevant decision makers within the manufacturer firm are also subject to governance regimes (Anderson and Gatignon 2005). Indeed, research (e.g., Stinchcombe 1985) has shown that norms and incentives are generic governance devices that apply both across and within organizational boundaries. For example, research in various disciplines (e.g., Ayers, Dahlstrom, and Skinner 1997; Baker, Gibbons, and Murphy 2002; Blau and Scott 1962; Lindenberg 2001) has shown that informal solidarity norms, defined as expectations about joint responsibilities across functional areas, are common within firms. Furthermore, parallel to the supplier relationship, boundary personnel within the firm may be subject to incentive regimes of various kinds (Lal and Staelin 1986; Mishra, Heide, and Cort 1998). For example, apparel companies frequently tie explicit and formal financial rewards (e.g., salary increases, bonuses) to departmental managers' ability to manage downstream retailer relationships.

FIGURE 2
Research Hypotheses



Although a firm can use norms and incentives both externally and internally, its internal governance arrangements do not necessarily mirror its external ones. Both the supply chain literature (e.g., Charan 2006; Hemp and Stewart 2004) and organization theory (e.g., Bacharach, Bamberger, and Sonnenstuhl 1996; McGinn and Keros 2002) show that governance regimes across organizational boundaries frequently differ. This raises the question whether different governance mechanisms, when brought to bear on the same basic processes or workflows, affect overall manufacturer performance.

Note that different governance mechanisms are associated with unique (social vs. economic) interaction logics. These logics differ in their (1) focal point (the overall relationship vs. the individual parties), (2) time dimension (long vs. short term), and (3) decision-making process (informal vs. formal rules). Heide and Wathne (2006) argue that governance mechanisms are capable of inducing different generic relationship roles, which, when internalized, exert systematic influence on a party's decision making.

In general, decision making across a value chain is facilitated by the extent to which the different parties (e.g., the manufacturer's employees) operate within a single governance regime or employ the same decision logic. However, to the extent that the relevant parties are subject to *different* governance regimes and are forced to switch between them, this creates a governance mismatch that weakens the effect of the individual mechanisms and thus reduces overall performance.

Heide and Wathne (2006) explain switching across governance regimes in terms of the "stickiness" associated with particular roles. We propose that stickiness resides in the unique properties of norms and incentives, which produce coordination difficulties when the two intersect as part of a larger workflow. As a specific example, assume that the upstream supplier relationship is based on solidarity norms and that the internal relationships are governed through incentives. Furthermore, consider a situation in which market conditions require a change in product design or delivery schedule. Acting under a prevailing solidarity norm, the upstream supplier, when working with its counterpart in the manufacturer's purchasing department, will make the necessary changes to its processes without insisting on a complete specification of individual tasks and rewards. When the cost–benefit implications of specific activities are not clear, the supplier will, within reason, "satisfice rather than maximize on price" (Uzzi 1997, p. 37). Thus, while the solidarity norm's informal quality promotes performance, aspects of the overall workflow remain incomplete and undocumented.

However, assume that internal stakeholders within the manufacturing firm (e.g., the sales department) receive financial incentives that are affected by the supplier's actions. To safeguard their individual incentives against supplier nonperformance, these stakeholders will demand that the informal dealings with the supplier be formally codified and translated into individual tasks and performance levels as a prerequisite for an appropriate compensation process. Conceptually, the particular interaction logic that underlies incentives (e.g., Klein and Leffler 1981; Messick 1999) requires that such codification takes place. The necessary process, however, is time consuming, costly, and subject to both direct errors and omissions that compromise performance to the downstream customer.[1]

In principle, if the manufacturer's other departments are subject to the same type of governance regime (i.e., solidarity norms), the larger workflow will not be subject to obstacles, and the upstream governance mechanisms will promote manufacturer performance in an unconstrained fashion. However, to the extent that functional areas within the firm employ different interaction logics, coordination difficulties predictably emerge. Therefore, the outcome of different governance regimes along a larger supply chain is ongoing coordination problems between the relevant decision makers. Ultimately, these problems are sources of performance drains.

In summary, although the upstream solidarity norm in itself has a positive impact on the supplier's decisions and, ultimately, on manufacturer performance, its effect weakens in the presence of a strong internal incentive regime. Thus:

H_3: The effect of solidarity norms in an (upstream) supplier relationship on (downstream) manufacturer performance weakens with internal incentives within the manufacturer firm.

We next consider the effect of a different type of governance mismatch, in which the external supplier relationship is governed by formal incentives and the relevant departments within the manufacturer firm are subject to informal solidarity norms. The prerequisites for a supplier incentive scheme to promote performance are the ability to (1) define appropriate tasks and performance outcomes and (2) link individual tasks and outcomes with formal financial rewards (Klein and Leffler 1981). What happens, however, when this type of governance regime and its underlying economic logic coexist with an internal regime in which decisions are made according to informal norms?

Consider a situation in which market conditions require that a change be made in product design. Given the prevailing solidarity norm, the relevant internal parties interact informally with each other. For example, the sales department may not specify a complete list of acceptable new coloring dyes. Nonetheless, in line with the prevailing norm, the sales department expects its counterpart in purchasing to make the appropriate decisions based on the parties' joint responsibilities.

However, for the upstream supplier to perform its part of the larger design workflow, the internal norm must be translated into specific supplier tasks and measurable outcomes for the supplier to establish incentive claims under its particular (incentive-based) governance regime. As we noted previously, transitions between informal norms at one level and explicit tasks and outcomes at another may cause delays, omissions, and actual errors, all of which may com-

[1]Gibbons and Roberts (2010) note how relational norms are idiosyncratic to a set of parties and their circumstances. In part, this explains a norm's performance implications, but its idiosyncratic nature also makes a norm's content difficult to codify and express to third parties. Polanyi's (1967, p. 4) quote illustrates this process well: "We can know more than we can tell."

promise overall performance. As H_2 states, formal incentives influence supplier decision making favorably, but if aspects of the required tasks are incompletely specified in the first place, the effect of the supplier incentives on overall performance will weaken. Kaplan and Henderson (2006) specifically note the difficulty involved in matching incentive systems to incompletely specified tasks.

In principle, and in accordance with H_3, the relevant internal departments may attempt to switch or transition between governance regimes. However, we expect that such efforts are time consuming and that the performance of the employees in question may suffer as a consequence. In general, we expect that governance mismatches between external incentives and internal norms produce inefficient interactions between boundary personnel, which weaken the effect of external supplier incentives on performance. Stated formally,

> H_4: The effect of incentives in an (upstream) supplier relationship on (downstream) manufacturer performance weakens with solidarity norms within the manufacturer firm.

Summary of Hypotheses

Statistically, our hypotheses involve a set of contingency predictions that include (1) positive main effects of external solidarity norms and incentives on manufacturer performance (H_1 and H_2) and (2) negative interactions due to governance mismatches across relationships (H_3 and H_4). From a technical standpoint, these contingency predictions pertain to the slope of the relationships between the external governance mechanisms and performance as a function of the internal governance regime. In practical terms, our hypotheses express the impact on manufacturer performance when workflows that comprise both external and internal stakeholders are subject to incompatible interaction logics.

Research Method

Empirical Context and Data Collection

The empirical context for our study is the U.S. apparel industry. Our research setting is the supply chain for a particular apparel item, involving an apparel manufacturer, an upstream supplier (contractor), and a downstream retail customer. The apparel industry represents a suitable context for our research because (1) the processes and workflows that affect manufacturer performance involve both external and internal relationships (Magretta 1998) and (2) the firms rely on both norms and incentives (Uzzi 1997). To safeguard against same-source bias, we obtained the dependent variable (manufacturer performance) from the customer and the focal independent variables (pertaining to the external and internal relationships) from the manufacturer.

We collected data through a field study that included manufacturer and customer key informants. The initial sampling frame was a national mailing list of 9574 managers in U.S. apparel companies. The managers were contacted by telephone to locate an appropriate key informant within each company. Ultimately, we identified 1764 managers who (1) were knowledgeable about their company's external and internal relationships, (2) were willing to participate in the study, and (3) worked for companies we deemed appropriate for the study because they purchased from independent suppliers and sold to independent retailers.

Each manufacturer informant received a questionnaire and completed it with respect to a particular apparel item. To capture exchange relationships that were salient to the informants and avoid a potential selection bias, we instructed informants to select the largest supplier (by annual dollar value) and the largest retail customer (by annual purchase volume) for the focal garment. After callbacks and a second mailing, we received 497 questionnaires, for a 28% response rate (among eligible informants). Of these, we discarded 13 because of excessive missing data.

Given our interest in collecting matched data, we also asked the manufacturer informants to identify an informant from the focal customer firm. In total, we obtained 218 different customer informant names (one for each retailer) from the apparel company managers. We qualified these informants using a similar procedure. Of the 218 names received, 178 (82%) met our informant criteria and were mailed a questionnaire. To boost response rates, we promised each retailer a report containing the main findings from the study and a comparison of the retailer firm with the overall sample. Ultimately, 81 customer questionnaires were returned, for a 46% response rate, which yielded 81 matched manufacturer–customer responses.

Key Informant Checks

We administered a post hoc test of the manufacturer informants' knowledge about their firms' supplier and retailer relationships (Kumar, Stern, and Anderson 1993). On a seven-point scale, 63 informants scored lower than 4 on either of the scales and were eliminated. The average scores for the remaining 421 manufacturer informants were 6.3 (SD = .89) and 6.2 (SD = .99), respectively. Of the informants, 80% were owners, chief executive officers, presidents, vice presidents, or general managers, and the remaining ones held senior positions. The average knowledge score for the retailer informants was 6.5 (SD = .74). Overall, these checks suggest that our informants were well qualified to report on the focal phenomena.[2]

Nonresponse Bias

We conducted two tests of nonresponse bias. First, we compared early and late responses for both the apparel and the retail companies with respect to the key study variables (Armstrong and Overton 1977). Second, we compared our final matched sample with (1) companies on the original

[2]We also inspected the informant responses for consistency with respect to our theoretical variables. Of the 81 matched responses, only 1 showed an idiosyncrasy, in the form of a pricing practice in which the final garment price was decided *ex post* (after delivery) rather than *ex ante*, according to the logic of price premiums (Klein and Leffler 1981), and thus we eliminated it from subsequent analyses. We also ran our analyses after including this observation, but we found the same results.

mailing list with respect to two demographic measures (number of employees and total revenues) and (2) the remaining (unmatched) sample of apparel companies with respect to the focal independent variables. We found no significant differences, suggesting an absence of bias.

Measures

We measured all the key variables using multi-item reflective scales. The items, response formats, scale source, and key descriptive statistics appear in the Appendix.

Manufacturer operational performance (PERF). Our dependent variable captures the manufacturer's operational performance, as reflected in a particular set of service outputs (Bucklin 1966) to the downstream retailer. Although performance involves many aspects (e.g., Kumar, Stern, and Achrol 1992), we focused on its operational dimension because of its salience in a supply chain context (e.g., Uzzi 1997). We used six items, including initial order fulfillment cycle, percentage of on-time shipments, replenishment cycle time, quality, completeness of shipments, and responsiveness (Hult, Ketchen, and Slater 2004). For brevity, we refer to manufacturer operational performance simply as performance.

Supplier solidarity norms (SSN). Solidarity norms describe the expectation that parties choose behaviors that support the relationship as a whole and abstain from behaviors that have negative consequences (Lusch and Brown 1996; Macneil 1980). The four items are based on the ones Heide and John (1992) use.

Supplier incentives (SI). This scale captures the incentives the apparel manufacturer uses in the supplier relationship. Specifically, we focus on incentives in the form of price premiums that create an ongoing revenue stream for the supplier. Consistent with Klein and Leffler's (1981) definition, the items assess whether the prices in question exceed the normal prices or competitive prices for similar garments. The informants indicated that given the ongoing transactions involving the same apparel item, baseline quality expectations are well established and, in turn, easily evoked in response to item wordings (e.g., "normal," "similar garments"). As such, informants judged price premiums against the manufacturers' ingrained expectations. The specific scale items are identical to the ones Rao and Bergen (1992) and Mishra, Heide, and Cort (1998) use.

Manufacturer solidarity norms (MSN). Parallel to supplier solidarity norms, our measure of internal norms captures the willingness of departments within the apparel company to strive for joint or collective benefits. Consistent with Ayers, Dahlstrom, and Skinner's (1997) operationalization and extant work on organizational properties (e.g., Deshpandé, Farley, and Webster 1993), the measure captures the overall level of solidarity between the departments involved in supplying the garment to the downstream retailer.

Manufacturer internal incentives (MI). This scale captures the financial incentives given to the manufacturers' departmental managers who are involved in supplying the downstream retail customer. Specifically, the internal counterparts to supplier price premiums involve salary increases and bonuses (e.g., Lal and Staelin 1986). In-depth interviews with apparel company managers showed that this was a standard compensation practice among apparel companies. We adapted the scale items from Mishra, Heide, and Cort (1998).

Control variables. We also included a series of control variables to account for alternative influences on manufacturer operational performance. First, we controlled for a key aspect of the upstream power structure (Frazier 1983; Lusch and Brown 1996)—namely, supplier size relative to the manufacturer. We collected this measure from the manufacturers. Second, we accounted for the power structure in the downstream relationship by including a measure of manufacturer size relative to the customer (retailer). We obtained this measure from the retailers.

Following transaction cost theory (Williamson 1996), we controlled for manufacturer transaction-specific investments (TSIs) in both the supplier and the retailer relationships. By definition, TSIs create lock-in and thus increase a party's motivation to perform (Anderson and Weitz 1992; Nygaard and Dahlstrom 2002). We also accounted for the suppliers' and retailers' TSIs toward the manufacturer (Jap and Ganesan 2000). We obtained these measures from the manufacturers and the retailers, respectively.

Next, we controlled for two exchange attributes (Akerlof 1970; Williamson 1996; Wuyts et al. 2004) of the downstream market: (1) demand volatility and (2) quality uncertainty regarding the focal items. We measured demand volatility with a four-item scale based on the ones Poppo and Zenger (2002) and Wathne and Heide (2004) use. To obtain the quality uncertainty measure, we supplied qualitative descriptions of the focal garments (provided by manufacturer informants) to managers in two independent apparel retailing firms and asked them to rate the inherent difficulty of ascertaining the garment's overall quality. To limit rater effort, each party rated only half the observations in our sample; we randomly chose the individual observations supplied for rating from our sample.

Given our interest in performance in the downstream relationship, we accounted for two additional characteristics of the manufacturer's relationship with the downstream retailer. Specifically, we controlled for (1) downstream solidarity norms and (2) the pricing arrangement used (adjustable vs. fixed pricing) in the downstream relationship. We obtained these measures from the retailer informants. The final control variable was whether the focal garment was branded; this particular characteristic can influence relationship outcomes.

Analysis Strategy

We employed partial least squares (PLS) estimation for analyses. We chose PLS because improper or nonconvergent solutions are unlikely to occur even in small samples (Fornell and Bookstein 1992; Hulland, Ryan, and Rayner 2010; Wold 1989). Moreover, PLS offers bootstrapping capabilities that can address stability issues in limited samples such as ours (Henseler, Ringle, and Sinkovics 2009; Hulland 1999). Another benefit of PLS is that it permits us

to account for error in our measures that are captured through fallible indicators.

We estimated both the measurement and the structural (regression) models simultaneously using SmartPLS 2.0 (Ringle, Wende, and Will 2005). We describe the details and the results for these models sequentially.

Measurement Model

The results of the measurement model appear in Table 1. Given our modest sample size, we ran a partially disaggregated measurement model that included all our focal variables and the multi-item controls (Bagozzi and Heartherton 1994). As we show in the Appendix, for two of the control variables (volatility and manufacturer TSIs downstream), we dropped one item each because of a low (<.4) and insignificant loading (Churchill 1979; Hulland 1999).

As Table 1 shows, the composite reliabilities for all variables exceed .70, and all the factor loadings are significant ($t > 1.96$). The average variance extracted exceeds the .5 level for all focal variables. These results establish the convergent validity of our measures. Furthermore, the average variance extracted for each measure always exceeded the highest shared variance between every construct pairs, which provides evidence of discriminant validity (Fornell and Larcker 1981). We also examined item cross-loadings for all constructs but found no significant effects, which provides additional evidence of discriminant validity. Table 2 reports all correlations and descriptive statistics.

Hypotheses Tests and Results

Our hypotheses suggest that upstream governance efforts increase manufacturer downstream performance (H_1 and H_2) but that a governance mismatch across external and internal relationships weakens these effects (H_3 and H_4). To test these hypotheses, we estimated a structural model that included paths from (1) the upstream governance mechanisms (supplier solidarity norms [SSN] and supplier incentives [SI]), (2) the internal governance mechanisms (manufacturer solidarity norms [MSN] and manufacturer internal incentives [MI]), (3) the interactions between the external and the internal mechanisms (SSN × MI and SI × MSN), and (4) all the control variables to manufacturer operational performance (PERF):

$$PERF = f(SSN, SI, MSN, MI, SSN \times MI, SI \times MSN, controls).$$

Because our focal measures are latent variables, their interactions are also represented as latent variables by the SmartPLS software, which uses the product-indicator procedure that Chin, Marcolin, and Newsted (2003) developed in conjunction with PLS. Following recommendations in previous research (e.g., Chin, Marcolin, and Newsted 2003; Hulland, Ryan, and Rayner 2010; Wuyts and Geyskens 2005), we standardized all indicators to aid interpretation. Finally, because PLS is a distribution-free approach, it does not offer parametric significance tests. Instead, we performed bootstrapping (drawing 100 samples with replacement) to compute the standard errors and significance levels of the estimated parameters (Hulland 1999).

Overall, our model explains a significant amount of the variance in manufacturer performance (adjusted $R^2 = .36$). Furthermore, including the focal interaction terms enhances model adjusted R-square by 20% (adjusted $R^2 = .36$ and .30 with and without the interactions). Table 3 shows the specific results from the structural model.

Structural model results. H_1 states that reliance on supplier (upstream) solidarity norms increases manufacturer operational performance toward the downstream customer. As Table 3 shows, the main effect of supplier solidarity norms ($\beta = .20$, $p < .01$) is significant and positive, in support of H_1. H_2 states that reliance on supplier incentives has a positive effect on manufacturer downstream performance. Consistent with this, the regression coefficient for supplier incentives is positive and significant ($\beta = .25$, $p < .01$). These results represent the first-order effects created by the upstream governance mechanisms on performance in the downstream relationship.

Our contingency hypotheses (H_3 and H_4) pertain to the second-order or joint effects of the external and internal governance mechanisms. Specifically, H_3 states that the performance effects of solidarity norms in the supplier relationship weaken with internal incentives within the manufacturer firm. Statistically, this is represented by a negative interaction term between supplier solidarity norms and manufacturer internal incentives. As Table 3 shows, the interaction term is negative and significant ($\beta = –.33$, $p < .01$), in support of H_3.

To investigate H_3 further, we graphed the relationship between manufacturer performance and supplier norms following Aiken and West's (1991) procedure. Specifically, we computed the slope (partial derivative) between performance and supplier norms ($\partial PERF/\partial SSN$) at three levels of the moderator variable (manufacturer internal incentives [MI]): (1) at one standard deviation below the mean ($MI_{-1\sigma}$), (2) at the mean level (MI_{mean}), and (3) at one standard deviation above the mean ($MI_{+1\sigma}$). The range for MI (mean centered) is (–2.02, 2.94). The plots and the significance tests for the slopes appear in Figure 3, Panel A.

As Figure 3, Panel A, depicts, supplier norms have a monotonic effect on performance. Specifically, supplier solidarity norms increase performance over the range of manufacturer internal incentives but at a decreasing rate. Solidarity norms strongly increase performance at one standard deviation below the mean of manufacturer incentives ($\partial PERF/\partial SSN = .53$, $p < .01$). The strength of this slope weakens but continues to be positive at the mean level of the moderator ($\partial PERF/\partial SSN = .20$, $p < .01$). However, the effect of solidarity norms becomes insignificant ($\partial PERF/\partial SSN = –.13$, $p > .1$) at one standard deviation above the mean of internal incentives.

Next, H_4 states that the effect of supplier (upstream) incentives on downstream performance weakens with (internal) manufacturer solidarity norms. Statistically, this relationship is represented by a negative interaction term between supplier incentives and manufacturer solidarity norms.

As we noted previously, the main effect of supplier incentives on manufacturer performance is positive and significant (H_2). However, its interaction with internal solidar-

TABLE 1
Partially Disaggregated Measurement Model for Focal Theoretical Variables and Multi-Item Controls

Items Loadings	Manufacturer Operational Performance (ξ1)	Supplier Solidarity Norms (ξ2)	Supplier Incentives (ξ3)	Manufacturer Solidarity Norms (ξ4)	Manufacturer Internal Incentives (ξ5)	Manufacturer TSIs Upstream (ξ6)	Supplier TSIs (ξ7)	Manufacturer TSIs Downstream (ξ8)	Retailer TSIs (ξ9)	Demand Volatility (ξ10)	Retailer Solidarity Norms (ξ11)
X1	.90 (37.98)										
X2	.92 (69.22)										
X3	.93 (53.09)										
X4		.89 (5.64)									
X5		.92 (5.16)									
X6		.97 (4.49)									
X7			.90 (4.50)								
X8			.82 (3.47)								
X9			.85 (3.65)								
X10				.75 (4.00)							
X11				.95 (7.38)							
X12				.98 (3.65)							
X13					.95 (17.77)						
X14					.91 (7.38)						
X15					.95 (8.21)						
X16						.85 (4.29)					
X17						.80 (4.57)					
X18						.88 (4.70)					
X19							.92 (6.73)				
X20							.91 (4.91)				
X21							.81 (4.53)				
X22								.62 (2.53)			
X23								.91 (3.66)			
X24								.52 (1.99)			
X25									.70 (2.45)		
X26									.87 (3.05)		
X27									.79 (3.47)		
X28										.88 (4.57)	
X29										.66 (2.30)	
X30										.86 (4.36)	
X31											.93 (55.79)
X32											.88 (29.04)
X33											.91 (44.35)
Composite reliability	.94	.95	.89	.93	.96	.88	.91	.74	.83	.84	.93
Average variance extracted	.84	.86	.74	.81	.88	.71	.77	.50	.62	.64	.82
Highest shared variance	27%	16%	9%	16%	9%	20%	20%	6%	5%	6%	27%

TABLE 2
Descriptive Statistics

Manufacturer operational performance	1.00															
Supplier solidarity norms	.06	1.00														
Supplier incentives	–.07	–.38	1.00													
Manufacturer solidarity norms	.04	.33	–.21	1.00												
Manufacturer internal incentives	.30	.02	.02	.16	1.00											
Relative size upstream	.04	–.13	.22	.00	–.07	1.00										
Relative size downstream	–.15	–.07	.23	.15	–.10	–.03	1.00									
Manufacturer TSIs upstream	.13	.10	–.02	.04	.06	.12	–.06	1.00								
Supplier TSIs	–.06	.02	.12	–.03	–.01	.12	.00	.49	1.00							
Manufacturer TSIs downstream	–.09	.00	.14	–.20	–.19	.11	–.10	–.23	–.04	1.00						
Retailer TSIs	–.06	–.17	.13	–.08	.03	.06	–.03	–.03	.13	.39	1.00					
Demand volatility	.00	–.01	.23	–.02	–.13	.07	–.03	.07	–.03	.02	–.08	1.00				
Quality uncertainty	–.11	.35	–.02	.04	–.02	.06	–.20	.10	–.03	.20	.25	.09	1.00			
Retailer solidarity norms	.53	.30	–.19	.07	.16	–.04	–.02	.16	.09	–.09	.04	–.15	.16	1.00		
Retailer pricing (fixed/not fixed)	–.12	.03	–.07	.03	.10	–.11	–.19	–.13	–.07	–.01	.04	–.04	.25	–.04	1.00	
Garment (branded/not branded)	.10	.05	–.24	.01	–.06	.00	–.04	.00	.08	.17	.10	–.14	.08	.02	–.17	1.00
M	5.50	5.49	2.92	5.56	5.71	.78	.42	3.76	3.22	2.83	2.96	3.52	4.22	5.68	.23	.45
SD	1.08	1.28	1.27	1.19	1.29	.42	.50	1.36	1.38	1.40	1.44	1.20	1.21	1.19	.42	.49

Notes: All analyses are based on N = 80. r > .23 are significant at $p < .05$ (two-tailed).

TABLE 3
Structural Model Estimates: Manufacturer Operational Performance

	Structural Path Estimates (Est.)	Bootstrap Standard Error (SE)	Bootstrap T (Est./SE)
Supplier solidarity norms (SSN)	.20	.10	2.00***
Supplier incentives (SI)	.25	.10	2.50***
Manufacturer solidarity norms (MSN)	–.07	.08	–.88
Manufacturer internal incentives (MI)	.22	.10	2.20***
SSN × MI	–.33	.10	–3.30***
SI × MSN	–.23	.11	–2.09***
Relative size upstream	.03	.08	.38
Relative size downstream	–.19	.09	–2.11**
Manufacturer TSIs upstream	–.22	.10	–2.20**
Supplier TSIs	–.01	.10	–.10
Manufacturer TSIs downstream	–.07	.10	–.70
Retailer TSIs	–.01	.08	–.13
Demand volatility	.09	.08	1.13
Quality uncertainty	–.49	.13	–3.77***
Retailer solidarity norms	.63	.12	5.25***
Retailer pricing (fixed/not fixed)	–.07	.09	–.78
Garment (branded/not branded)	.16	.09	1.78*
R^2 = .50			
Adjusted R^2 = .36			
N = 80			

*$p \leq .1$.
**$p \leq .05$.
***$p \leq .01$.
Notes: We used one-tailed tests for hypothesized effects and two-tailed test for the control variables.

ity norms is negative and significant ($\beta = -.23$, $p < .01$), suggesting that the performance-enhancing effect of supplier incentives weakens over the range of internal solidarity norms. To investigate these effects further, we plotted the slope between performance and supplier incentives ($\partial PERF/\partial SI$) over the range of the moderator variable (internal solidarity norms [MSN]): (1) at one standard deviation below the mean ($MSN_{-1\sigma}$), (2) at the mean level (MSN_{mean}), and (3) at one standard deviation above the mean ($MSN_{+1\sigma}$). The range of MSN (mean centered) was (–3.90, 1.30).

As Figure 3, Panel B, shows, supplier incentives have a monotonic effect on manufacturer performance. Specifically, the positive performance effect weakens over the range of internal solidarity norms. The effect of supplier incentives on performance is strongest at one standard deviation below the mean level of internal solidarity norms ($\partial PERF/\partial SI = .48$, $p < .01$). The effect weakens substantially at the mean level of internal norms ($\partial PERF/\partial SI = .25$, $p < .01$) and becomes insignificant at one standard deviation above the mean ($\partial PERF/\partial SI = .02$, $p > .1$).

Collectively, these tests support the key premise of our study—namely, that incentives and norms individually promote favorable (first-order) effects in the form of performance spillovers across relationships (H_1 and H_2). However, as the negative interaction (second-order) effects reveal, the performance benefits of individual mechanisms weaken when different governance mechanisms are combined across internal and external relationships (H_3 and H_4).

Among the control variables, greater manufacturer size relative to the retailer is negatively associated with downstream performance ($\beta = -.19$, $p < .05$). The coefficients for both manufacturer TSIs upstream ($\beta = -.22$, $p < .05$) and quality uncertainty ($\beta = -.49$, $p < .01$) are negative. As we expected, retailer solidarity norms are positively associated with performance ($\beta = .63$, $p < .01$). Branded garments seem to enjoy superior performance to unbranded ones ($\beta = .16$, $p < .1$).

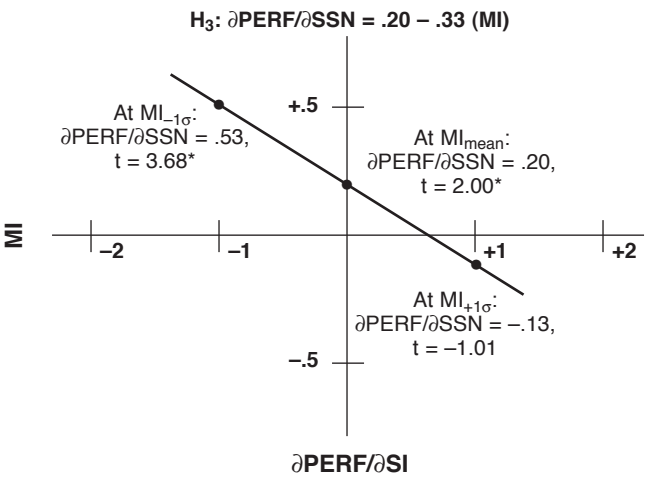
Common method variance. Although common method variance is unlikely to be an issue in our study because we collected the dependent and independent measures from different parties, we examined the robustness of our results to its possible effect. Specifically, we reestimated our structural model after allowing a method factor to load freely onto all indicators, following the general PLS estimation procedure described by Podsakoff et al. (2003) and adapted by Liang et al. (2007, pp. 85–87).

We found that the structural model estimates for our hypothesized effects remained virtually unchanged after we introduced the method factor. Furthermore, all item loadings on the common method factor were insignificant ($t < 2$). Finally, the proportion of variance in each observed indicator (computed as the square of the item loadings) explained by its focal construct (83% on average) substantially exceeded the variance explained by the method factor (1% on average). Collectively, these analyses suggest that method variance does not materially affect our conclusions (Liang et al. 2007).

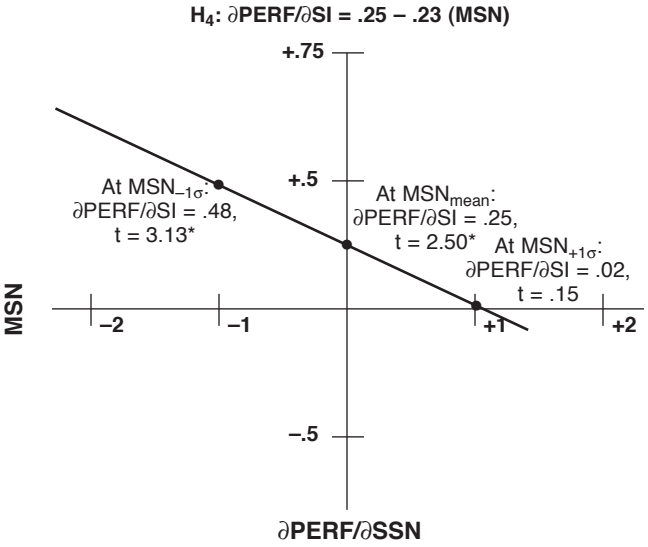
Within-level mismatches. Although our primary focus is on the effects of incompatible governance regimes across relationships (H_1–H_4), it could be argued that governance mismatches within a particular relationship (e.g., reliance

FIGURE 3
Plots for Cross-Level Mismatches

A: Slope of Supplier Solidarity Norms (SSN) on Manufacturer Operational Performance (PERF) over the Range of Manufacturer Internal Incentives (MI)



B: Slope of Supplier Incentives (SI) on Manufacturer Operational Performance (PERF) over the Range of Manufacturer Solidarity Norms (MSN)



*$p \leq .01$.

on incentives and norms within the external and/or internal relationships) also undermine performance outcomes. Such scenarios have received some attention in prior research (e.g., Poppo and Zenger 2002; Zenger, Lazzarini, and Poppo 2002) based on the notion that explicit incentives may degrade the coordination benefits of social norms (e.g., Bowles 2008; Frey and Stutzer 2007; Kreps 1997).

Ultimately, we expect that mismatches in governance that cross organizational boundaries carry greater weight. Within a particular relationship, the common context represented by joint ownership may counteract the negative implications of mismatches. Nonetheless, we formally examined the effects of within-level mismatches by reestimating our focal structural model after augmenting it with the two within-level mismatch terms. In the expanded model, all our hypothesized effects remained significant at the previous levels. Furthermore, we found partial support for the performance implications of within-level mismatches. The interaction between supplier incentives and solidarity norms was insignificant, while the interaction between internal norms and incentives was significant and negative (MSN × MI: $\beta = -.23$, $p < .01$).

Analysis of mismatches versus matches. Our predictions suggest that governance mismatches across relationships weaken the effect of the upstream mechanisms. Conceivably, we could also consider the performance implications of governance "matches"—that is, whether deployment of the *same* type of governance mechanism across relationships enhances the effect of a certain mechanism. We reestimated the focal model with two additional interactions that corresponded to matches (e.g., SSN × MSN). The main effects of the upstream mechanisms and the mismatch effects remained significant, while the terms corresponding to the matches were insignificant. Specifically, the tests for matches between upstream and internal norms and between upstream and internal incentives yielded $\beta = .01$ ($p > .1$) and $\beta = .17$ ($p > .1$), respectively.[3]

Substantively, these results suggest that matches do not incrementally enhance the effectiveness of the upstream governance mechanisms. In other words, although performance losses can arise from mismatches across relationships, it is not clear whether matching governance efforts actually enhance the effects of the individual upstream governance variables. That is, the cross-level interaction effects we show are inherently negative in nature. These results reveal an important boundary condition for our findings.

Sources of performance. In transaction cost theory (Williamson 2005), performance results from an alignment between governance problems and mechanisms. For example, transaction cost theory's adaptation argument suggests that solidarity norms are appropriate responses to conditions of demand volatility and that the interaction between the two should affect performance. Conversely, a failure to deploy a particular mechanism under certain conditions should reduce performance.

To the extent that performance is influenced by both the alignment between governance problems and mechanisms (in line with standard transaction cost theory) and the mismatches between the mechanisms themselves (in line with our hypotheses), the former represents an alternative expla-

[3]Conceptually, governance matches (e.g., high supplier incentives with high manufacturer internal incentives) and mismatches (e.g., high supplier incentives with high manufacturer solidarity norms) are not opposite scenarios, because they involve different sets of variables (manufacturer internal incentives vs. manufacturer solidarity norms). If a "mismatch" means high supplier incentives with high manufacturer solidarity norms, logically a lack of a mismatch would refer to a combination of high supplier incentives and low manufacturer solidarity norms, which is different from a "match" (high supplier incentives with high manufacturer internal incentives).

nation for our findings. To explore this formally, we reestimated our model to account for the possible effects of alignment by augmenting the model with interactions between governance problems and mechanisms (e.g., demand volatility × solidarity norms).

Our hypothesized mismatch effects remained unchanged even after we accounted for alignment effects. For example, while the volatility × solidarity norm ($\beta = .23$, $p < .05$) term had a significant and positive effect on performance, consistent with the alignment thesis, all the mismatch effects remained significant. In general, these analyses suggest that our observed performance results are attributable to mismatches between different governance mechanisms and not to the degree of alignment between mechanisms and governance problems per se.

Discussion

Implications for Theory

Prior research has identified different governance mechanisms that are available for managing exchange relationships, including solidarity norms and economic incentives. However, with some exceptions (e.g., Antia and Frazier 2001; Wathne and Heide 2004), the focus of these studies has been on the mechanisms' effects within individual relationships. The current study extends prior research by showing how specific mechanisms, when deployed in an (upstream) supplier relationship, are capable of promoting performance in a different (downstream) one. Although extant theory frequently views different relationships as independent transactions separated by sharp "boundaries" (Williamson 1996), our evidence of spillover effects suggests that individual governance mechanisms have greater payoffs than frequently recognized.

At the same time, we also showed that the performance effects of a firm's external governance mechanisms are contingent on the ones the firm uses internally. Specifically, we showed that supplier norms and incentives, which have individual performance effects, actually weaken each other's effects when they coexist across external and internal relationships.

Importantly, the performance implications of governance mismatches would not be revealed by standard analyses of individual relationships and governance mechanisms. Our results show that governance variables, which are well understood at the individual relationship level, have complex performance effects, some of which are revealed only when the level of analysis is expanded from individual relationships to larger constellations of dyads and governance mechanisms.

In general, this study builds on Bradach and Eccles's (1989) plural forms thesis about combinations of governance mechanisms. In our empirical tests, the main effects of supplier norms and incentives (H_1 and H_2) suggest that the two governance mechanisms contribute separately to performance. In other words, the two mechanisms have additive effects on performance, which is consistent with Bradach and Eccles's conjecture about the role of governance mechanisms as building blocks. At the same time, we showed that the interactions between different mechanisms across relationships cause performance losses. Overall, our findings point to the complexity of the plural forms phenomenon, as Cannon, Achrol, and Gundlach (2000) note.

In a broad theoretical sense, our findings shed light on the effects of combining incentives and social norms. Economists (e.g., Kreps 1997) have noted the importance of such questions but also lamented the lack of testable propositions and empirical evidence. Similarly, sociologists (e.g., Granovetter 2005) have pointed to the commonality of mixed courses of action but stopped short of articulating the likely processes and their effects. As we discussed previously, our study shows that both norms and incentives are associated with positive performance effects. At the same time, our findings underscore the importance of examining individual mechanisms' unique decision logics and their interactions. Somewhat surprisingly, although it is commonly accepted that the upshot of governance is to influence decision making, the microlevel properties of particular mechanisms have received limited attention. Our study shows that because of their inherent incompatibilities, these properties may be sources of performance drains in situations in which a firm's strategy involves multiple relationships and governance mechanisms.

Implications for Practice

In an influential study, Arndt (1979, p. 73) describes one of the marketing function's inherent challenges in terms of "negotiating agreements with external boundary persons and having them ratified by internal constituents." Arndt's statement serves as a general illustration of our current hypotheses: Firms may rely on norms and incentives to govern relationships with external suppliers, but the performance implications of these mechanisms also depend in part on the governance regimes within the firm itself. Specifically, our findings suggest that firms must explicitly account for both the performance *gains* from using norms and incentives within a particular relationship and the potential *losses* that governance mismatches across relationships produce.

We propose a general decision heuristic for relationship governance based on our findings. For example, consider a manufacturer that is evaluating its strategy toward an external supplier. Established governance theory suggests that the firm should consider the particular attributes of the relationship in question and subsequently deploy governance mechanisms that match these attributes. Such an analysis of individual "transactions" is at the core of transaction cost theory's discriminating alignment principle. However, following this principle, assume that the firm develops a tentative "blueprint" for the external supplier relationship that involves explicit incentives. Our findings suggest that this relationship-level analysis should be augmented with an assessment of a firm's other relationships. Such an aggregated analysis is necessary to ascertain whether the relationship-level blueprint will produce governance mismatches that have negative performance implications.

In this example, to the extent that incentives are deployed in all the relevant relationships, governance mismatches will not result, and the firm can implement the

blueprints for each individual relationship and achieve its full performance benefits. Alternatively, the analysis may reveal potentially problematic mismatches, for example, if the relationship-level blueprint produces a larger governance constellation in which external incentives are combined with internal norms. If so, a comparative analysis involving (1) the performance gains from deploying supplier incentives and (2) the performance losses caused by mismatches must be undertaken. If the latter are significant, the firm should modify the initial governance blueprint by altering the magnitude of the supplier incentives and potentially sacrificing some of the related gains.

Overall, our findings tell a cautionary tale about relationship management and governance combinations. A narrow focus on individual relationships and governance mechanisms will miss the occurrence of governance mismatches and related performance losses. In particular, our findings suggest that firms should exercise caution when making changes to their existing governance menus. For example, although adding a governance mechanism such as explicit incentives at one level in an overall supply chain provides some degree of incremental control, the overall effect on the chain's performance need not be positive, to the extent that the incentives produce costly mismatches with norms elsewhere in the overall supply chain.

Our findings point to the practical difficulty that firms face when trying to "bond" with multiple stakeholders. As we discussed, prior research has identified the different ways firms can align themselves with exchange partners, including incentive mechanisms and credible commitments of various kinds (Anderson and Weitz 1992). Implicitly or explicitly, much of this work has viewed bonding efforts as having inherently positive performance implications. Our findings paint a slightly more complex picture. Specifically, to the extent that a firm's strategy comprises multiple stakeholders (e.g., suppliers, internal departments, downstream customers) and governance mechanisms (e.g., norms, incentives), it may face competing demands that have negative performance implications. As such, the use of different bonding initiatives in various parts of a supply chain may, somewhat counterintuitively, actually precipitate performance losses.

Finally, the guidelines that follow from our study suggest a decision heuristic that involves both multiple relationships and the content of each one. At first glance, such a heuristic may seem daunting because of the necessary relationship setup and maintenance costs. However, when deployed, a vertical architecture (Jacobides and Billinger 2006) of governance efforts across relationships may offer important strategic benefits by virtue of being inherently difficult to duplicate.

Limitations and Further Research

Some limitations of this research should be noted. First, the size of our current sample is modest. Although we used appropriate analysis procedures and the results were robust to different model specifications, it would be desirable to replicate our findings with a larger sample. In addition, the study consisted of a single industry. Although the homogeneous context poses certain advantages, it raises questions about generalizability to other industries and contexts.

Second, we limited our focus to the juxtaposition between two particular governance mechanisms, namely, norms and incentives. These are prototypical governance mechanisms, but they do not exhaust the domain of available devices. Moreover, norms and incentives might be implemented in different ways (Anderson and Weitz 1992). Our focus was on supplier incentives in the form of price premiums, but incentive structures can be crafted in other ways.

Unresolved questions also pertain to the effect of solidarity norms. Our focus was on the effects of an existing norm, but exchange norms clearly evolve over time, which raises questions about relationship dynamics. For example, suppose that a supplier relationship at one point in time is governed on the basis of price premiums and that this does not create problematic mismatches with the supplier's internal counterparts because of weak norms within the focal manufacturer firm. However, if over time solidarity norms begin to evolve within the firm itself, if we take our theoretical arguments to their logical conclusion, this would suggest that the firm should scale back the upstream incentive system, to the extent that it creates problematic governance mismatches. However, if the internal solidarity norms emerge gradually, the negative effects of mismatches may be less severe than anticipated. This situation cannot be addressed without longitudinal data, but it represents an avenue for further research.

Further research could also augment our analysis of the effects of the different governance mechanisms by considering a given firm's competencies in using them. For example, leveraging norms and incentives may require unique (and different) organizational skills, and the effects of the different mechanisms can be enhanced or weakened, depending on the organizational context within which they are deployed.

Finally, additional insight could be gained by further expanding the unit of analysis in relationship research. For example, the analysis could be broadened to include multiple supplier relationships, which in turn may reveal different types of governance mismatch scenarios. Furthermore, although we examined downstream customer outcomes and controlled for salient aspects of that relationship, we did not examine mismatches resulting from the content of the downstream relationship. Our conceptual framework logically extends to more complex governance constellations, but the available data prevented us from formally testing such effects. We hope that future studies will continue to expand the unit of analysis in relationship research and to consider even more complex constellations of governance mechanisms.

Appendix
Response Formats, Scale Items, and Scale Source

For the following measures, a superscript "M" indicates that the measure was obtained from the manufacturer, and a superscript "C" indicates that the measure was obtained from the retail customer.

1. Manufacturer Operational Performance[C] (seven-point Likert-type scale: 1 = "poor performance," 4 = "average performance," and 7 = "good performance")

Please indicate the performance of this apparel manufacturer as it relates to this garment on the dimensions listed below. Please judge the performance relative to the prevailing industry norm or relative to what might have been obtained from another apparel manufacturer.

- Order fulfillment cycle
- Percentage of on-time shipments
- Percentage of orders shipped complete
- Quality of deliveries
- Responsiveness to requests for change
- Replenishment cycle time

2. Supplier Solidarity Norms[M] (seven-point Likert-type scale: "completely inaccurate description/completely accurate description")

Please evaluate the degree to which the following statements accurately describe the relationship with this contractor by circling the most appropriate number on the scale. (Derived from Heide and John 1992)

- Both parties in this relationship do not mind owing each other favors.
- Problems that arise in the course of this relationship are treated by both parties as joint rather than individual responsibilities.
- Both parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties.
- The responsibility for making sure that the relationship works for both parties is shared jointly.

3. Supplier Incentives[M] (seven-point Likert-type scale: "strongly disagree/agree")

The questions in this section refer to the price of the garment which you source from this contractor. Please indicate your agreement or disagreement with the following statements by circling the most appropriate number on the scale. (Adapted from Mishra, Heide, and Cort 1998)

- The price we pay for this garment from this contractor is higher than what competitors pay for similar garments.
- The contractor earns gross margins for this garment that are higher than normal.
- The price we pay for this garment exceeds what is warranted based on this contractor's manufacturing performance.
- The price we pay for this garment from this contractor is higher than the competitive market price.

4. Manufacturer Solidarity Norms[M] (seven-point Likert-type scale: "completely inaccurate description/completely accurate description")

The questions in this section refer to various aspects of interdepartmental relationships within your own company (e.g., between merchandising and sales). Please evaluate the degree to which the following statements accurately describe these relationships in general. (Derived from Heide and John 1992; Mishra, Heide, and Cort 1998)

- The departments within our company do not mind owing each other favors.
- When problems occur between different departments within our firm, they are treated as joint responsibilities.
- Departments within our company are committed to improvements that may benefit the company as a whole, and not only each individual department.
- In our company, mutual consultation among employees from different departments is the norm.

5. Manufacturer Internal Incentives[M] (seven-point Likert-type scale: "not at all important/extremely important")

Please rate which of the following factors are important considerations in deciding upon financial rewards (e.g., salary increases, bonuses) for managers of the departments that are involved in making and supplying garments to the retailer. (Adapted from Mishra, Heide, and Cort 1998)

- Manager's ability to meet retailer's needs
- Manager's responsiveness to retailer's needs
- Manager's ability to provide superior value to the retailer
- Manager's ability to meet retailer's satisfaction objectives

6. Relative Size Upstream[M]/Relative Size Downstream[C] (dummy variable)

Relative size based on annual sales for all garments (1 = supplier/customer is larger in size than apparel manufacturer, and 0 = otherwise)

7. Manufacturer TSIs Upstream[M] (seven-point Likert-type scale: "strongly disagree/agree")

Please indicate your agreement or disagreement with each statement by circling the most appropriate number on this scale. (Derived from Heide and John 1992)

- We have spent significant resources to ensure that our specification for the garment fit well with this contractor's production capabilities.
- The procedure and routines we have developed to produce this garment are tailored to this contractor's particular situation.
- Training and qualifying this contractor have involved substantial commitments of our firm's time and money.
- We have made significant investments dedicated to our relationship with this contractor.
- Replacing this contractor for this particular garment would require us to write off substantial investments.

8. Supplier TSIs[M] (seven-point Likert-type scale: "strongly disagree/agree")

Please indicate your agreement or disagreement with each statement by circling the most appropriate number on this scale. (Derived from Heide and John 1992)

- This contractor has made significant investments in tools and equipment dedicated to supporting our firm's production of this garment.
- This contractor's production system has been tailored to produce this garment for our firm.
- The procedures and routines this contractor has developed for this garment are tailored to our firm's particular situation.
- Our firm has unusual technological norms and standards for this garment, which have required extensive adaptation by this contractor.
- Most of the training this contractor has undertaken relative to our firm's requirements for this garment would have limited usefulness in another manufacturer relationship.

•If we canceled our sourcing agreement with this contractor, the contractor would be required to write off substantial investments.

9. Manufacturer TSIs Downstream[C] (seven-point Likert-type scale: "strongly disagree/agree")

Please indicate your agreement or disagreement with each statement by circling the most appropriate number on this scale. (Derived from Heide and John 1998)

•The procedures and routines this apparel manufacturer has developed for the garments are tailored to our firm's particular situation. (item dropped because of low loading)

•Our firm has some unusual standards for the delivery of this garment, which have required extensive adaptation by this apparel manufacturer.

•Most of the training this apparel manufacturer has undertaken relative to our firm's requirement for this garment would have limited usefulness in another retailer relationship.

•If we canceled our purchase agreement with this apparel manufacturer, the apparel manufacturer would be required to write off substantial investments.

10. Retailer TSIs[C] (seven-point Likert-type scale: "strongly disagree/agree")

Please indicate your agreement or disagreement with each statement by circling the most appropriate number on this scale. (Derived from Heide and John 1992)

•The procedures and routines which we have developed to purchase this garment are tailored to this apparel manufacturer's particular situation.

•Training and qualifying this apparel manufacturer have involved substantial commitments of our firm's time and money.

•We have made significant investments dedicated to our relationship with this apparel manufacturer.

•Replacing this apparel manufacturer for this particular garment would require us to write off substantial investments.

11. Demand Volatility[M] (seven-point Likert-type scale: "strongly disagree/agree")

Please indicate your agreement or disagreement with the following statement by circling the most appropriate number on the scale.

•Your firm's sales volume of this garment to this retailer is unpredictable.

•Past sales data for this retailer are a poor indicator of this retailer's demand for this garment. (item dropped because of low loading)

•We expect many order changes from this retailer for this garment.

•It is difficult to forecast sales for this garment to this retailer.

12. Quality Uncertainty

Please rate the difficulty of assessing this garment's overall quality in terms of its construction (e.g., colorfastness and shrinkage), design and style for an average apparel retailer (1 = "very easy to assess," and 7 = "very difficult to assess").

13. Retailer Solidarity Norms[C] (seven-point Likert-type scale: "completely inaccurate description/completely accurate description")

Please evaluate the degree to which the following statements accurately describe the relationship with this contractor by circling the most appropriate number on the scale. (Derived from Heide and John 1992)

•Problems that arise in the course of this relationship are treated by both parties as joint rather than individual responsibilities.

•Both parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties.

•Both parties in this relationship do not mind owing each other favors.

•The responsibility for making sure that the relationship works for both parties is shared jointly.

14. Retailer Pricing[C]

Under this sourcing agreement, are prices agreed to be:

•Adjustable/fixed

15. Garment Characteristic[M] (dummy variable)

Please describe the garment that your firm is sourcing from this contractor:

•Branded/not branded (1 = branded, 0 = not branded)

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