

New Product Creativity: Understanding Contract Specificity in New Product Introductions

Introducing new products necessitates that manufacturers not only carefully craft the initial contract terms with retailers but also consider how the specificity of the terms influences a retailer's relational behaviors throughout the duration of the contract, contingent upon the new product's success. The authors develop a series of hypotheses to investigate new product introductions using a multimethod design consisting of a survey of manufacturers and a repeated measures experiment with retailers. The results indicate that manufacturers craft increasingly specific contract terms as new product creativity increases when frequency of new product introductions and performance ambiguity are higher. When they are lower, the positive influence of new product creativity on contract specificity weakens and can in some instances become negative. The results also indicate that there is no significant change in a retailer's relational behaviors throughout a contract's duration when contract specificity is lower, regardless of the new product's success. However, under the condition of higher contract specificity, the retailer's relational behaviors increase (decrease) over a contract's duration when the new product is successful (unsuccessful).

Keywords: new product creativity, contract specificity, safeguarding, adaptation, relational behaviors

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New product creativity is the extent to which a new product is novel and differs from competing alternatives (Fang 2008; Moorman 1995). Although creative new products drive firm sales and market growth (Im and Workman 2004), difficulty in predicting the demand for them creates a coordination problem for manufacturers launching new products through retailers as the need to align the activities of channel members increases (Celly and Frazier 1996). For example, a retailer left with excess inventory from the introduction of an unsuccessful new product may not fulfill the contracted product promotion obligations, or, to limit losses, it may discount its

existing inventory below the price agreed to with the manufacturer. Alternatively, when a new product is successful, a retailer may capture increased profits by raising the retail selling price, thereby damaging the manufacturer's product positioning. The uncertainty regarding demand prediction and retailer action not only heightens the importance of establishing the initial contract terms for new products, wherein manufacturers trade off the ability to adapt the contract (which favors lower contract specificity) against the ability to safeguard against retailer opportunism (which favors higher contract specificity), but also necessitates an understanding of how a contract's specificity influences a retailer's relational behaviors related to the new product over time, subject to new product success.

Notably, although there is a great deal of literature on new product creativity related to organizational factors such as organizational memory (Moorman and Miner 1997), information and knowledge acquisition (Ganesan, Malter, and Rindfleisch 2005; Moorman 1995; Rindfleisch and Moorman 2001), and speed to market (Fang 2008), there has been very little research on the governance of creative new product introductions launched through a retailer (outside of work related to slotting fees; e.g., White, Troy, and Gerlich 2000). To investigate the coordination of channel members for new product introductions, we focus on the governance mechanisms of contracting and relational behaviors (e.g., Gulati and Singh

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1998; Lusch and Brown 1996; Poppo and Zenger 2002).¹ Buvik and John (2000) denote coordination as a means to manage the tension between adaptation and safeguarding; they draw on the work of Lusch and Brown (1996), who argue that contracts have a significant influence on a partner's willingness to engage in relational behaviors. Consistent with this literature, Poppo and Zenger (2002, p. 721) state that there is a "need to explore more carefully and predict more cautiously the relationship between formal contracts and relational governance," which the authors view as being complementary. Together, these works provide motivation for investigating the crafting of initial contract terms, as well as the relational behaviors in which a retailer may engage throughout the contract's duration, for the introduction of a creative new product. Therefore, this research works to address two key questions: (1) Under what conditions do manufacturers craft specific contract terms for new products to align expectations and identify shared rules and responsibilities, and under what conditions do they leave contractual terms open to permit greater adaptation and value-enhancing adjustments? (2) How might a retailer's engagement in relational behaviors change for a new product during the contract, according to the initial level of contract specificity and differing levels of new product success?

By addressing these questions, we contribute to the literature in two ways. First, we provide one of the first examinations of the governance of new product introductions through retailers, thereby extending the new product creativity literature (e.g., Ganesan, Malter, and Rindfleisch 2005; Moorman 1995; Rindfleisch and Moorman 2001). Building on the extant research in coordination of relationships through contracting (e.g., Buvik and John 2000; Celly and Frazier 1996; Lusch and Brown 1996; Mooi and Ghosh 2010; Wuyts and Geyskens 2005), we demonstrate that contract specificity (defined as the degree to which the initial contractual terms for the new product are specified in detail) should be considered within the context of the type of new product launched (i.e., new product creativity) and the situation-specific factors of frequency of new product introductions and performance ambiguity. We are therefore able to delineate factors that influence the governance trade-off between the problems of adaptation (minimizing the costs

¹The extant literature (e.g., Lusch and Brown 1996; Poppo and Zenger 2002) has argued that contractual and relational governance act as complements in coordinating the actions among arms-length exchange partners. Lusch and Brown (1996, p. 19) indicate, "Relational governance occurs primarily through a set of relational norms that govern acceptable behavior between the exchange partners." They further articulate (p. 23), "In a relational channel setting, we expect that when a normative contract exists channel members are more likely to engage in behavior that is consistent with the normative contract." Their findings provide strong support for the argument that relational governance norms drive channel member relational behaviors. Furthermore, Hoppner and Griffith (2011) argue that within a relational exchange context, relational behaviors emanate from the establishment of relational norms and are reciprocated by exchange partners. Building from the extant literature on contractual and relational governance, we conceptualize and operationalize the governance mechanism of contractual and relational governance through contract specificity and relational behaviors (the action orientation of relational behavioral norms).

of renegotiation associated with changing circumstances) and safeguarding (protecting the new product from a retailer's opportunistic behaviors). The results indicate that frequency of new product introductions and performance ambiguity motivate firms to negotiate contract terms of varying levels of specificity with increasing new product creativity.

Second, this work extends the research on coordination of interorganizational exchanges through contractual and relational governance (e.g., Lusch and Brown 1996; Poppo and Zenger 2002), answering the call of Poppo and Zenger (2002), who urge exploration of the relationship between contractual and relational governance. The results not only indicate that contract specificity enhances a retailer's relational behaviors related to the new product (i.e., actions taken to promote the development of cooperative relationships consisting of solidarity, flexibility, and information exchange; Hoppner and Griffith 2011; Lusch and Brown 1996) but also that this effect is contingent on the new product's success during the duration of the contract. As such, we extend the literature by detailing the roles of contract specificity and relational behaviors and how their relationship is subject to new product success, aspects that have not been addressed in prior research. Our finding that relational behaviors can change over the duration of a contract has important implications because manufacturers rely on the cooperation of their retailers when launching new products.

Conceptual Model

Manufacturer–Retailer Context of New Product Introductions

To better understand our context, consider ConAgra Foods, an American packaged foods company that distributes its products through various retail outlets. ConAgra Foods manufactures a wide variety of products under numerous brand names (e.g., Healthy Choice, Hunt's, Chef Boyardee) through retail partners such as Kroger, Walmart, Target, Meijer, and others. The company has an extensive product line and is continually introducing new products. For example, in August 2014, ConAgra Foods announced that it would be introducing Delight Bites (under the Life Choice brand) to retail stores in six flavors (ConAgra Foods 2014). Before these new products could appear on retail shelves, ConAgra Foods and its retailers engaged in negotiations in which they agreed on the terms of trade for the new products. Such negotiations generally include establishing an agreement regarding items, including, but not limited to, slotting allowances, promotional support, advertising, pricing, introductory allowances and discounts, sales targets, customer education and support activities, and shelf space allocation (Federal Trade Commission 2003).

The roles and responsibilities of manufacturers and retailers regarding product management can vary across contracts and have different levels of specificity. Typically, manufacturers are responsible for the production and delivery of products either to the distribution center or all the way to the shelf; for packaging and labeling that meets the retailer's requirements; for advertising; and so on. For example, ConAgra Foods was responsible for the production of the six flavors of Delight Bites, their distribution to retail partners,

and the national advertising to promote the new products. Retailers are typically responsible for store-level implementation and execution, including the implementation of agreed-on shelf placement, promotional displays, product replenishment, sales support, and so on.

However, although manufacturers and retailers establish contracts to set forth the roles and responsibilities of each party, they may also need to engage in behaviors outside of what is specifically stated in the contract to support the new product's introduction. For example, when a newly launched product sells below expected levels, the manufacturer may need to rely on and cooperate with its retailer to identify the problem. As such, it is not simply the contract but also the retailer's relational behaviors that facilitate the coordination of introducing new products between a manufacturer and its retailers.

New Product Creativity, Contract Specificity, and Situation-Specific Elements

New product creativity differentiates a new product from competing alternatives (Sethi, Smith, and Park 2001) and directly influences a consumer's intention to buy (Rubera, Ordanini, and Griffith 2011). However, "highly creative products may have greater potential for short-term performance problems due to the difficulty of changing consumer or retail acceptance of the product" (Moorman and Miner 1997, p. 94). Thus, when introducing creative new products, manufacturers must consider the uncertainty of demand prediction as well as retailer action. Taken together, these factors create a tension between the problems of adaptation and safeguarding in specifying the initial terms of trade for creative new products.

This tension can best be described as the problems that arise within interorganizational governance. Difficulty of predicting demand creates uncertainty, which makes the circumstances of exchange difficult to specify beforehand (Heide and John 1990; Moorman and Miner 1997). This uncertainty gives rise to an adaptation problem, that is, difficulties with modifying agreements to reflect changing circumstances that increase transaction costs, such as those associated with communicating new information and renegotiating agreements (Heide and John 1990; Rindfleisch and Heide 1997; Walker and Weber 1984). Manufacturers launching new products thus need the flexibility to respond to observed demand by implementing changes in areas such as pricing, quantity delivered, promotions, packaging, product characteristics, and location within the retail store. For example, when one of the flavors of the newly launched Delight Bites by ConAgra Foods is selling below expectations, the manufacturer may desire to modify the product specifications or alter the price in an attempt to increase sales. Similarly, when the product is surpassing sales expectations, the manufacturer may need to modify the agreement to allocate more prominent shelf space to capitalize on the new product's success. This need for adaptation due to uncertainty favors lower contract specificity that permits profitable revisions (Buvik and John 2000). Unfortunately, less specific contracts can create exposure to opportunism.

Opportunism refers to "self-interest seeking with guile" (Williamson 1985, p. 47) and includes not only behaviors

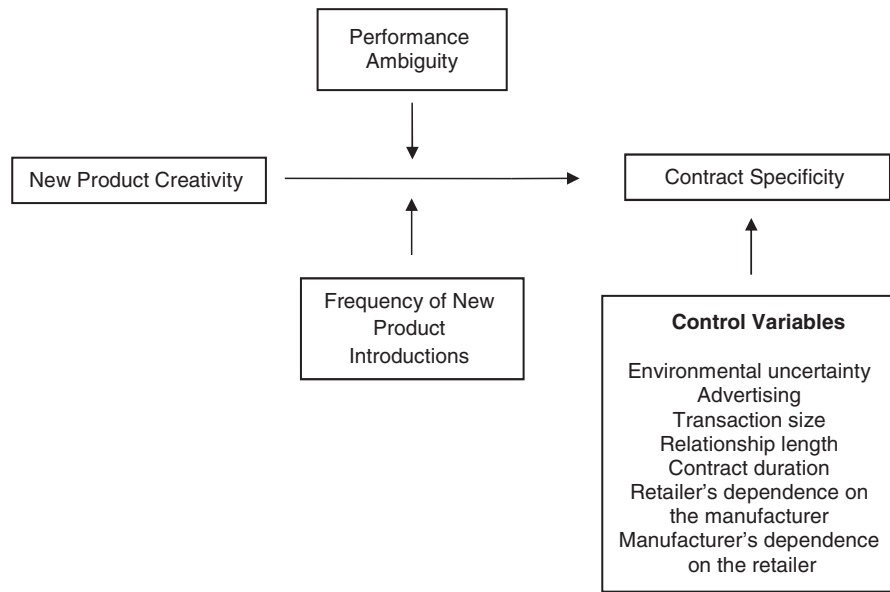
such as lying and cheating, but also shirking or evading contractual obligations (Seggie, Griffith, and Jap 2013; Wathne and Heide 2000). Opportunism, which gives rise to the safeguarding problem, is viewed as a consequence of investments in specific assets whose value is limited outside of the existing relationship (Rindfleisch and Heide 1997). When a retailer takes ownership of the manufacturer's product, a manufacturer's product becomes, to some extent, specialized to the retailer, and is therefore subject to potential retailer opportunism. This is consistent with the argumentation of Celly and Frazier (1996), who note that the channel coordination problem between a supplier and a distributor derives from the fact that distributors take title to the supplier's products; distributors are independent businesses with multiple suppliers, and as such, their business objectives differ from those of any one supplier. This is also consistent with the concerns of Gulati and Singh (1998) about appropriation (i.e., taking something for one's own use, typically without the owner's permission). These concerns arise from incomplete contracts that lower goal alignment between exchange partners. It is in this light that our work focuses on the adaptation problem brought forth by balancing demand uncertainty with the need to safeguard against retailer opportunism.

To explain how manufacturers trade off between safeguarding and adaptation when specifying contractual terms for creative new products, we develop a conceptual model of contract establishment (see Figure 1, Panel A). The contracting literature (e.g., Lusch and Brown 1996; Mooi and Ghosh 2010; Wuyts and Geyskens 2005) suggests that contracts should be considered within the context of the exchange. Therefore, we consider moderation effects of situation-specific factors relevant to new product introductions—specifically, performance ambiguity and a firm's frequency of new product introductions with the retailer. Performance ambiguity is defined as the difficulty in assessing the performance of new products (end goals and means to those ends) at a specific retailer. Conceptually, the ability of the manufacturer to evaluate not only the retailer's sales of the new product but also the completion of agreed-on tasks regarding store-level implementation and execution is consistent with the concept of behavioral uncertainty as enumerated by Rindfleisch and Heide (1997), who characterize behavioral uncertainty as a performance-evaluation problem associated with information asymmetry. Frequency of new product introductions is defined as the number of new products introduced by a manufacturer through a specific retailer in the same category as the new product. It incorporates all of a firm's new products launched in the category, regardless of their level of creativity.² Frequency of new

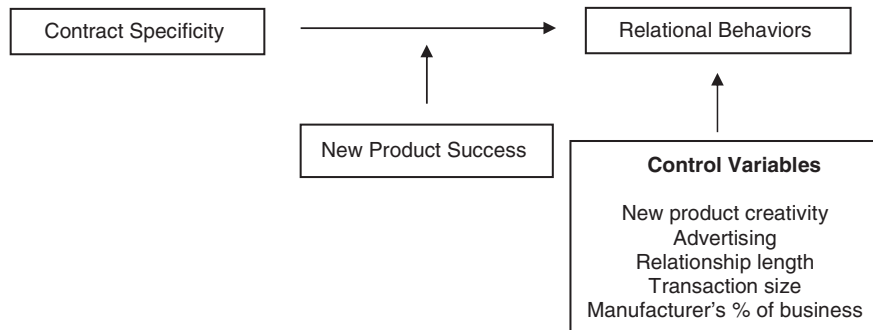
²Theoretically, we do not expect that there is a relationship between new product creativity and frequency of new product introductions. Whereas frequency of new product introductions is conceptualized at the relationship level (i.e., the frequency of new product introductions through the specific retailer), product creativity is conceptualized solely at the product level. Therefore, a firm that introduces a new product can introduce either a more creative or a less creative new product.

FIGURE 1
Conceptual Framework

A: Antecedents of Contract Specificity (Manufacturer's Perspective)



B: Contract Specificity and Retailer's Relational Behaviors (Retailer's Perspective)



product introductions has been argued to be an important element of a manufacturer's new product strategy (Ganesan, Malter, and Rindfleisch 2005; Li and Atuahene-Gima 2001; Moorman and Miner 1997).

Contract Specificity, New Product Performance, and Retailer's Relational Behaviors

Because not all contingencies can be contractually planned for (Grossman and Hart 1986), coordination between exchange partners is facilitated through not only formal contracts but also relational behaviors (e.g., Bercovitz, Jap, and Nickerson 2006; Jap and Ganesan 2000; Lusch and Brown 1996; Poppo and Zenger 2002; Sande and Haugland 2015). Thus, we contend that contract specificity influences a retailer's engagement in relational behaviors throughout the duration of the contract (thus addressing the complementarity of contracts and relational governance, as indicated by Poppo and Zenger 2002). We also contend that this influence is

contingent on the new product's success, defined as sales generated by the new product relative to a category average (Figure 1, Panel B).

In contrast to prior research that has examined the influence of relational behaviors on relationship performance (Hoppner and Griffith 2011; Lusch and Brown 1996), we conceptualize new product success as affecting the influence of contract specificity on relational behaviors. Scholars have noted that relational behaviors develop on the basis of the expectation of future returns (Hoppner and Griffith 2011; Lazzarini, Miller, and Zenger 2004). As such, a retailer's willingness to work with the manufacturer outside of the contract may be quite limited, because there is little motivation for the retailer to incur additional costs unless it can also realize additional benefits. Retailers will thus pay close attention to a new product's success (a strong indicator of the potential returns the new product will generate) when determining their level of relational behaviors in light of the

initial contract. We also contend that a retailer's relational behaviors can change over time, a proposition that has not been examined.

Hypotheses

Antecedents of Contract Specificity (Manufacturer's Perspective)

When a new product is less creative (offering minor changes to existing products on the market), demand can be more accurately predicted on the basis of response models for similar products. As creativity increases, there are fewer similar products against which to benchmark, which makes demand prediction more challenging. As a result, the trade-off between adaptation and safeguarding becomes more severe as creativity increases. Manufacturers cannot both safeguard their products from retailer opportunism and at the same time maintain the flexibility needed to adjust to changing demand, because these actions require opposing levels of contract specificity. We contend that the need for safeguarding against opportunism will overshadow the inherent need for flexibility. This expectation is based on the logic that a manufacturer will craft initial contractual terms to protect its investment in the new product, accepting potential costs associated with renegotiation of the contract terms that will evolve over time, but that can be negotiated. This is consistent with prior research that has suggested that contracts are initially specific to ensure that early, more vulnerable stages of exchange are protected against opportunistic actions of an exchange partner (such as shirking, exploiting loopholes, evading informally stated obligations, etc.), and are renegotiated once danger decreases (Huberman and Kahn 1988; Poppo and Zenger 2002). Specific contract terms then permit exchange partners to align expectations and identify shared rules and responsibilities (Gulati, Lawrence, and Puranam 2005; Mooi and Ghosh 2010; Sanchez and Mahoney 1996), thus protecting against appropriation (Gulati and Singh 1998). For these reasons, we expect a positive influence of new product creativity on contract specificity. However, because this relationship exists within the context of the manufacturer-retailer relationship, we argue that it is conditional on the frequency of new product introductions and performance ambiguity.

Frequency of new product introductions. A higher frequency of new product introductions creates a more turbulent exchange environment because retailers must handle a greater number of products. Estimates of new product failures among consumer packaged goods (fast-moving goods) are around 75% (Schneider and Hall 2011), so retailers may become increasingly opportunistic when introducing each new product, because a larger number of new product introductions increases the demands placed on a retailer and its customers. The potential for greater opportunism created by the higher frequency of new product introductions, coupled with increasing new product creativity, enhances the need for safeguarding against opportunistic behaviors (e.g., shirking, breach of contract). As such, we contend that the positive relationship between new product creativity and

contract specificity is heightened as a manufacturer's frequency of new product introductions increases.

Alternatively, when a manufacturer's frequency of new product introductions is lower, we contend that the positive influence of new product creativity on contract specificity weakens. A lower frequency of new products introduced by the manufacturer provides a more stable product offering for the retailer, decreasing a retailer's costs and increasing its profits per stock keeping unit (SKU) (Quelch and Kenny 1994). Therefore, as new product creativity increases, the increased stability of the exchange environment allows manufacturers to build more flexibility into their contracts with retailers. By doing so, manufacturers decrease their costs of maladaptation that result from increased demand uncertainty inherent to the introduction of creative new products. As discussed previously, new product creativity creates difficulties in completely specifying the exchange in a contract due to unforeseeable contingencies (Carson, Madhok, and Wu 2006; Iyer and Villas-Boas 2003), necessitating the implementation of mechanisms for adaptation (Heide and John 1990; Walker and Weber 1984). Thus, because a lower frequency of new product introductions creates a more stable and profitable environment for retailers, it curtails their engagement in opportunistic behaviors when they introduce each new product. As such, we argue that the positive influence of new product creativity on contract specificity will weaken in favor of adaptation as the need for safeguarding decreases. More formally:

H₁: When the frequency of new product introductions is higher, the positive relationship of new product creativity and contract specificity is greater than when the frequency of new product introductions is lower.

Performance ambiguity. Performance ambiguity makes it difficult to evaluate the performance of new products and to assess retailers' adherence to contractual terms. For example, when manufacturers rely on their retailers to manage new product introductions within the store, they experience greater performance-evaluation problems because retailers may not carry out agreed-on tasks and data may be limited in terms of comprehensiveness and essential downstream information. The information asymmetry created by this condition increases the potential for a retailer to engage in opportunism (Carson, Madhok, and Wu 2006; Wathne and Heide 2000). As a result, when the new product does not perform as expected, the manufacturer cannot easily determine whether the underperformance is due to issues in consumer demand or to a retailer's lack of compliance with the terms of the contract. For this reason, we contend that performance ambiguity will enhance the positive influence of new product creativity on contract specificity (i.e., a greater need for safeguarding through more specific contracts). This contention is based on the argument that although early literature has questioned the effectiveness of contracts as legal safeguards under ambiguity (Ouchi 1979), more recent research has indicated that the coordinating role of contracts makes them robust to ambiguity (Carson, Madhok, and Wu 2006). Specifically, greater contract specificity enhances the identification of shared objectives, responsibilities, and expectations (Gulati, Lawrence, and

Puranam 2005; Hill and King 2004; Mayer and Argyres 2004) and reduces appropriation concerns (Gulati and Singh 1998).

Conversely, when performance ambiguity is lower, the manufacturer can more easily monitor and evaluate the retailer's activities and determine its contribution to the product's sales. Thus, lower levels of performance ambiguity reduce the need for safeguarding against opportunism (Heide and John 1990). Less ambiguous environments lessen information asymmetry and provide a better understanding of cause-effect relationships and available courses of action (Carson, Madhok, and Wu 2006). Therefore, as new product creativity increases, less ambiguous environments permit manufacturers to build more flexibility into their contracts with retailers, enabling them to better respond to unforeseeable contingencies that rise from the difficulty in predicting demand. For these reasons, we contend that lower performance ambiguity will weaken the positive influence of new product creativity on contract specificity. More formally:

H₂: When performance ambiguity is higher, the positive relationship of new product creativity and contract specificity is greater than when performance ambiguity is lower.

Contract Specificity and Retailer's Relational Behaviors (Retailer's Perspective)

Apart from establishing initial contractual terms, governance of new product introductions necessitates an ongoing support of the new product that requires exchange partners to operate beyond the scope of the contract and to engage in product-related relational behaviors. Because these behaviors are product-specific, it is important to note that they do not apply to other products in the manufacturer's portfolio. Prior research has shown that well-specified contracts promote goal alignment and cooperative behaviors (Lazzarini, Miller, and Zenger 2004; Poppo and Zenger 2002) because they limit the domain and severity of risk to which retailers are exposed by specifying punishments and restricting gains from opportunism on the part of the manufacturer. In contrast, less specific contracts decrease goal alignment (Gulati, Lawrence, and Puranam 2005; Mooi and Ghosh 2010; Sanchez and Mahoney 1996), increase the potential for opportunistic behaviors (Gulati and Singh 1998), and, thus, lower expectations of cooperation (Poppo and Zenger 2002). Thus, we contend that contract specificity enhances retailers' relational behaviors. However, as engagement in relational behaviors related to the new product over time (e.g., timely restocking of shelves, encouraging employees to discuss a specific product with customers) can be costly in terms of time and resource allocation (Larson 1992), we contend that retailers will be reluctant to make such investments unless they can capture increased benefits (e.g., increased margins, market share, customer loyalty, differentiation) that are contingent on the new product's success.

When contract specificity is higher, manufacturers and retailers work to craft a mutually agreeable contract that explicitly details their roles, responsibilities, and obligations, planning for as many foreseeable contingencies as possible (Lusch and Brown 1996; Mooi and Ghosh 2010). This

contractual specificity enhances a retailer's motivation to engage in relational behaviors over time when a new product is successful. The rationale is that when a new product is successful, the retailer gains increased benefits from greater product sales because contractual specificity safeguards the retailer from a manufacturer's opportunistic behaviors. This rationale builds on the work of Dahlquist and Griffith (2014), who find that in multidyadic industrial channels, a buyer engages in behaviors with its upstream supplier to share in its successful product sales to downstream customers. Consistent with this argumentation, we also contend that when a new product is unsuccessful, a retailer will minimize its efforts outside the scope of the contract over time, minimizing its costs. Thus, we argue that when a new product is successful, the retailer will increase its engagement in relational behaviors over time, and when a new product is unsuccessful, the retailer will decrease its engagement in relational behaviors over time.

When contract specificity is lower, the lack of specificity in the contract allows for greater flexibility for both parties. Because a retailer operates to maximize its profits while minimizing its costs, we contend that the lack of contract specificity suppresses the retailer's motivation to engage in relational behaviors over time not only when the new product is unsuccessful but also when it is successful. Whereas this logic is intuitive for an unsuccessful new product (i.e., the retailer would not incur costs outside the contract by engaging in relational behaviors for a product that provided limited value to the retailer), the logic regarding a successful new product is more nuanced. We contend that although the retailer may be inclined to engage in behaviors to partake in the new product's success (cf. Dahlquist and Griffith 2014), a lack of contract specificity would fail to safeguard the retailer from manufacturer opportunism. For instance, the retailer might provide additional support to the new product but, due to the lack of specificity in the contract, may not be able to claim additional benefits. This consideration motivates the retailer to wait until renegotiation at contract renewal, as opposed to incurring unanticipated costs (i.e., relational behaviors). More formally:

H₃: (a) When contract specificity is higher, a retailer's engagement in product-related relational behaviors over time increases (decreases) when the new product is successful (unsuccessful), whereas (b) when contract specificity is lower, a retailer's engagement in product-related relational behaviors remains unchanged over time, regardless of whether the new product is successful or unsuccessful.

Methodology

We tested our hypotheses in a multimethod research design. Study 1 examined the antecedents of contract specificity (H₁-H₂) by using a survey of consumer packaged goods (CPGs) manufacturers. Study 2 examined a retailer's relational behaviors related to the product throughout the duration of a contract on the basis of contract specificity and new product success (H₃), using a repeated measure experiment of retail managers in the CPG industry.

Study 1

Procedure

We administered an online survey to managers of CPG manufacturers by a research company. We selected a random sample of 1,290 qualified informants from the research company's manager panel. To enhance the response rate, informants were offered financial compensation to participate in the study. Follow-up e-mails with a second survey were sent to nonrespondents. In total, we received 217 completed surveys, for a response rate of 17%. Of the 217 respondents, only 135 provided information regarding their written contracts. The final sample thus represents 135 completed and usable surveys. To assess nonresponse bias, we compared the differences of means between early and late informants on demographic variables and study constructs. The results indicate that nonresponse bias was minimal: we found no significant differences on any of the study constructs. We also compared the means of informants who included contractual information versus those who did not on demographic variables and study constructs. We found no significant differences.

To qualify informants, we screened managers on the basis of two criteria: (1) they needed to be involved in the process of getting new products into a retailer's stores, and (2) they needed to be knowledgeable about the contractual terms negotiated for new products between the manufacturer and the retailer. These contractual terms refer to written contracts and do not include implicit or verbal contracts. Informants who fit both criteria were allowed to proceed to the survey, in which they were asked to select a new product that had recently been launched and a retailer through which this new product had been launched. Informants were instructed to select a new product and a retailer with which they were personally involved. The final sample represents manufacturers from multiple CPG categories (e.g., food, health and beauty, sporting goods, craft and hobby, jewelry, apparel)

and informants who have worked in their current position for an average of 7 years and have an average of 18 years of experience in the industry. The median number of retailers and products that these informants are responsible for is 20 and 60, respectively. The final sample represents manufacturers with median sales of \$50 million, and a median number of employees of 300. The informants selected retailers with which they had been doing business for an average of 16 years, and on average, 23% of the selected category business went to these retailers. The selected new products were on the market for an average of 11 months.

Measurement

We operationalized the key study constructs using established multi-item scales. Appendix A reports measures of the constructs. Table 1 presents correlations and descriptive statistics.

New product creativity. We measured new product creativity with a seven-item, five-point semantic differential scale, adapted from Moorman (1995) and Fang (2008). This measure captures the extent to which a manufacturer's new product is novel and differs from competing alternatives.

Frequency of new product introductions. We used three open-ended items to operationalize the frequency of new product introductions and to capture the number of new products introduced by a manufacturer through a specific retailer in the same category as the new product. The informants were asked to report the number of new SKUs created, the total number of new products launched yearly, and the average number of new products introduced yearly by the manufacturer through the specific retailer. To reduce skewness, we used the natural log of frequency of new product introductions.

Performance ambiguity. We measured performance ambiguity with three items, each on a five-point semantic differential scale. These items build on the conceptualizations

TABLE 1
Correlations and Summary Statistics for Study 1

Construct	1	2	3	4	5	6	7	8	9	10	11
1. New product creativity	.89										
2. Frequency of new product introductions (ln)	.07	.82									
3. Performance ambiguity	-.23**	.01	.93								
4. Contract specificity	.22**	.22**	-.32**	.90							
5. Environmental uncertainty	-.14	-.07	.25**	-.16*	.80						
6. Advertising	.15*	.08	-.03	.25**	.01	.93					
7. Transaction size (ln)	.18*	.06	-.11	.14	.01	.03	N.A.				
8. Relationship length (ln)	.08	.21**	-.10	.10	-.06	.15*	.18*	N.A.			
9. Contract duration	.18*	-.12	-.19*	-.29**	-.23**	-.19*	-.00	.02	N.A.		
10. Retailer's dependence on the manufacturer	.24**	-.21*	-.07	-.01	.06	.02	.00	-.17*	.01	.82	
11. Manufacturer's dependence on the retailer	-.04	.17*	-.11	-.01	-.04	-.04	.21*	.07	-.06	.01	.77
Mean	3.94	2.36	2.01	3.81	2.52	2.87	10.68	2.37	12.39	2.86	3.35
Standard deviation	.66	1.4	.95	.79	.80	1.04	3.02	1.04	10.57	.93	.96
Average variance extracted	.53	.74	.83	.74	.58	.87	N.A.	N.A.	N.A.	.61	.69

* $p < .05$.

** $p < .01$.

Notes: Cronbach's alphas are on the diagonal. N.A. = not applicable.

of performance ambiguity in the extant literature (e.g., Heide and John 1990; Kim et al. 2011; Stump and Heide 1996) and work to capture the extent to which manufacturers have difficulty in assessing the performance of new products (e.g., sales, performance of agreed-on tasks regarding store-level implementation and execution) at a specific retailer.

Contract specificity. We measured contract specificity using three items, each on a five-point Likert scale. These items build on the conceptualization of contract specificity of Mooi and Ghosh (2010) and Ghosh and John (2005).

Control variables. We included seven variables in the model to control for differences in contract specificity that may have occurred as a result of transaction- or relationship-specific factors: environmental uncertainty, advertising, transaction size, relationship length, contract duration, retailer's dependence on the manufacturer, and manufacturer's dependence on the retailer. Environmental uncertainty creates adaptation problems (Williamson 1996) and may thus influence the specificity of the contract. We measured environmental uncertainty with a three-item, five-point semantic differential scale adapted from Celly and Frazier (1996).

Advertising support for new products plays a critical role in new product launch and performance. A manufacturer's willingness to pay for advertising expenditures can influence the way contracts are negotiated to safeguard against exploitation. We measured advertising support using two items, each on a five-point Likert scale. We measured transaction size as the initial monthly purchase amount for the new product. As the size of the transaction increases, manufacturers draft more specific contracts because they face increasing hazards (Heide 1994). Relationship length captures the number of years the manufacturer and the retailer have engaged in business with each other.³ The length of the relationship can influence contract specificity because it can lead to greater coordination (Srikanth and Puranam 2014) and trust between parties, decreasing the need for safeguarding (Mooi and Ghosh 2010).⁴ Contract duration refers to the length of time for which two parties agree to abide by the terms of the contract (Joskow 1987). Contracts with shorter duration are more likely to be more specific because the shorter time frame covered by the contract decreases the need for adaptation. We measured retailer's dependence on the manufacturer and manufacturer's dependence on the retailer following Kumar, Scheer, and Steenkamp (1995). Dependence structures have been found to influence contracting (e.g., Lusch and Brown 1996).

Measurement model. We evaluated the psychometric properties of the constructs by conducting a confirmatory factor analysis (CFA). Appendix A presents the item

³To reduce skewness, we used the natural log of transaction size and relationship length.

⁴We imputed the missing values on transaction size (14.8%) and relationship length (2%). We employed the expectation maximization method for transaction size, and we mean-imputed the missing values for relationship length.

loadings, and Table 1 reports the Cronbach's alphas. The overall χ^2 goodness-of-fit index for the model is 370.65, with 273 degrees of freedom. The measurement fit indexes all meet the critical values for a model of good fit (Hu and Bentler 1999): comparative fit index (CFI) of .99, root mean square error of approximation (RMSEA) of .05, and standardized root mean square residual (SRMR) of .06. Factor loadings are large (range: .59 to .99) and significant ($t > 2.00$), supporting convergent validity. The average variance extracted (AVE) for each construct also exceeds the square of correlations between constructs, confirming discriminant validity (Fornell and Larcker 1981). Also, Cronbach's alphas of .80 or above indicate acceptable levels of reliability for each construct.

We performed two empirical tests to check for the presence of common method variance. First, we employed Lindell and Whitney's (2001) marker variable assessment test. We used the number of years the informants had worked in the industry as a marker variable. Number of years had a small correlation with the dependent construct ($r = .02$). We partialled out this coefficient from bivariate correlations and compared the results with those obtained from the unadjusted correlations between study predictors and outcomes. We found that the unadjusted correlations maintained their size and pattern of significance. Second, we examined correlations between endogenous and exogenous errors in CFA. We permitted the errors of the endogenous variable items to covary with those of the exogenous variable items and tested for a difference in χ^2 (Molina-Castillo et al. 2012). We found no significant differences. The results indicate that common method bias is not a significant issue in the data.

Results

Our research hypotheses (H_1 and H_2) specify that the effect of new product creativity on contract specificity will shift across the range of frequency of new product introductions and performance ambiguity. To test these hypotheses, we estimated the following model:

$$\begin{aligned} (1) \text{ Contract specificity} = & \alpha_0 + \beta_1 \text{New product creativity} \\ & + \beta_2 \text{Frequency of new product introductions} \\ & + \beta_3 \text{Performance ambiguity} \\ & + \beta_4 \text{New product creativity} \\ & \times \text{Frequency of new product introductions} \\ & + \beta_5 \text{New product creativity} \\ & \times \text{Performance ambiguity} \\ & + \text{control variables} + \epsilon_1. \end{aligned}$$

A possible concern in estimating Equation 1 is endogeneity, which is a common problem that occurs as a result of omitted variables and self-selection bias (Bascle 2008). In our model, new product creativity and frequency of new product introductions may be endogenous and thus lead to biased coefficients. Building on prior literature that has suggested that new product introductions are closely related to differentiation (Ter Braak, Dekimpe, and Geyskens 2013) as well as the type and number of products in a portfolio (Wind and

Mahajan 1997), we used differentiation in the product category and the number of products in each informant's portfolio as instruments for new product creativity and frequency of new product introductions. We provide additional details of this instrumental variable procedure in the Web Appendix. The Durbin–Wu–Hausman test did not reveal any violation of the assumed exogeneity of our variables ($F = .07, p > .10$). Although tests for endogeneity of the interaction terms could also be performed, given that the main effect tests were nonsignificant, we are confident that even with the interaction terms, the effect of endogeneity (if any) is limited. This is consistent with prior literature (e.g., Ter Braak, Dekimpe, and Geyskens 2013).

Table 2 shows coefficients and associated t-statistics for a model with and without interaction effects (Model 1 and Model 2, respectively). We mean-centered the independent variables and created the interaction terms by multiplying these centered variables. The adjusted R^2 for Model 2 is .30, and the R^2 change between Model 1 and Model 2 is .044 ($p < .05$). Furthermore, the collinearity statistics reveal no multicollinearity issues (all variance inflation factor [VIF] values are below 1.5 and tolerance values are above .65).

The results of Model 1 indicate that new product creativity and contract specificity are not significantly related ($\beta_1 = .02, p > .10$) but that frequency of new product introductions ($\beta_2 = .25, p < .01$) and performance ambiguity ($\beta_3 = -.24, p < .01$) are both statistically significant. The results of Model 2 support H_1 , indicating that the effect of the interaction between new product creativity and frequency of new product introductions on contract specificity is positive and significant ($\beta_4 = .17, p < .05$). Supportive of H_2 , the

interaction between new product creativity and performance ambiguity is positive and significant ($\beta_5 = .13, p < .05$).

To better understand the significant moderation effects, we plotted the partial derivative of the model using Schoonhoven's (1981) procedure. We used unstandardized coefficients to perform this analysis. Figure 2, Panel A, shows the moderating effect of frequency of new product introductions, and Panel B shows the moderating effect of performance ambiguity, suggesting that these effects may be nonmonotonic. To test for nonmonotonic effects, we performed a simple slopes analysis (cf. Preacher, Curran, and Bauer 2006). Table 3 displays the relationship between new product creativity and contract specificity at different levels of frequency of new product introductions (Panel A) and performance ambiguity (Panel B). The results in Panel A suggest that the relationship between new product creativity and contract specificity becomes more positive as frequency of new product introductions increases. At low levels of frequency, the effect of product creativity on contract specificity is also significant but negative (in a one-tailed test), suggesting a nonmonotonic effect. The results in Panel B suggest that as performance ambiguity increases, the relationship between new product creativity and contract specificity becomes increasingly positive. However, because at a low level of performance ambiguity the main effect of product creativity is not significant, we do not observe a nonmonotonic effect.

Robustness of the Results with Different Specifications

To test the robustness of our results, we ran a variation of our model. Research has suggested that situation-specific factors can not only affect, but also can be affected by, governance (Ghosh

TABLE 2
Results for Study 1: Antecedents of Contract Specificity

Independent Variable	Model 1			Model 2		
	Unstandardized Coefficient	Standardized Coefficient	t-Value	Unstandardized Coefficient	Standardized Coefficient	t-Value
New product creativity	.02	.02	.24	.05	.04	.49
Frequency of new product introductions	.14	.25	3.17**	.12	.21	2.65**
Performance ambiguity	-.19	-.24	-2.94**	-.22	-.27	-3.40**
New product creativity × Frequency of new product introductions				.13	.17	2.28*
New product creativity × Performance ambiguity				.16	.13	1.76*
Environmental uncertainty	-.02	-.02	-.25	.01	.01	.11
Advertising	.21	.28	3.61**	.21	.28	3.59**
Transaction size	.03	.11	1.37	.03	.10	1.27
Relationship length	-.03	-.04	-.49	-.05	-.06	-.79
Contract duration	.02	.32	4.00**	.02	.32	4.06**
Retailer's dependence on the manufacturer	.01	.01	.15	-.01	-.01	-.10
Manufacturer's dependence on the retailer	-.05	-.06	-.77	-.05	-.07	-.85

* $p < .05$.

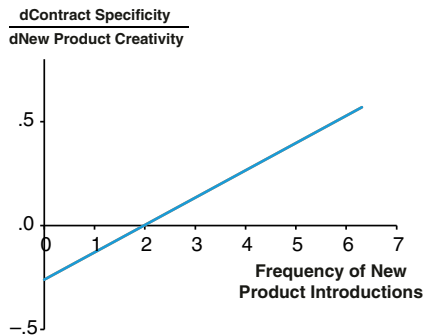
** $p < .01$.

Notes: Dependent variable is contract specificity. Adjusted R^2 for Model 2 = .30; R^2 change between Model 1 and Model 2 = .044 ($p < .05$).

FIGURE 2
Graphical Interpretation of the Moderation Effects
for Study 1

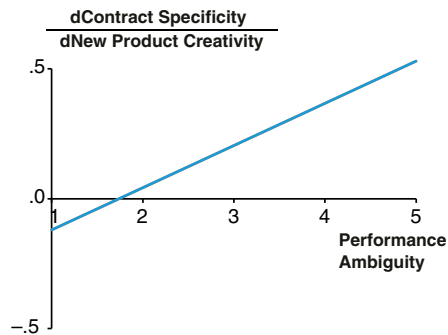
A: The Effect of the Frequency of New Product Introductions on Contract Specificity

$$\frac{d\text{Contract Specificity}}{d\text{New Product Creativity}} = .05 + .13(\text{Frequency of New Product Introductions})$$



B: The Effect of Performance Ambiguity on Contract Specificity

$$\frac{d\text{Contract Specificity}}{d\text{New Product Creativity}} = .05 + .16(\text{Performance Ambiguity})$$



and John 1999; Wuyts, Dutta, and Stremersch 2004). This suggestion indicates the possible presence of a feedback loop between contract specificity and frequency of new product introductions,⁵ whereby the way a contract is specified may influence a manufacturer's willingness to launch new products through the retailer. To examine this possibility, we tested an alternate model that adds a feedback loop between contract specificity and frequency of new product introductions to the initial model. Using three-stage least squares estimation, we fitted two simultaneous equations. First, we estimated frequency of new product introductions as a function of contract specificity and its exogenous drivers. This included the number of products

⁵We do not include a feedback loop between contract specificity and product creativity because manufacturers first develop new products and subsequently establish agreements with interested retailers on the basis of various factors, such as product characteristics or marketing strategy (Rao and McLaughlin 1989). An exception would be when a retailer demands the development of a certain new product that is designed specifically for that retailer. This is, however, beyond the scope of our study.

in each informant's portfolio; relationship length; and category-specific variables, including the extent of differentiation in the product category, category concentration, and number of competitors. The second equation was identical to Equation 1, with the exception that we used fitted values of frequency of new product introductions to create the interaction term between new product creativity and frequency of new product introductions.

The results demonstrate a level of consistency wherein interaction effects between new product creativity and both (1) frequency of new product introductions ($\beta = .26, p < .05$) and (2) performance ambiguity ($\beta = .21, p < .05$) retain their signs and significance. Furthermore, the link between contract specificity and frequency of new product introductions is not significant ($\beta = -.02, p > .10$). This is consistent with our earlier finding that the effect of endogeneity (if any) is limited. Theoretically, these results suggest that the specificity of the contractual terms for new products has no bearing on the manufacturer's decision to launch new products through a specific retailer.

Discussion

In Study 1, we find that the variability in contract specificity depends on the interaction between new product creativity and both frequency of new product introductions and performance ambiguity. Specifically, the results suggest that when frequency of new product introductions and performance ambiguity are higher, exchange partners craft increasingly specific contracts as new product creativity increases. We also find that the opposite is true when frequency of new product introductions is lower. Under this condition, the positive relationship between new product creativity and contract specificity not only weakens as hypothesized, but becomes negative. Notably, we do not find the same effect at lower levels of performance ambiguity. When performance ambiguity is lower, the influence of new product creativity on contract specificity becomes nonsignificant.

Although Study 1 increases our understanding of how manufacturers craft contract terms for selling creative new products, new product introductions also necessitate a retailer's ongoing support of the new product under the contract terms. To address this issue and to provide a more complete understanding of the governance of new product introductions, we conducted a repeated measures experiment that examines a retailer's relational behaviors in support of the new product over time, in response to the initial level of contract specificity and differing levels of new product success.

Study 2

Procedure

Study 2 is a repeated measures experiment that tests the influence of contract specificity on a retailer's relational behaviors throughout the duration of the contract, moderated by new product success. We administered an online experiment to 132 CPG retail managers from a research company's manager panel. We recruited CPG retail managers through the same market research company contracted in Study 1. To

TABLE 3
Statistical Significance of Interactions for Study 1

**A: New Product Creativity (X) → Contract Specificity (Y)
Relationship Moderated by Frequency of New Product
Introductions (Z)**

Z Level (ln) ^a	X Coefficient ^b	SE of X Coefficient	t-Value of X Coefficient
6.31	.57	.24	2.42
5	.40	.17	2.30
4	.27	.13	2.03
2.36	.05	.09	.49
0	-.26	.16	-1.66

**B: New Product Creativity (X) → Contract Specificity (Y)
Relationship Moderated by Performance Ambiguity (Z)**

Z Level (ln) ^c	X Coefficient ^d	SE of X Coefficient	t-Value of X Coefficient
5	.53	.23	2.35
4	.37	.17	2.16
3	.20	.12	1.69
2.01	.05	.09	.49
1	-.12	.11	-1.10

^aMean = 2.36.

^bGiven by $(.05 + .13Z)X$, with Z mean-centered.

^cMean = 2.01.

^dGiven by $(.05 + .16Z)X$, with Z mean-centered.

enhance the response rate, the company offered financial compensation to participants. Follow-up e-mails were sent to nonrespondents. In total, we received 132 completed and usable responses from a sample of 541 potential participants, a response rate of 24%. Comparing the differences of means between initial respondents with those of respondents after the follow-up e-mails on demographic variables and study constructs, we found no significant differences, suggesting that nonresponse bias was minimal.

To ensure the appropriateness of the informants, we screened them on the basis of two criteria. Specifically, they had to be knowledgeable about (1) decisions made regarding new products and (2) the written contractual terms negotiated for new products. Qualified informants had, on average, 16 years of experience in the industry and worked for retailers with median sales of \$1 million. The top product categories represented in the sample included food (23%), health and beauty (12%), and apparel (6%).

We followed Ganesan et al.'s (2010) approach of having the manager anchor on a specific supplier before proceeding to the experiment, organizing the study into two parts. In Part A, informants were asked to think of a branded new product (1) that one of their manufacturers had most recently launched through the retailer, (2) whose performance was not yet known, and (3) for which a 12-month contract had been signed.⁶ Informants were then asked to provide information about the initial contractual terms (contract specificity), new product creativity, advertising, relationship length and transaction

⁶We selected a 12-month contract duration because Study 1 revealed that it is the most common contractual length.

size, and the manufacturer's percentage of business, which served as control variables.

In Part B, we randomly assigned informants to one of two experimental treatment conditions, in which new product success was manipulated between subjects as either consistently far above (successful) or far below (unsuccessful) the category average throughout the duration of the contract (we provide scenario descriptions in Appendix B). Informants in each treatment condition were then asked to imagine that the new product had been on the market for 3, 6, and then 9 months of the 12-month contract, using within-subject design. Each informant was presented with information on the new product sales in each time period and then asked to report on the extent of his/her subsequent engagement in relational behaviors related to the new product. We did not manipulate new product success at 12 months because at that point the contract would have been terminated or renegotiated.

Measurement

We operationalized contract specificity in the same way as in Study 1, using three items, each on a five-point Likert scale. We measured relational behaviors related to the product in each period and, consistent with prior literature (Hoppner and Griffith 2011; Lusch and Brown 1996), operationalized them as a second-order construct consisting of three first-order dimensions: solidarity, flexibility, and information exchange. We assessed solidarity, which captures the extent to which the retailer works jointly with the manufacturer for the benefit of the new product, using a three-item, five-point Likert scale. We assessed flexibility, which captures the extent to which the retailer works around the contractual terms for the benefit of the new product, using a three-item, five point Likert scale. Finally, information exchange measures the extent to which the retailer proactively provides useful information about the new product to the manufacturer. We assessed it using a two-item, five-point Likert scale. Appendix A reports measures of the constructs, and Table 4 presents correlations, internal reliability, and AVE.

Control variables. We included new product creativity, advertising, relationship length, transaction size, and the manufacturer's percent of business as control variables in the model. Creative new products take longer to take off but also have a greater potential for financial returns and profitability (Sorescu, Chandy, and Prabhu 2003), which may motivate retailers to engage in relational behaviors related to the product. Advertising motivates retailers to provide greater support to heavily advertised products. Relationship length influences relational behaviors, as the longer the exchange partners conduct business with each other, the more likely they are to be committed and accept short-term disadvantages (Lusch and Brown 1996). Transaction size increases retailers' hazards (Heide 1994), which motivates them to engage in relational behaviors.⁷ Last, the manufacturer's percent of

⁷The data contain missing values for transaction size (21%). As such, we imputed these values using expectation maximization method.

business captures the percent of category business that goes to the manufacturer, and reflects the importance of the manufacturer's products to the retailer, capturing a retailer's dependence on the manufacturer.

Manipulation checks. We included manipulation checks for new product success (see Appendix A). Significant mean differences in the appropriate directions were observed for the three-month manipulation (3.47 vs. 3.75; $t = -2.17, p < .05$), the 6-month manipulation (3.39 vs. 3.92; $t = -3.80, p < .01$), and the nine-month manipulation (3.18 vs. 4.01; $t = -5.32, p < .01$), providing evidence that the manipulation was effective.

Measurement model. We evaluated the psychometric properties of the latent constructs by conducting a CFA, using the maximum likelihood estimation method. Appendix A presents the item loadings, and Table 4 reports Cronbach's alphas. The CFA results demonstrate satisfactory model fit that is within the range of acceptability according to prior literature (e.g., Corsten and Kumar 2005): χ^2 goodness-of-fit index of 278.71, with 144 degrees of freedom; CFI of .91; RMSEA of .09; and SRMR of .07. All factor loadings are large (range: .59 to .99) and significant ($t > 2.00$), in support of convergent validity. Cronbach's alphas of .88 or above demonstrate good reliability. Discriminant validity is also confirmed because the AVE exceeds the square of correlations among all constructs (Fornell and Larcker 1981).

Analysis and Model Development

We used two-level hierarchical linear modeling (HLM) to test the influence of contract specificity, new product success, and their interaction on a retailer's relational behaviors related to the product over the contractual period. Compared with traditional methods, HLM provides two advantages. First, it accounts for the lack of independence across observations (Raudenbush and Bryk 2002) that arise with repeated measures designs. Second, HLM accommodates individual heterogeneity that can be explained by inclusion of explanatory variables at higher levels.

To test the hypothesized effects, we employed a model-building approach that balances theory with model parsimony, an approach applied in prior literature (e.g., Palmatier 2008). As such, we estimated three nested models. The independent variables for each of these models were mean-centered, and collinearity statistics revealed no major multicollinearity issues among independent variables (all VIF values are below 2.5 and tolerance values above .40). Model 1 estimates the main effects of time, contract specificity, new product success, and control variables. In Model 2, we add the interaction terms. To adequately reflect the spacing of repeated measures, the values of $Time_{it}$ were defined as 0 (for observations made at three months), 1, and 2 (for observations made at six and nine months, respectively). Equation 2 shows the Level 1 equation for Model 2. Equations 3–4 show Level 2 equations for the intercept (α_{i0}) and slope (α_{i1}). On the basis of these equations, we specify an "intercepts and slopes as outcomes" model that explains the initial level of relational behaviors as well as their growth over time.

$$(2) \quad \text{Relational Behaviors}_{it} = \alpha_{i0} + \alpha_{i1} \text{Time}_{it} + \epsilon_{it}.$$

$$(3) \quad \begin{aligned} \alpha_{i0} = & \beta_{00} + \beta_{01} \text{Contract specificity}_i \\ & + \beta_{02} \text{New product success}_i \\ & + \beta_{03} \text{Contract specificity}_i \\ & \times \text{New product success}_i \\ & + \beta_{\text{controls}} \text{Control variables}_i + \mu_{i0}. \end{aligned}$$

$$(4) \quad \begin{aligned} \alpha_{i1} = & \beta_{10} + \beta_{11} \text{Contract specificity}_i \\ & + \beta_{12} \text{New product success}_i \\ & + \beta_{13} \text{Contract specificity}_i \\ & \times \text{New product success}_i + \mu_{i1}. \end{aligned}$$

Equation 4 does not include control variables. We did not include the interaction terms between control variables and time because they are not theoretically expected to affect the growth curve, and their addition did not result in an improved model fit ($p > .10$). The selection of a more parsimonious model was therefore preferred. Finally, Equations 3 and 4 can be substituted into Equation 2 to generate a baseline aggregated model, which is specified as follows:

$$(5) \quad \begin{aligned} \text{Relational Behaviors}_{it} = & \beta_{00} + \beta_{01} \text{Contract specificity}_i \\ & + \beta_{02} \text{New product success}_i \\ & + \beta_{03} \text{Contract specificity}_i \\ & \times \text{New product success}_i \\ & + \beta_{10} \text{Time}_{it} \\ & + \beta_{11} \text{Contract specificity}_i \\ & \times \text{Time}_{it} \\ & + \beta_{12} \text{New product success}_i \\ & \times \text{Time}_{it} + \beta_{13} \text{Contract specificity}_i \\ & \times \text{New product success}_i \times \text{Time}_{it} \\ & + \beta_{\text{controls}} \text{Control variables}_i + \nu_{it}, \end{aligned}$$

where ν_{it} represents random error. To examine more nuanced effects in relational behaviors during the contractual period (i.e., earlier vs. later in the duration of the contract), we also fitted a third model (Model 3) using piecewise splines (Chou et al. 2004). Growth curve analysis with piecewise splines enables us to incorporate multiple stages into our model. This is important because the retailer's evolving engagement in relational behaviors may differ earlier in the contractual period, when the product is becoming established, versus later, when the contract is about to expire. Using the piecewise approach, we estimated the initial level of relational behaviors (α_{i0}) and two growth parameters, one for each stage. In our analysis, the first parameter (α_{i1}) represents the growth profile early in the contractual period (three and six months). The second parameter (α_{i2}) represents the growth profile later in the contractual period (six and nine months). To adequately reflect the spacing of repeated measures, the values of $Time_{it}$ for the first stage (α_{i1}) were defined as 0 (for observations made at three months) and 1 (for observations made at six and nine months), and values for the second stage (α_{i2}) were defined as 0 (for observations made at three and six months) and 1 (for observations made at nine months).

TABLE 4
Correlations and Summary Statistics for Study 2

Construct	1	2	3	4	5	6	7
1. Contract specificity	.92						
2. Relational behaviors	.44**	.89					
3. New product creativity	.24**	.44**	.88				
4. Advertising	.37**	.30**	.31**	.91			
5. Relationship length (ln)	.05	.02	.13	.14	N.A.		
6. Transaction size (ln)	.09	.09	-.05	-.07	.21*	N.A.	
7. Manufacturer's % business	.03	.15*	.18	.01	-.03	.02	N.A.
Mean	3.76	3.63	3.48	3.10	2.22	9.80	35
Standard deviation	.94	.68	.80	.98	1.04	3.56	31.26
Average variance extracted	.80	.80	.56	.83	N.A.	N.A.	N.A.

* $p < .05$.

** $p < .01$.

Notes: Cronbach's alphas are on the diagonal. N.A. = not applicable.

Table 5 reports the maximum likelihood estimates and goodness-of-fit statistics for each model. An HLM test does not produce an R-square. However, it yields a deviance (-2 log-likelihood criterion), which can be used to evaluate alternative models (Raudenbush and Bryk 2002). The deviance for each model is compared with a χ^2 distribution, where degrees of freedom represent the difference in the number of parameters between two models (Ang, Slaughter, and Yee Ng 2002). As Table 5 reveals, adding the interaction terms to Model 1 improves fit (Δ deviance₍₄₎ = 23.86, $p < .01$). Model 3, in which piecewise splines are added, further improves the model fit relative to Model 2 (Δ deviance₍₇₎ = 18.72, $p < .01$).

Results

Model 2 reveals that both contract specificity ($\beta_{01} = .23, p < .01$) and new product success ($\beta_{02} = .18, p < .05$) are positively related to a retailer's relational behaviors related to the product. The interaction between new product success and contract specificity is not significant ($\beta_{03} = .001, p > .10$). We find a significant negative interaction between time and contract specificity ($\beta_{11} = -.10, p < .01$) and a significant positive interaction between time and new product success ($\beta_{12} = .24, p < .01$). The three-way interaction among contract specificity, new product success, and time is also significant ($\beta_{13} = .13, p < .05$). Although this result lends support to a three-way interaction proposed in H₃, to test this hypothesis, we performed a simple slopes analysis to more closely investigate change over time across different levels of new product success and contract specificity. To do this, we used the Preacher, Curran, and Bauer (2006) procedure.

Figure 3 shows the plot of the three-way interaction among contract specificity, new product success, and time. Panel A shows the influence of new product success on relational behaviors over time when contract specificity is higher. The results show that retailers increase their relational behaviors over the contract's duration when the new product is successful ($\beta = .13, p < .05$) but decrease their relational behaviors when the new product is unsuccessful ($\beta = -.28, p < .01$). This result supports H_{3a}. Panel B shows the influence of new product success on relational behaviors over time when contract specificity is lower. The results show that retailers' relational behaviors do not change over time when the new product is

successful ($\beta = .002, p > .10$) or when it is unsuccessful ($\beta = .12, p > .10$). This result supports H_{3b}.

Model 3 examines the changes in a retailer's behaviors over time using two stages. The results for Stage 1 show the influence of contract specificity, new product success, and their interaction on relational behaviors earlier in the contract (three and six months). The results reveal a significant negative interaction between time and contract specificity ($\beta_{11} = -.11, p < .05$) and a positive interaction between time and new product success ($\beta_{12} = .21, p < .01$). The three-way interaction of contract specificity, new product success, and time, however, is not significant at Stage 1 ($\beta_{13} = .12, p > .05$). The results for Stage 2 demonstrate changes in relational behaviors later in the contract (six and nine months). It is important to note that whereas the interaction between time and new product success remains significant ($\beta_{22} = .28, p < .01$), the interaction of time with contract specificity becomes nonsignificant ($\beta_{21} = -.09, p > .05$). In contrast, the interaction among contract specificity, new product success, and time becomes significant at Stage 2 ($\beta_{23} = .14, p < .05$).

Discussion

Study 2 extends our prior findings by examining a retailer's relational behaviors related to the new product during the duration of the initial contract. Overall, we find support for our hypotheses that contract specificity and new product success jointly influence a retailer's relational behaviors. For example, we find that when contract specificity is higher and the new product is successful, retailers increase their relational behaviors over the contractual period. Conversely, when contracts are specific but the new product is unsuccessful, retailers decrease their relational behaviors over time. We also find that when contract terms are less specific, retailers' motivation to engage in relational behaviors over time is suppressed regardless of the new product's level of success. This suggests that although the retailer may be inclined to engage in behaviors to partake in the new product's success (Dahlquist and Griffith 2014), the lack of contract specificity fails to safeguard the retailer from manufacturer opportunism.

The test of Model 3 presents particularly notable findings. The results reveal that the positive influence of contract

TABLE 5
Results for Study 2: HLM Estimation of Relational Behaviors

Independent Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)
Initial Status			
Intercept	3.53** (.07)	3.57** (.07)	3.54** (.07)
Contract specificity	.22** (.06)	.23** (.08)	.23** (.08)
New product success	.27** (.09)	.18* (.10)	.19** (.10)
Contract specificity × New product success		.001 (.10)	.006 (.10)
Advertising	.07 (.05)	.07 (.05)	.06 (.05)
New product creativity	.28** (.06)	.28** (.07)	.29** (.06)
Relationship length	-.04 (.05)	-.04 (.05)	-.04 (.04)
Transaction size	.02* (.01)	.02* (.01)	.03* (.01)
Manufacturer's % business	.001 (.002)	.002 (.002)	.002 (.002)
Growth Rate			
Time	-.04 (.03)	-.16** (.04)	Stage 1: -.05 (.05) Stage 2: -.27** (.05)
Contract specificity × Time		-.10** (.04)	Stage 1: -.11* (.06) Stage 2: -.09 (.06)
New product success × Time		.24** (.06)	Stage 1: .21** (.07) Stage 2: .28** (.07)
Contract specificity × New product success × Time		.13* (.06)	Stage 1: .12 (.08) Stage 2: .14* (.08)
Deviance (-2 log-likelihood)	523.96	500.10	481.38
Degrees of freedom	13	17	24

**p* < .05.

***p* < .01.

Notes: SE = standard error of the estimate.

specificity on retailers' relational behaviors weakens over time and becomes nonsignificant toward the end of the contract. This suggests, consistent with some prior research (e.g., Larson 1992; Poppo and Zenger 2002), that contracts play a critical role in ensuring that earlier, more vulnerable stages of exchange are protected. The results also reveal that earlier in the contract period, contract specificity does not interact with new product success in influencing changes in a retailer's relational behaviors but that this interaction becomes important later in the contract period. This result may suggest that retailers initially rely more on contractual terms in determining their level of engagement in relational behaviors, but over time, as the new product's success is observed, the contract is supplemented with the observation of the new product's market success. Both the contract terms and new product success then determine retailers' engagement in relational behaviors over time.

General Discussion

This research was motivated by two key questions: (1) Under what conditions do manufacturers craft specific contract terms for new products to align expectations and identify shared rules and responsibilities, and under what conditions do they leave contractual terms open to permit greater adaptation and value-enhancing adjustments? (2) How might a retailer's engagement in relational behaviors change for a new product during the contract, according to the initial level of contract specificity and differing levels of new product success? To investigate these questions, we drew on the extant research in coordination of interorganizational relationships through contracting (e.g., Buvik and John 2000; Celly and Frazier 1996; Lusch and Brown 1996; Mooi and Ghosh 2010; Poppo and Zenger 2002) and relational behaviors (e.g., Hoppner and Griffith

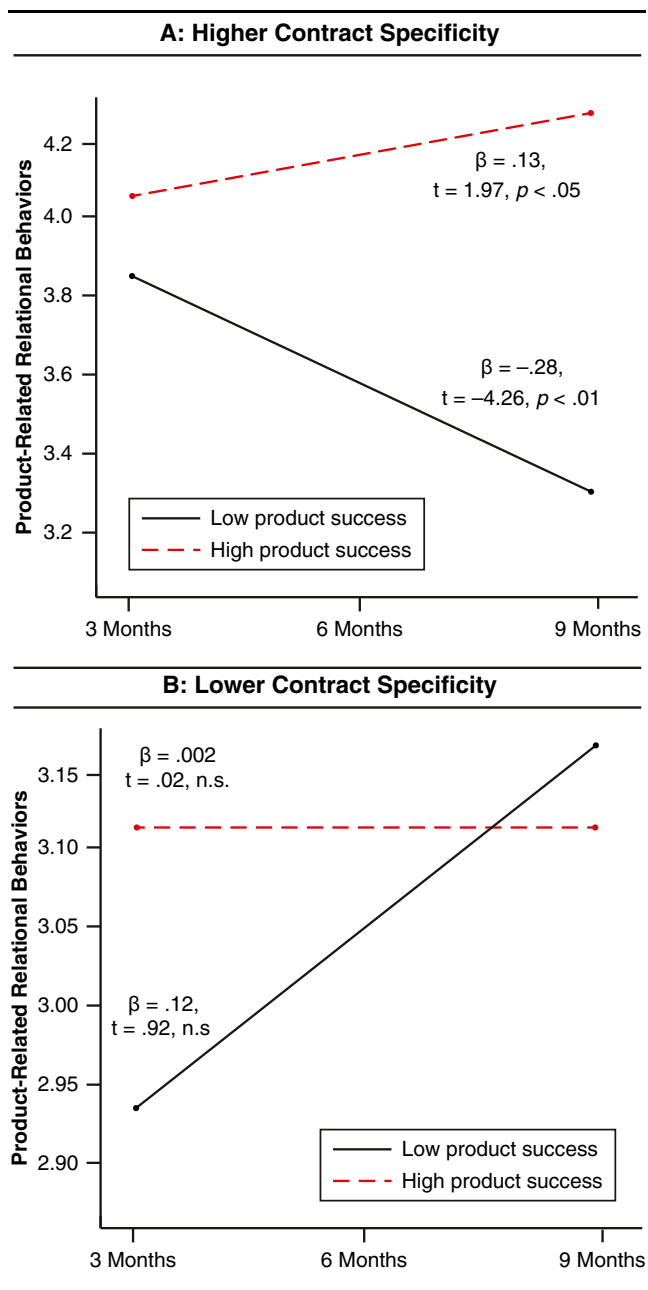
2011; Lusch and Brown 1996). The findings offer important insights into these questions and provide substantive implications for marketing academics and practitioners.

Theoretical Contributions

This work makes several important theoretical contributions to the literature. First, we extend research on new product creativity (e.g., Ganesan, Malter, and Rindfleisch 2005; Moorman 1995; Rindfleisch and Moorman 2001) by studying the governance of creative new product introductions. Extending the coordination and contracting literatures (e.g., Buvik and John 2000; Celly and Frazier 1996; Lusch and Brown 1996; Mooi and Ghosh 2010), we study the factors that influence the governance trade-off between the need to adapt for the benefit of the new product, which favors lower contract specificity, and the need to safeguard the new product against retailer opportunism, which favors higher contract specificity. The findings of this work provide insights into this trade-off through the consideration of how new product creativity interacts with both frequency of new product introductions and performance ambiguity, two important situation-specific conditions with the retailer. The results suggest that both frequency of new product introductions and performance ambiguity alter the balance between adaptation and safeguarding, causing firms to negotiate contract terms of varying levels of specificity with increasing new product creativity. As such, we not only provide insights into an issue that exists in contracting that prior literature has not addressed, but also theoretically argue for, and empirically support, the situation-specific factors that determine a manufacturer's governance of creative new product introductions.

Second, we extend the literature streams on contractual and relational governance (e.g., Lusch and Brown 1996; Mooi and Ghosh 2010; Poppo and Zenger 2002) by answering the calls

FIGURE 3
Graphical Interpretation of the Impact of New Product Success on Relational Behaviors over Time Under Varying Contract Specificity



of Poppo and Zenger (2002) that scholars need to further explore aspects of contractual and relational governance as complementary and advance the understanding of coordination (Buvik and John 2000; Celly and Frazier 1996) within arms-length relationships. Specifically, our findings shed light on the relationship between contractual and relational governance by detailing the influence of contract specificity on relational behaviors over time (aspects not taken into account by Lusch and Brown 1996 or Poppo and Zenger 2002). Furthermore, by departing from prior research that has predominantly studied how relational behaviors influence

performance (e.g., Bercovitz, Jap, and Nickerson 2006; Hoppner and Griffith 2011; Lusch and Brown 1996; Sande and Haugland 2015), this work extends the literature by examining the moderating role of new product success on the relationship between contract specificity and relational behaviors. As such, we provide a more robust perspective of ongoing manufacturer–retailer relationships. For example, this work could be argued to extend the work of Hoppner and Griffith (2011), in that it is suggestive of a retailer’s reciprocity (through relational behaviors related to the product) that may be contingent on the new product’s ability to contribute to the retailer’s performance.

Furthermore, the work provides new theoretical insights by examining how retailers’ relational behaviors may change over time. Because relational behaviors engaged in by retailers are not only discretionary but also costly (Larson 1992), retailers are reluctant to incur such costs over time unless they can realize increased benefits as a result. In support of this argument, our findings suggest that a retailer’s engagement in relational behaviors is motivated by an expectation of greater economic rents created by the new product success but safeguarded by a specific contract. Indeed, under conditions of higher contract specificity, we found that retailers engaged in an increasing (decreasing) level of relational behaviors throughout the duration of the contract when the new product was successful (unsuccessful). This finding extends the arguments of Dahlquist and Griffith (2014) that exchange partners engage in strategies to share in the success of their upstream supplier’s product sales to downstream customers and suggests that reciprocity (Hoppner and Griffith 2011) may be at play.

Potentially more of note, we found that when contract specificity was lower, a retailer’s relational behaviors over time did not change regardless of whether the new product was successful or unsuccessful. This suggests that in striving to maximize their profits while minimizing their costs, retailers refrain from engaging in relational behaviors over time (regardless of the new product’s success) because they cannot easily secure additional benefits when contract terms are open. This finding extends the extant literature (e.g., Buvik and John 2000; Gulati and Singh 1998; Lusch and Brown 1996; Mooi and Ghosh 2010; Poppo and Zenger 2002) by providing a better understanding of how retailers behave under contractual terms. Specifically, our findings indicate that retailers will scale back investments that are not easily measurable (e.g., relational behaviors) when contracts are less specific, laying a foundation for further research that could examine contract (mis)alignment (cf., Ghosh and John 1999; Sande and Haugland 2015) and its influence on relational governance over time.

Managerial Implications

This research has important implications for manufacturers in the management of new product introductions. First, managers understand that not all new product introductions are the same and that each introduction requires different resources and support. However, how this fact influences the way new products are managed has received limited attention. We address this gap and find that the level of specificity of the contractual terms for new products should be considered within the context of the type of the new product launched (i.e., new product creativity) and the

situation-specific factors of frequency of new product introductions and performance ambiguity. This is not suggesting differences in contract terms across retailers, such as price, which could run afoul of the Robinson–Patman Act, but rather differences in relation to the level of specificity of the contract terms (e.g., level of specification of product support, implementation procedures, or legal aspects). Specifically, we recommend that managers work to craft more specific contract terms as new product creativity increases when the firm maintains a higher frequency of new product introductions in a context with higher performance ambiguity. In contrast, we recommend that managers decrease their level of contract specificity for creative new products only when performance ambiguity and frequency of new product introductions are lower.

Second, managers should be aware that the specificity of the initial contractual terms has a significant influence on a retailer's relational behaviors throughout the duration of the contract. This is an important consideration because new products often necessitate a retailer's support during the initial stages of their introduction. Our findings suggest that managers should expect minimal retail support outside the terms of the contract when contract specificity is low. Thus, by building in flexibility (so as to protect against adaptation costs), the manufacturer may actually be diminishing retailers' motivation to support the new product after it is launched. This becomes a major challenge because by crafting the contract terms to avoid adaptation costs, the manufacturer may actually be embedding such costs into future contract negotiations if retailers look toward contract renegotiation upon renewal, as opposed to providing support to a new product under the initial contractual terms.

Conversely, when contract specificity is higher, manufacturers can expect retailers to be more responsive to new product success. Specifically, when a new product is successful, retailers will increasingly engage in relational behaviors over the duration of the contract. Here, we suggest that manufacturers recognize retailers' behaviors and engage in reciprocal actions (either with other new product introductions or upon contract renewal). Recognizing and rewarding a retailer's support that is outside the contract is critical for the creation of a long-term collaborative relationship. With that said, when a new product is unsuccessful (i.e., sales are below the category average), manufacturers should not expect retailers to provide assistance outside the contract. This suggests that manufacturers who desire to maintain their products on the market for a longer period must have in place their own contingency plan of support for the product to offset the reduction in retailer support, to increase the new product's potential for success in the future.

Limitations and Further Research

Although this study presents many new insights, it is not without limitations. First, although we tested for endogeneity, the possibility for a selection bias remains. This is because certain characteristics of the relationship between the manufacturer and retailer (such as potential opportunism) may have caused the informants to withhold information regarding their contractual terms. Unfortunately, the nature of the data prevents us from running a Heckman selection (Heckman 1979) model to fully rule out potential selection bias.

Second, we focused our efforts on understanding contracts and relational behaviors for the introduction of a single new product in order to assess the trade-offs between adaptation and safeguarding. Because ours is a reduced form model, future studies could examine governance of new product introductions by explicitly incorporating demand uncertainty, volatility, opportunism, and flexibility directly into the model. For example, opportunism may vary with the extent to which retailers assist in contributing to the differentiation of the manufacturer's product. Incorporating these constructs formally into the model would more accurately account for differences across various consumer products. Furthermore, as new products are launched in the context of past product introductions, competitive offerings, and expectations of future exchanges, a broader perspective could be examined to assess how prior and existing product offerings influence a retailer's engagement with the manufacturer's new products (e.g., the success of the most recently introduced new product could have a carryover effect).

Third, although the focus of this work is on exploring the relationships between contractual and relational governance in the context of creative new products, we believe that this work could provide a foundation for the study of the discriminating alignment hypothesis within Governance Value Analysis (Ghosh and John 1999). Researchers may wish to expand on this work and study whether the contract terms for creative new products are aligned with firm- and situation-specific factors for the determination of new product success. We would encourage researchers to build off of the recent discriminating alignment findings by Sande and Haugland (2015) to better understand how (mis)alignment of contract terms influences new product success in this context.

Fourth, although we collected data from both manufacturers and retailers, the data were not matched. The possibility exists that the way governance is viewed by each partner is unique, because each partner may have different goals. Because contracts reflect the mutual agreement of both parties, understanding these differences can be valuable. One approach to furthering this research would be through the development of simulated negotiations between manufacturers and retailers, or detailed documentation of contract negotiations. Furthermore, we operationalize contract specificity abstractly and therefore do not capture the specific contractual terms. For example, the level of specificity may vary for price, profit-sharing conditions, payment terms, shelf-space allocation, advertising support, and so forth. Inclusion of more specific contractual measures would enhance understanding of setting up and managing contracts in greater detail.

Fifth, the CPG context in which this study was conducted brings forth a number of complications. For example, one could argue that there exist fewer opportunities for creative new products to be truly innovative and change marketing thinking and practice than in other product categories. Furthermore, the variations in contracts for these consumer goods, ranging from simple merchant contacts wherein a great deal of action is needed by the retailer to those in which retailers can simply rent space to the manufacturer (e.g., vendor-managed inventory arrangements) could limit the generalizability of our findings, suggestive of the need for greater work in the area.

APPENDIX A
Construct Measures

Constructs (Scale Sources): Items	Item Loadings
New Product Creativity: Studies 1 and 2	
<i>Relative to other products in the same category, how would you describe this new product?</i>	
Very ordinary for its category/Very novel for its category	.78/.59
Not creative/Creative	.81/.74
Uninteresting/Interesting	.75/.66
Not at all innovative/Very Innovative	.70/.82
Not challenging to existing ideas in its category/Challenging to existing ideas in its category	.69/.79
Not offering new ideas to its category/Offering new ideas to its category	.77/.85
Not capable of generating ideas for other products/Capable of generating ideas for other products	.59/N.A.
Frequency of New Product Introductions: Study 1	
<i>In this new product's category,</i>	
the number of new SKUs created yearly by your company for this retailer is roughly60
the total number of new products launched yearly by your company through this retailer is approximately95
the average number of new products launched annually by your company through this retailer is approximately99
Performance Ambiguity: Study 1	
<i>With this retailer,</i>	
it is easy to monitor the retail performance of new products closely/it is not possible to monitor the retail performance of new products closely.	.88
it is easy to assess the retail performance of new products/it is not easy to assess the retail performance of new products.	.99
it is easy to obtain accurate new product performance evaluations/it is difficult to obtain accurate new product performance evaluation.	.85
Environmental Uncertainty: Study 1	
<i>Which term better describes your expectations about the market for this new product at the time of the launch?</i>	
Certain that selling efforts would pay off/Uncertain whether selling efforts would pay off.	.86
Sales forecasts likely to be accurate/Sales forecasts likely to be inaccurate.	.68
Confident of results of marketing actions/Unsure of the results of marketing actions.	.75
Contract Specificity: Study 1/Study 2	
At launch, the terms of trade for this new product were clearly contractually specified.	.84/.91
At launch, the purchasing agreement as a whole was very specific.	.89/.90
At launch, the contractual terms for this new product were very detailed and specific.	.86/.87
Advertising: Study 1/Study 2	
The total dollars spent advertising for this new product was higher than those spent on other, similar new products.	.98/.94
This new product received greater advertising support (in USD) than other similar new products.	.88/.88
Transaction Size: Study 1/Study 2	
The approximate initial monthly purchase amount (in USD) for the new product	N.A.
Relationship Length: Study 1/Study 2	
The number of years that your organization has been in business with this retailer/supplier	N.A.
Contract Duration: Study 1/Study 2	
The approximate duration of this signed agreement (months)	N.A.
Retailer's Dependence on the Manufacturer: Study 1	
It would be easy for this retailer to replace the sales generated from your products with sales from other manufacturers.	.85
Other manufacturers could supply this retailer with comparable products.	.82
The cost of switching to another manufacturer would be manageable for the retailer.	.67
Manufacturer's Dependence on the Retailer: Study 1	
You could easily replace the sales generated by this retailer with sales from other retailers.	.63
You would incur minimal costs in replacing this retailer.	.99
Manufacturer's % Business: Study 2	
The % of specified category business that is sourced by this supplier	N.A.

APPENDIX A
Continued

Constructs (Scale Sources): Items	Item Loadings
Relational Behaviors: Study 2	
<i>Solidarity</i>	
You would try to help this supplier to manage this new product.	.74
You would be committed to improvements and changes for the benefit of this new product.	.79
You would treat this new product as a joint responsibility rather than an individual responsibility.	.74
<i>Flexibility</i>	
You would rather work with this supplier for the benefit of this new product than hold them to the initial contractual terms.	.59
To benefit this new product, you would work around the contractual terms.	.78
You would be flexible in response to requests to work around the contract to support this new product.	.84
<i>Information Exchange</i>	
You would keep this supplier informed about events and changes that may affect this new product.	.81
You would provide this supplier with information relevant to this new product more frequently and informally and not only according to prespecified agreement.	.74
<i>Relational Behaviors</i>	
Solidarity	.99
Flexibility	.77
Information exchange	.92
Manipulation Check: Study 2	N.A.
<i>In the fictitious scenarios given to you about the future performance of the new product, (a) in the first three months since launch, (b) during the three to six months since launch, (c) during the six to nine months since launch,</i>	
the success of this new product was ^a	
the performance of this new product was ^a	
Instrumental Variables	
<i>Differentiation in the Product Category</i>	
Product differentiation in this new product's category is.... ^b	N.A.
<i>Number of Products in Informant's Portfolio</i>	
How many different products are you responsible for? ^c	N.A.
<i>Category Concentration</i>	
Category concentration in this new product's category is ^b	N.A.

^aRated on a five-point scale, from "far below" to "far above" category average.

^bRated on a five-point scale, low-high.

^cOpen-ended response.

Notes: Standardized loadings are reported as Study 1/Study 2 when applicable. N.A. = not applicable.

Appendix B: Study 2 Scenario Description

Manipulation at Three Months

Now imagine the new product that you selected has been on the market for 3 months of the 12-month contract, and during this time, the new product consistently generated sales far *above* (*below*) the category average. Assume that you have a complete authority over the decision

making. How would you treat this product over the next three months?

Manipulation at Six and Nine Months

Imagine that another three months have passed. The new product has now been on the market for 6 (9) months of the 12-month contract, and continues to generate sales far *above* (*below*) its category average. Given this information, how would you treat this product over the next three months (again assume that you have complete control over the decision making)?

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WEB APPENDIX

New Product Creativity: Understanding Contract Specificity in New Product Introductions

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Web Appendix Instrumental Variable Testing

In our model, new product creativity and frequency of new product introductions may be endogenous. To address this concern, we use instrumental variable approach with a two-stage least squares estimation (2SLS). Equations A1 and A2 report the first stage equations, in which each endogenous regressor is regressed on the instrumental variables (differentiation in the product category and the number of products in informant's portfolio) and exogenous variables from Equation 1 (Bascle 2008).

$$\begin{aligned}
 \text{(A1) New Product Creativity} &= \alpha_{20} \\
 &+ \beta_{21} \text{ Differentiation in the product category} \\
 &+ \beta_{22} \text{ Number of products in informant's portfolio} \\
 &+ \beta_{23} \text{ Performance ambiguity} \\
 &+ \text{control variables} + \varepsilon_1
 \end{aligned}$$

$$\begin{aligned}
 \text{(A2) Frequency of New Product Introductions} &= \alpha_{30} \\
 &+ \beta_{31} \text{ Differentiation in the product category} \\
 &+ \beta_{32} \text{ Number of products in informant's portfolio} \\
 &+ \beta_{33} \text{ Performance ambiguity} \\
 &+ \text{control variables} + \varepsilon_1
 \end{aligned}$$

Let New Product Creativity* and Frequency of New Product Introductions* be the predicted values of New Product Creativity and Frequency of New Product Introductions obtained from equations A1 and A2, respectively. We use these predicted values directly in the second stage regression equation in place of the actual variables. This produces equation A3, where control variable are same as in Equation 1.

$$\begin{aligned}
 \text{(A3) Contract specificity} &= \alpha_{30} + \beta_{31} \text{New product creativity*} \\
 &+ \beta_{32} \text{Frequency of new product introductions*} \\
 &+ \beta_{33} \text{Performance ambiguity} \\
 &+ \text{control variables} + \varepsilon_1
 \end{aligned}$$

Instrumental Variable Tests

We performed a series of tests to examine the validity and relevance of our instrumental variables. To test for the relevance of the instrumental variables, we used the Cragg-Donald (1993) statistic that applies to multiple endogenous regressors. The results do not indicate presence of poor instruments as the value of Cragg-Donald F statistic ($F = 8.07$) meets the critical value of 7.03 suggested by Stock and Yogo (2005) for two endogenous regressors and

two instrumental variables. We tested the validity of our instruments using the Sargan test (Bascle 2008). Since exogeneity tests necessitate that the equation is overidentified (i.e., there are more instrumental variables than endogenous regressors), we tested the set of instrumental variables on new product creativity and frequency of new product introductions separately. The results reveal that the instrumental variables are exogenous for both new product creativity ($\chi^2 = .15, p > .10$) and frequency of new product introduction ($\chi^2 = .02, p > .10$).

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