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Abstract

Purpose – This paper aims to explore the enhancement of value-added characteristics in strategic supply management by considering manufacturers' willingness, opinions on relational governance and the effect of relational governance on relationship value.

Design/methodology/approach – After a literature review, this study identified the antecedents of relational governance affecting manufacturers, and explored the effect of relational governance on relationship value, taking relationship quality and interfirm learning as the intervening constructs. Data collected from 259 valid questionnaires completed by purchasing managers for the top 2,000 Taiwanese manufacturers were assessed using a structural equation model.

Findings – The results indicated that relational governance is directly and positively correlated with relationship quality and interfirm learning; relational quality and interfirm learning are directly and positively correlated with relationship value; and consumer orientation and management innovation are directly and positively correlated with relational governance.

Research limitations/implications – The high explanatory power of the results of the deduced model in this research helps to explain the relational governance of manufacturers toward the suppliers. However, the factors affecting the sustainability of cooperative relationships in service contexts might differ.

Practical implications – Relational governance complements the adaptive limits of contracts by fostering the continuance of exchange and entrusting both parties with mutually agreeable outcomes. Relational governance affects manufacturers' ability to flexibly adapt and overcome uncertainty in the supply chain relationship.

Originality/value – This study investigated the relationship among governance features that support interorganizational relations and developed precise measures of relational governance. The effect of relational governance on the evaluation of relationship value was examined.

Keywords Relational governance, Relationship value, Consumer orientation, Management innovation.

Paper type Research paper

Introduction

The current business environment requires companies to create value efficiently through supply activities and supplier networks. The influence of supply management as a success factor has increased, and substantial improvements in performance have been associated with the strategic characteristic of supply management (Kähkönen and Lintukangas, 2012). Researchers have determined that strategic supply management correlates highly with the competitive advantage and business performance of a firm (Yeung, 2008). Supply management is used to determine the most valuable and

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appropriate suppliers, as well as to supply raw materials and products efficiently; therefore, the influence of supply management on value creation is substantial. Strategic and efficient supply management can generate numerous benefits and cost savings, thereby creating more value for a firm (Lindgreen and Wynstra, 2005). The goal of supply management is to seek potential collaborative partners, to identify opportunities for collaboration and to collaborate with these partners to create value (Hammervoll and Toften, 2010). Suppliers face increasing commoditization of products and attempt to differentiate themselves through relationships. Manufacturers must decide whether to invest in new supplier relationships, maintain and develop valued relationships and terminate low-value relationships. Market exchanges occur because all parties involved expect to benefit from the exchange. As the net value expected or received increases, the motivation to engage in commerce and sustain an exchange process becomes stronger (Ulaga and Eggert, 2006). Many scholars have observed that the governance of interorganizational exchanges, which are typically repeated exchanges in social relationships, involve more than formal contracts. Increasingly customized contracts cause managers to choose relational governance to increase the probability of continuance, and thereby further safeguard specific investments from premature and costly termination (Poppo and Zenger, 2002). Governance emerges from the values and agreed processes in social relationships that may minimize transaction costs compared to formal contracts (Heide and John, 1992). These governance mechanisms affect manufacturers' ability to flexibly adapt to partnership uncertainty (Wathne and Heide, 2004).

Effective supplier management depends on long-term cooperative relationships with a low number of suppliers who can supply high-quality products or services (Kaynak, 2003). To achieve high levels of quality in a supply chain, it is necessary to develop stable and lasting relationships that enable suppliers to make the investments required for satisfying customers' needs (Cannon *et al.*, 2010). A competitive approach to manufacturing is to coordinate and effectively manage supply chain relationships with suppliers. Relational governance is a central mechanism through which normative behaviors are tried and tested, facilitating necessary adaptations to address unexpected problems and conflicts. Relational governance refers to the process of maintaining ongoing interfirm relationships, including role specification, planning, adjustment processes, monitoring procedures and incentive systems (Heide, 1994). Interfirm learning between manufacturers and suppliers can improve schedule planning and product development in supply chain relationships. Consumer orientation is not only a set of processes but also a culture that stresses the consumer as the center of strategic planning and execution, and is crucial to creating superior value for an organization (Steinman *et al.*, 2000). Consumers are likely to respond to increases in consumer value through customer orientation by purchasing more. Consumer-oriented behaviors are particularly effective in creating consumer value when they help satisfy consumers' primary needs (Homburg *et al.*, 2011). Increasing consumer orientation requires shifting resources from consumer acquisition to consumer retention, and does not necessarily improve performance (Reinartz *et al.*, 2005). Management innovation, a systematic change in the management model implemented by absorbing existing management practices from the external firms to address rapidly changing environments and alter internal management approaches, may be an effective method of presenting the value of dynamic capabilities (Teece, 2007). Therefore, customer-oriented manufacturers can design business processes that are strongly oriented to improve suppliers' understanding of consumers. Dynamic capabilities of manufacturers may facilitate the progress of introducing and implementing feasible management practices. Innovation in manufacturing management can enhance the knowledge on manufacturer–supplier relationships. Consumer orientation and management innovation are crucial, but they are not directly associated with relational governance.

We recognize the value of relational governance, but we believe in the importance of addressing proximate forces and mechanisms that directly influence the formation of relationship value between manufacturers and suppliers in the institutional contexts of firms. Examining appropriate governance mechanisms has helped to increase relationship quality, develop interfirm learning and create relationship value. The main purpose of this study was to integrate the methods and concepts of relational governance, to form an effective model for explaining the relationship quality, interfirm learning and relationship value between manufacturers and suppliers. Specifically, this study clarified the importance of relational governance in the contribution of relationship quality and interfirm learning to relationship value by demonstrating its mediating role. This study revealed that consumer orientation and management innovation affect relationship value through relational governance, relationship quality and interfirm learning. The results of this study are particularly relevant to manufacturers that transact or plan to transact with suppliers in a business-to-business setting.

The remainder of this paper is organized as follows: the next section presents a summary of the theory and hypotheses. The methods section details the methods and procedures, and an analysis of the theoretical results is provided in the results section. The paper then presents a discussion of the theoretical results and managerial implications, and describes the limitations of this study and opportunities for future research.

Theory and hypotheses

Theory

The roles of customers and firms are in continuous flux as technological advances and changing managerial mindsets facilitate unorthodox and innovative method of integrating resources for value creation (Saarijärvi *et al.*, 2013). Relationship value refers to the perceived net worth of tangible benefits that can be obtained over the life of the relationship (Hogan, 2001). Wilson and Jantrania (1995) developed a three-dimensional categorization of relationship value, comprising economic, strategic and behavioral value, to examine the value creation in industrial buyer–supplier relationships. Tzokas and Saren (1999) contributed to this framework to "bring into the picture the costs and benefits associated with the relationship itself as determinants of the overall value perceived by the consumer". Lapierre (2000) identified 13 drivers of relationship value and grouped them into three benefit dimensions (product, service and relationship benefits) and two sacrifice dimensions (price and relationship costs). Data collection in the Lapierre study was restricted to business-to-business service, and the findings cannot be generalized to industrial buyer–seller relationships. Walter *et al.* (2003) suggested four main dimensions of value creation in a buyer–seller relationship, namely, "cost function," "quality function," "volume function" and "safeguard function". Ulaga and Eggert (2006) argued that relationship value appears to be an adequate condition for the intention to expand business with a supplier. Sanchez *et al.* (2010) indicated that relationship value can be improved by a series of direct and indirect functions in buyer–seller relationships.

Supply management concerns the flow of goods and services through an organization to increase competitiveness (Cousins and Spekman, 2003). A firm's competitiveness and ability to create unique value through effective resource utilization are connected. Changes in the interplay of various mechanisms over time result in a dynamic perspective on the development of governance mechanisms in interfirm relationships. Interfirm relationships are intrinsically unstable because the costs and benefits of a relationship can change for the parties over time (Caniëls *et al.*, 2012). Initially, the benefits of cooperation outweigh the costs. However, as the cooperation continues, circumstances can cause the costs to outweigh the benefits for one of the parties, whereas the other party might continue to gain from the relationship. This situation can induce opportunistic behavior from one party. Several governance mechanisms can be used to safeguard against this opportunistic behavior. Literature on governance exchange has explored this socioeconomic interaction by applying the concept of the transactional or relational continuum (Paulin *et al.*, 1997). The continuum is based on the combined use of two dominant theoretical approaches, namely, transactional cost economics (TCE) (Williamson, 1985) and relational contracting norms or the relational exchange theory (Macneil, 1980). In exchange governance terms, the poles of the continuum can also refer to contractual and relational governance (Ferguson *et al.*, 2005). As such, research on biotechnology and pharmaceutical industries shows a transactional perspective that focuses on the contractual mechanisms for coordinating interfirm activities, and a relational perspective that focuses on the mechanisms for information flows and mutual adjustment (Powell, 1998). Therefore, any interfirm exchange can be classified along a continuum ranging from a highly transactional, discrete, short-term and price-focused exchange to a multidimensional, cooperative and long-lasting relational exchange (Macneil, 2000). Barthon and Jepsen (1997) indicated that TCE and relational exchange theory explain the shift from market to nonmarket governance. TCE identifies and explains governance through transactional properties, whereas relational theory explains governance through relational properties. These transactional and relational properties can characterize numerous governance stages, from the beginning of nonmarket conditions to more relational-oriented TCE-based governance, followed by increasingly relationship-based governance stages. Yu *et al.* (2006) addressed how to design governance mechanisms to encourage local suppliers to make transaction-specific investments in foreign manufacturing firms. Supplier transaction-specific investments can increase the efficiency of production for foreign manufacturing firms operating in a host country. However, inducing suppliers to make specialized investments can be difficult because of the numerous hazards associated with such investments. Both formal governance and relational governance mechanisms were found to affect supplier tendencies to make specialized investments. Firms have traditionally added value by maintaining and developing internal competencies; however, managers now add value to their companies by designing and managing collaborative partnerships (Prahalad and Ramaswamy, 2000). Relational governance assumes a shared set of norms and values between exchange partners (Wang *et al.*, 2008).

Hypotheses

The success of a buyer–supplier relationship depends on the quality of products and services that facilitate the operations of partner firms in satisfying end-customer needs (Yang *et al.*, 2009). Relationship quality refers to the degree to which buyers are satisfied with the overall relationship as manifested in product quality, service quality and price paid for value received, and the degree to which the relationship functions as a partnership (Huntley, 2006). As commitment and satisfaction grow, the bonds of the relationship increase the partners' perceptions of value. Ryssel *et al.* (2004) found that trust and commitment are both positively related to both direct and indirect values. These elements of relationship quality affect both short-term performance-driven value and long-term value in innovation, access and market development actions. Palmatier (2008) found that relationship quality is positively related to perceptions of customer value. Ulaga and Eggert (2006) indicated that when the goal is to increase business with existing supplier managers, the focus should be on relationship value. Based on these analyses, this study proposed the following hypothesis:

H1. Relationship quality is positively related to relationship value.

Developing long-term, stable relationships with learning partners leads to information sharing that benefits both partners. Such partnerships provide access to more information sources, enable the development of mechanisms that facilitate the sharing of information, and provide alternative perspectives on critical information that could lead to generative learning (Slater and Narver, 1995). To ensure survival and growth, businesses that are not able to develop a knowledge base on their own must often resort to obtaining knowledge resources from other organizations (Oxley and Sampson, 2004). Interfirm collaboration, which creates conditions for firms to access and share each other's knowledge-based resources, is considered a particularly effective means of interfirm learning (Muthusamy and White, 2005). Interfirm learning refers to identifying the procedures, roles and rules to assist interorganization operation (Lui, 2009). If learning occurs asymmetrically in a relationship, the firm that is out-learning its partner may become more powerful as its partner adds less value to the relationship, with value being based on useful knowledge (Inkpen and Beamish, 1997). Hammervoll (2009) indicated that interfirm learning generates mutual understanding between partner organizations, facilitating appropriate joint problem-solving arrangements. For interfirm learning to occur, collaborating partners need to behave cooperatively toward each other to allow knowledge to flow between organizational boundaries. Such cooperative behavior cannot be taken for granted because knowledge flowing to and from a collaborating partner involves not only potential advantages but also considerable risk (Dussauge *et al.*, 2000); collaborating partners may "use the alliance to learn the other's business or technological secrets" (Muthusamy and White, 2005). On the basis of these analyses, this study proposed the following hypothesis:

H2. Interfirm learning is positively related to relationship value.

Partnerships and alliances are strategic relationships between independent firms that share compatible goals, interests and resources and also achieve a high level of interdependence in obtaining mutual benefits in the context of uncertain outcomes (Arino, 2003). Gladstein (1984) indicated satisfaction, the main outcome of a working partnership, as the underlying logic of a composite measure, which is not only a close proxy for concepts such as perceived effectiveness but also predictive of future actions by partner firm managers. Poppo and Zenger (2002) indicated that relational exchange arrangements supported by trust are commonly perceived as substitutes for complex contracts in interorganizational exchanges. They verified that formal contracts and relational governance function as complements. However, many argue that formal contracts actually undermine trust and therefore encourage the opportunistic behavior they are designed to discourage. Mysen *et al.* (2012) emphasized the importance of norms, attitudes and perceptions in securing high-quality, continuing relationships. We suggest that firms facilitate relational governance to strengthen the quality of their relationships. On the basis of these analyses, the present study proposed the following hypothesis:

H3. Relational governance is positively related to relationship quality.

Yu *et al.* (2006) found that both formal governance and relational governance mechanisms affect supplier tendencies to specialize investments. Cooperative partners may use various governance mechanisms to protect themselves against various exchange hazards. Rousseau *et al.* (1998) indicated that increasing interdependence is likely to motivate parties to move toward relational governance mechanisms, subsequently stimulating interfirm learning activities. By motivating the manufacturer to transfer knowledge to the supplier, the manufacturer's collaboration facilitates supplier learning and consequent value creation (Joshi and Campbell, 2003). Liu *et al.* (2009) stated that both firms and suppliers should mutually adapt to processes, standards and technologies to share risk and ensure payoffs. Relationships that involve close interpartner collaboration help firms learn, absorb and internalize the tacit knowledge and skills possessed by their partners (Lei, 1997). Interfirm learning is a function of the form and strength of an organization's interdependence from its learning partners (Slater and Narver, 1995), as well as its openness, that is, its willingness to share knowledge and to interact closely with a partner (Aadne *et al.*, 1996). Dyer (1997) indicated that cooperative partners unfamiliar with one another incur additional governance set-up costs in the form of a legal contract. Both parties may monitor the opportunistic behaviors of the other, and may not be willing to work to create value. Knowledge accumulation based on relational exchange includes collaborative supplier relationships and interfirm learning (Kähkönen and Lintukangas, 2012). We propose that manufacturers facilitate relational governance to enhance interfirm learning. On the basis of these analyses, this study proposed the following hypothesis:

H4. Relational governance is positively related to interfirm learning.

Consumer orientation refers to the beliefs that put consumers' interest first, while not excluding those of other stakeholders, to develop a long-term profitable enterprise (Deshpandé *et al.*, 1993). Because consumer expectations are dynamic (Shepetuk, 1991), organizations must assess them regularly and adjust their operations accordingly (Takeuchi and Quelch, 1983). Hence, the more attention a company pays to researching its consumer base to identify consumer needs, the more rewarding the exchange transaction in the supply chain will be for that company (Carson *et al.*, 1998). Adopting consumer-oriented behaviors requires substantial resources and complexity costs arising from customizing products and processes to meet consumer needs (Niraj *et al.*, 2001).Walter and Ritter (2003) suggested that, because consumer-oriented adaptations represent the supplier's increased risk and interest in solving consumer problems, consumer orientation may initiate and sustain a trusting and committed relationship between the manufacturer and supplier. Wathne and Heide (2004) considered the ability of a manufacturer to satisfy the continuously changing needs of retailers. The manufacturer must consider possible constraints throughout the supply chain that may affect its ability to meet customer needs. Based on an assessment of potential problems, the manufacturer can deploy relational governance mechanisms. The supplier can enable manufacturer adaptability by learning the requisite new technologies and procedures that facilitate manufacturer responsiveness to consumer orientation. Increasing consumer orientation is a resource-intensive endeavor (Kumar *et al.*, 2008). In particular, costs arise from the service time and added complexity for the service organization. Therefore, to manage and coordinate the activities between the manufacturer and supplier effectively, manufacturers must understand their consumers, the complexities of consumer orientation and the effect of relational governance. To serve consumers more effectively, a stronger relationship with suppliers is necessary. On the basis of these analyses, this study proposed the following hypothesis:

H5. Consumer orientation is positively related to relational governance.

Management innovation can be defined as a difference in the form, quality or state of management activities in an organization, with changes that are a novel or unprecedented departure from the past (Hargrave and Van de Ven, 2006). Organizational context has a direct effect (positive or negative) on the ability of internal change agents to pursue core activities associated with management (Birkinshaw *et al.*, 2008). The innovating process can result in introducing new practices or programs that ultimately change organizational goals (Selznick, 1957). Adopting a specific type of innovation negatively affects organizational performance, but positive firm performance results from the combined effects of several types (Roberts and Amit, 2003). Damanpour *et al.* (2009) posited that the adoption of management innovation is risky, and the success of management innovation is not guaranteed. As Hamel (2006) argued, management innovation that helps to upgrade productivity, improve the quality of customer offerings, improve the efficiency of resource use, motivate organizations to develop steadily and healthily and establish entrepreneurial order has become the most crucial and sustainable source of competitive advantage for enterprises. Management innovations are indirectly related to the organization's basic work activity and mainly affect its management systems (Birkinshaw *et al.*, 2008). Increases in the level of management innovation between a manufacturer and its major supplier should lead to increased perceptions of relational governance in the manufacturer–supplier exchange relationship. On the basis of these analyses, this study proposed the following hypothesis:

H6. Management innovation is positively related to relational governance.

Methods

The measurements of latent variables

The question items for measuring latent variables are listed in Table I. The question items used to measure the manifest variables in this research are mostly positive

Latent variables		Measurements
Relationship value	V1	My firm receives greater benefit from the relationship with the strategic supplier compared with the investment in the relationship
		My firm should gain from the relationship with the strategic supplier
	V2	My firm expects the future benefits of the relationship with the strategic supplier to substantially outweigh the costs
	V3	
Relationship quality	V4	My firm believes that its strategic supplier can cooperate professionally
	V5	My firm's cooperation with its strategic supplier yields practical benefits
	V6	My firm's cooperation with its strategic supplier increases its purchasing and service efficiency
		The strategic supplier supports the firm service policy and fulfills commitments to consumers (e.g., quality, delivery time, specifications)
	V7	My firm's contract with its strategic supplier facilitates the management of its cooperative relationship
		My firm's continued cooperative relationship with its strategic supplier is compatible with its long-term interests
	V8	My firm continues to invest in an exchange system with its strategic supplier, promoting a cooperative relationship
	V9	
	V10	
Interfirm learning	V11	My firm and its strategic supplier analyze the factors influencing environmental changes
	V12	My firm and its strategic supplier discuss cooperation adjustments
	V13	My firm and its strategic supplier discuss appropriate workflows
Relational governance	V14	My firm describes the manner in which decisions and functions are assigned to the strategic supplier in a relationship
		My firm and its strategic supplier specify future contingencies and consequential rights and responsibilities
	V15	My firm and its strategic supplier alter designs to adapt the ongoing relationship to circumstances
		My firm and its strategic supplier design the measurement of performance
	V16	My firm rewards the strategic supplier based on its level of performance
	V17	
	V18	

(*continued*)

Table I.
Research variables and measurements

Latent variables		Measurements
Consumer orientation	V19	My firm anticipates and responds to the evolving needs and desires of consumers
	V20	My firm emphasizes evaluating formal and informal consumer complaints
	V21	My firm follows up with consumers to procure quality and service feedback
Management innovation	V22	My firm implements new or substantially altered strategic supply strategies
	V23	My firm uses advanced management techniques
	V24	My firm adjusts the strategic supply structure according to consumer needs
	V25	My firm reengineers the strategic supply process based on changes in the market environment

Table I.

statements. All items were assessed using a seven-point ordinal scale with responses ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Questionnaire pretest and revision

To prevent respondents from misunderstanding the questions, the questionnaire used positive statements and simple language to avoid jargon, leading questions and double-barreled questions. The preliminary questionnaire was discussed with relevant personnel from the top 2,000 Taiwanese manufacturers. Suitable purchasing managers were recommended by relevant personnel from the manufacturers to discuss the questionnaire. Finally, the questionnaire was revised to ensure that the wordings were simple and understandable. To determine whether manufacturers could adequately understand the questions, the revised questionnaire was tested on manufacturers and again revised according to the respondents' opinions before conducting the full survey.

Results

The data collected for this study were based on the membership list of the top 2,000 Taiwanese manufacturers. To simplify questionnaire completion and return, this study sent questionnaires to the manufacturers by mail, requesting them to assign the purchasing manager to provide the necessary information and answers according to the questionnaire contents. In total, 2,000 questionnaires were sent out, yielding 266 returned questionnaires from Taiwanese manufacturers including those dealing in chemicals, textiles, electronics, machinery, motor vehicles and home appliances. The returned questionnaires were encoded and filed. After removing incomplete responses, the actual number of valid questionnaires was 259. The respondents represented various major industries: computer and communication (22.3 per cent), industrial machinery (16.5 per cent), consumer product (13.2 per cent), automotive (10.2 per cent), electronic equipment (8.9 per cent), medical equipment (6.3 per cent), chemical (4.9 per cent), other (15.6 per cent) and not reported (2.1 per cent).

To investigate the possibility of nonresponse bias in the data, a test for statistically significant difference in the response of early and late phases of returned surveys was performed (Lessler and Kalsbeek, 1992). For each phase, the last surveys received were considered a representative of nonrespondents. Each survey sample was split into two groups based on early and late survey return times; *t*-tests were performed on the responses of the two groups. The *t*-tests yielded no statistically significant differences among the survey items tested. These results suggested that nonresponse bias did not significantly affect the study. All constructs (latent variables) for relational governance mechanisms in the manufacturer–supplier relationships had high reliability, with Cronbach's α exceeding 0.8 (Table II). The data reliability was generally acceptable.

Confirmatory factor analysis

The psychometric properties of the measures used in this research were assessed through confirmatory factor analysis, and three complex variables were removed, namely, Item 8, Item 21 and Item 23. The model fit used the estimates of Bentler's comparative fit index (CFI), goodness-of-fit index (GFI), GFI adjusted for degrees of freedom (AGFI), normed-fit index (NFI), non-normed-fit index (NNFI) and root mean square residual (RMR) listed in Table III. The results in Table III indicated a good fit to the data; the fit indices exceeded or approached 0.9, the estimated RMR was 0.0643 and AGFI exceeded 0.8.

The reliability of the measures was assessed using composite reliability and variance extracted estimates. The composite reliability of each construct exceeded 0.7 in this study, satisfying the minimally acceptable level. Fornell and Larcker (1981) suggested that variance extracted estimates should exceed 0.5. All indices exceeded 0.5 in this study (Table IV). Therefore, the constructs in this model performed fairly well. This study assesses validity by using the *t* values of the factor loadings. All indicator *t* values ranged from 8.009 to 19.219, indicating that all factor loadings were significant ($p <$ 0.01). This fact supported the convergent validity of all indicators that effectively measured the same construct (Anderson and Gerbing, 1988).

Path analysis

Based on the previous results, the theoretical model testing was conducted through path analysis by using SEM. The results are shown in Figure 1. CFI, GFI, NFI and NNFI exceeded or were close to 0.9, and AGFI exceeded 0.8. The research model achieved a

Table II.
Results of reliability analysis

Latent variables	Cronbach's α
Relationship value	0.812
Relationship quality	0.837
Interfirm learning	0.902
Relational governance	0.901
Consumer orientation	0.905
Management innovation	0.873

Table III.
Summary of measurement statistics

χ^2	df	χ^2/df	GFI	AGFI	RMR	NFI	NNFI	CFI
520.646	194	2.684	0.841	0.792	0.064	0.884	0.909	0.923

Latent variable and manifest variable	Standardized factor loadings	*t*-value	Composite reliability	Variance extracted estimates
Relationship value			0.821[a]	0.614
V1	0.884	17.359*	0.781[b]	
V2	0.876	17.116*	0.767	
V3	0.543	9.032*	0.295	
Relationship quality			0.893	0.589
V4	0.490	8.009*	0.240	
V5	0.692	12.248*	0.479	
V6	0.873	17.152*	0.762	
V7	0.843	16.241*	0.711	
V8	–	–	–	
V9	0.795	15.028*	0.632	
V10	0.842	16.418*	0.709	
Interfirm learning			0.828	0.618
V11	0.835	16.189*	0.697	
V12	0.664	11.721*	0.441	
V13	0.846	16.539*	0.716	
Relational governance			0.922	0.704
V14	0.887	17.801*	0.787	
V15	0.857	16.832*	0.734	
V16	0.853	16.720*	0.728	
V17	0.730	13.286*	0.533	
V18	0.860	16.971*	0.740	
Consumer orientation			0.875	0.779
V19	0.928	19.219*	0.861	
V20	0.834	16.169*	0.696	
V21	–	–	–	
Management innovation			0.834	0.628
V22	0.796	14.729*	0.634	
V23	–	–	–	
V24	0.880	17.039*	0.774	
V25	0.689	12.069*	0.475	

Notes: *Denotes a significant value ($p < 0.01$); [a]indicates the composite reliability; [b]indicates the square of factor loadings

Table IV. Results of reliability analysis and factor loading analysis

good fit. All path coefficients in the current model were statistically significant and as hypothesized.

Discussion

The research results showed that relationship quality has a direct influence on relationship value (*H1* is supported). To achieve a high level of value, the partners must engage in clear alignment and focus that derive from a high level of relationship development and relationship quality. Relationship quality enhances both cooperative and adaptive behaviors because a trusted partner in an exchange with strong reciprocity norms accepts risk by providing benefits, making investments or changing the terms of interaction without an immediate concession or formal guarantee of

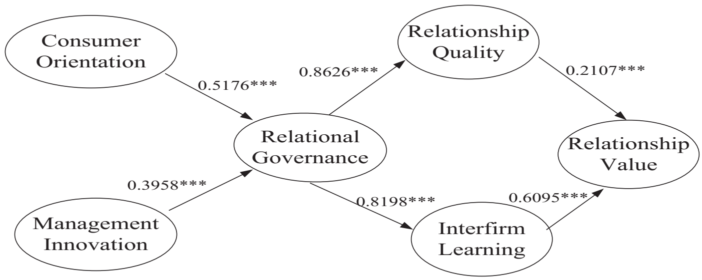

Figure 1.
Results

Notes: Path coefficients are statistically significant; *** denotes a significant value $p < 0.01$

repayment in the future; this is similar to the finding by Mysen *et al.* (2012). Interfirm learning has a direct influence on relationship value (*H2* is supported). We found that a high level of manufacturer interfirm learning with a major supplier enhances relationship value. The expected outcome is consistent with the finding by Andersen *et al.* (2009), suggesting that interfirm learning between manufacturers and suppliers may lead to the development of norms, heuristics and values that reflect industry equality, which may be even more enhanced compared with national business systems.

The research results also showed that relational governance directly and positively influence relationship quality and interfirm learning (*H3* and *H4* are supported). This shows that increased relational governance enhances relationship quality, interfirm learning and relationship value. The result showed that to strengthen the relationship quality, interfirm learning and relationship value between manufacturers and the major supplier, relational governance must be increased. Working with a small group of suppliers facilitates trust, shared norms, common behavioral patterns and behavioral interdependence (Tang and Rai, 2012). The impact of relational governance on relationship quality in industrial markets characterizes what typically emerges in industrial relationships. Mutuality, solidarity, long-term orientation, role integrity and flexibility directly influence the dimensions of relationship quality, which are trust, economic satisfaction, social satisfaction and commitment. The value creation of interfirm learning requires relational governance, which enables the sharing and interpreting of knowledge, and the integrating of that knowledge into relationship-specific structures; this is consistent with the findings by Kähkönen *et al.* (2013).

Consumer orientation and management innovation directly and positively influence relational governance (*H5* and *H6* supported). This result showed that to increase relational governance, strengthening customer orientation and management innovation is necessary. Consumer orientation was more strongly associated with relational governance development compared to management innovation. Modern organizational tendencies focus on the role of customers, emphasizing their integration into new service development processes. Implementing consumer orientation requires substantial time, and this applies to the identification of consumer requirements because gaining insights into consumer preferences is a lengthy process (Franke *et al.*, 2009). Such integration behaviors increase the efficiency of new service designs and enable greater commercial success. Management innovation development in manufacturing firms involves a network trigger, an opportunity to change the productive opportunity, the revelation of resources and a reconfiguration of the network, leading to an expanded productive opportunity and hence a platform for marketing new service capabilities. In this sense, a network is considered as an interconnected set of productive opportunities. It also draws attention to the importance of manufacturers' relational governance, and this is similar to the finding by Spring and Araujo (2013).

Managerial implications

This research considered Taiwanese manufacturers as the research object, and we investigated how the customer orientation and management innovation capabilities of manufacturers affect their relational governance to achieve superior relationship quality, interfirm learning and relationship value. This research presented evidence of the relationships among relational governance, interfirm learning, relationship quality and relationship value. The findings can help manufacturers to understand that relational governance mechanisms can directly affect the relationship quality and interfirm learning with suppliers, and relational governance mechanisms can indirectly affect the relationship value with suppliers. Therefore, using proper relational governance mechanisms can help realize the objectives of maximizing the relationship quality, interfirm learning and relationship value with suppliers. This study also examined the effects of consumer orientation and management innovation on relational governance on the basis of the characteristics of Taiwanese manufacturers and the theories from a literature review. There are several managerial implications from the study findings.

Manufacturers' cooperative and adaptive behaviors create value for suppliers because these manufacturers are more willing to adapt to the supplier's product changes, test new products and invest in reducing the supplier's costs, with the expectation that the supplier will reciprocate in the future. Moreover, partners involved in high-quality, committed relationships are more willing to disclose proprietary information, which enables suppliers to cross-sell additional products more effectively and properly price products, which, in turn, increases sales and profits for manufacturers.

Relational governance mechanisms that match the learning intentions of both partners involved must be designed to maximize the possible benefits of learning while minimizing the risks. Various methods, such as supplier associations, consulting groups and learning teams, can help to realize the development potential of suppliers. The findings of this study contribute specifically to management and organizational learning theory because, in the unique context of partnership, the ability to manage relationships by applying various mechanisms simultaneously results in increased learning. Thus, interfirm learning should be facilitated by using various governance mechanisms simultaneously. This is one of the first studies to demonstrate this finding by using empirical data in the context of partnership. Parties should be aware that the design and execution of an optimal mix governance type are essential for achieving common goals. Parties must be willing to evaluate, discuss and possibly revise the mix of mechanisms jointly and on a regular basis to adapt to changing circumstances during the course of a project.

To manage and coordinate the activities between actors in a supply chain effectively, manufacturers must understand their customers, the complexities introduced by uncertainty and the effect of relational governance mechanisms in various circumstances. In considering the importance of the relevance of the supplier's current knowledge in fostering relational governance, suppliers should ensure that they have the capability to apply the new technologies and work practices that may be required by the manufacturer. Management innovation includes implementing new or substantially altered corporate strategies, using management techniques that are more advanced, changing the organizational structure and implementing business process reengineering. The management innovation that a firm applies strongly depends on the environments it faces, as well as its targeted strategies. Accordingly, the dynamic transformation of management innovation becomes an essential theme for firms when choosing and determining the appropriate relational governance in response to the environment and situation. Firms must then define the strategic objectives of increasingly competitive products, services and business models, and implement optimal designs of strategy-driven management innovation to accomplish these objectives.

Limitations

Although this study has several limitations, we wish to draw attention to a point that we believe is of fundamental concern to the advancement of research on this topic.

This research surveyed the effects of the strategic characteristics of manufacturer–supplier relationships on the sustainability of relational governance. The sample of this empirical research comes from manufacturers in Taiwan. Although the characteristics of industry relationships are common, the relationship among relational governance, relationship quality, interfirm learning and relationship value may vary in service industry contexts.

The questionnaire of this research examined current relational governance and did not examine the development stage of the manufacturer–supplier partnership. However, alliance itself is a dynamic interactive process. At different times and stages, the degree to which the factors are significant might be vastly different. The suppliers might need different forms of management.

The sample of purchasing managers of manufacturing companies selected from the directory of an association of purchasing managers is not representative of the population of manufacturing companies.

Opportunities for future research

Future empirical research might explore whether manufacturers adapt different mechanisms of relational governance at different stages, and whether the benefits produced by different mechanisms differ. Future research should investigate the impact of specific combinations of governance mechanisms, preferably in a dynamic context. Future research can focus on service industries and compare differences in results. Future research can use a randomized sample from other sources such as large industry databases. Replication of this study in other countries would also validate our results. Finally, conducting similar studies in other cultural contexts and economies at various levels of sophistication to determine if these relationships are similar in different settings might yield compelling results from either a cultural or an economic perspective.

References

Aadne, J., von Krogh, G. and Roos, J. (1996), "Representationism: the traditional approach to cooperative strategies", in von Krogh, G. and Roos, J. (Eds), *Managing Knowledge: Perspectives on Cooperation and Competition*, Sage Publications, London, pp. 9-31.

Andersen, P.H., Christensen, P.R. and Damgaard, T. (2009), "Diverging expectations in buy-seller relationships: institutional contexts and relationships norms", *Industrial Marketing Management*, Vol. 38 No. 7, pp. 814-824.

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.

Arino, A. (2003), "Measures of strategic alliance performance: an analysis of construct validity", *Journal of International Business Studies*, Vol. 34 No. 1, pp. 66-79.

Barthon, P. and Jepsen, B. (1997), "How time affects transaction costs and relational governance in the distribution channel: a review and research propositions", *Management Research News*, Vol. 20 No. 6, pp. 14-29.

Birkinshaw, J., Hamel, G. and Mol, M.J. (2008), "Management Innovation", *Academy of Management Review*, Vol. 33 No. 4, pp. 825-845.

Caniëls, M.C.J., Gelderman, C.J. and Vermeulen, N.P. (2012), "The interplay of governance mechanisms in complex procurement projects", *Journal of Purchasing & Supply Management*, Vol. 18 No. 2, pp. 113-121.

Cannon, J.P., Doney, P.M., Mullen, M.R. and Petersen, K.J. (2010), "Building long-term orientation in buyer-supplier relationships: the moderating role of culture", *Journal of Operations Management*, Vol. 28 No. 6, pp. 506-510.

Carson, D., Gilmore, A. and Maclaran, P. (1998), "Customer or profit focus: an alternative perspective", *Journal of Marketing Practice: Applied Marketing Science*, Vol. 4 No. 1, pp. 26-39.

Cousins, P.D. and Spekman, R. (2003), "Strategic supply and the management of inter- and intra-organizational relationships", *Journal of Purchasing & Supply Management*, Vol. 9 No. 1, pp. 19-29.

Damanpour, F., Walker, R.M. and Avellaneda, C.N. (2009), "Combinative effects of innovation types and organizational performance: a longitudinal study of service organizations", *Journal of Management Studies*, Vol. 46 No. 4, pp. 650-675.

Deshpandé, R., Farley, J.U. and Webster, F.E. (1993), "Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrat analysis", *Journal of Marketing*, Vol. 57 No. 1, pp. 23-37.

Dussauge, P., Garrette, B. and Mitchel, W. (2000), "Learning from competing partners: outcomes and durations of scale and link alliances in Europe, North America and Asia", *Strategic Management Journal*, Vol. 21 No. 2, pp. 99-126.

Dyer, J.H. (1997), "Effective inter-firm collaboration: how firms minimize transaction costs and maximize transaction value", *Strategic Management Journal*, Vol. 18 No. 7, pp. 535-556.

Ferguson, R.J., Paulin, M., Moslein, K. and Bergeron, J. (2005), "Contractual governance, relational governance and the performance of inter-firm service exchanges: the influence of boundary-spanner closeness", *Journal of the Academy of Marketing Science*, Vol. 32 No. 2, pp. 217-234.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Franke, N., Keinz, P. and Steger, C.J. (2009), "Testing the value of customization: when do customers really prefer products tailored to their preferences?", *Journal of Marketing*, Vol. 73 No. 5, pp. 103-121.

Gladstein, D.L. (1984), "Groups in context: a model of task group effectiveness", *Administrative Science Quarterly*, Vol. 29 No. 4, pp. 499-517.

Hamel, G. (2006), "The why, what and how of management innovation", *Harvard Business Review*, Vol. 84 No. 2, pp. 72-84.

Hammervoll, T. (2009), "Value-creation logic in supply chain relationships", *Journal of Business-to-Business Marketing*, Vol. 16 No. 3, pp. 220-241.

Hammervoll, T. and Toften, K. (2010), "Value-creation initiatives in buyer-seller relationships", *European Business Review*, Vol. 22 No. 5, pp. 539-555.

Hargrave, T. and Van de Ven, A. (2006), "A collective action model of institutional innovation", *Academy of Management Review*, Vol. 31 No. 4, pp. 864-888.

Heide, J.B. (1994), "Interorganizational governance in marketing channels", *Journal of Marketing*, Vol. 58 No. 1, pp. 71-85.

Heide, J.B. and John, G. (1992), "Do norms really matter?", *Journal of Marketing*, Vol. 56 No. 2, pp. 32-44.

Hogan, J.E. (2001), "Expected relationship value: a construct, a methodology for measurement, and a modeling technique", *Industrial Marketing Management*, Vol. 30 No. 4, pp. 339-351.

Homburg, C., Muller, M. and Klarmann, M. (2011), "When should the customer really be king? on the optimum level of salesperson customer orientation in sales encounters", *Journal of Marketing*, Vol. 75 No. 2, pp. 55-74.

Huntley, J.K. (2006), "Conceptualization and measurement of relationship quality: linking relationship quality to actual sales and recommendation intention", *Industrial Marketing Management*, Vol. 35 No. 6, pp. 703-714.

Inkpen, A.C. and Beamish, P.W. (1997), "Knowledge, bargaining power, and the instability of international joint ventures", *Academy of Management Review*, Vol. 22 No. 1, pp. 177-202.

Joshi, A.W. and Campbell, A.J. (2003), "Effect of environmental dynamism on relational governance in manufacturer-supplier relationships: a contingency framework and an empirical test", *Journal of the Academy of Marketing Science*, Vol. 31 No. 2, pp. 176-188.

Kaynak, H. (2003), "The relationship between total quality management practices and their effects on firm performance", *Journal of Operations Management*, Vol. 21 No. 4, pp. 405-435.

Kähkönen, A.K. and Lintukangas, K. (2012), "The underlying potential of supply management in value creation", *Journal of Purchasing & Supply Management*, Vol. 18 No. 2, pp. 68-75.

Kähkönen, M., Partanen, J. and Möller, K. (2013), "Making a profit with R&D services: the critical role of relational capital", *Industrial Marketing Management*, Vol. 42 No. 1, pp. 71-81.

Kumar, V., Venkatesan, R. and Reinartz, W. (2008), "Performance implications of adopting a customer-focused sales campaign", *Journal of Marketing*, Vol. 72 No. 5, pp. 50-68.

Lapierre, J. (2000), "Customer-perceived value in industrial contexts", *Journal of Business and Industrial Marketing*, Vol. 15 Nos 2/3, pp. 122-140.

Lei, D.T. (1997), "Competence building, technology fusion and competitive advantage: the key roles of organizational learning and strategic alliances", *International Journal of Technology Management*, Vol. 14 Nos 2/3/4, pp. 208-237.

Lessler, J.T. and Kalsbeek, W.D. (1992), *Nonsampling Error in Surveys*, Wiley, New York, NY.

Lindgreen, A. and Wynstra, F. (2005), "Value in business markets: what do we know? where are we going?", *Industrial Marketing Management*, Vol. 34 No. 7, pp. 732-748.

Liu, Y., Luo, Y. and Liu, T. (2009), "Governing buyer-supplier relationships through transactional and relational mechanisms: evidence from China", *Journal of Operations Management*, Vol. 27 No. 4, pp. 294-309.

Lui, S.S. (2009), "The roles of competence trust, formal contract, and time horizon in inter-organizational learning", *Organization Studies*, Vol. 30 No. 4, pp. 333-353.

Macneil, I.R. (1980), *The New Social Contract: An Inquiry into Modern Contractual Relations*, Yale University Press, New Haven, CT.

Macneil, I.R. (2000), "Relational contract theory: challenges and queries", *Northwestern University Law Review*, Vol. 94 No. 3, pp. 877-907.

Muthusamy, S.K. and White, M.A. (2005), "Learning and knowledge transfer in strategic alliances: a social exchange view", *Organization Studies*, Vol. 26 No. 3, pp. 415-441.

Mysen, T., Svensson, G. and Hogevold, N. (2012), "Relationship quality-relationship value and power balance in business relationships: descriptives and propositions", *Journal of Business-to-Business Marketing*, Vol. 19 No. 3, pp. 248-285.

Niraj, R., Gupta, M. and Narasimhan, C. (2001), "Customer profitability in a supply chain", *Journal of Marketing*, Vol. 65 No. 4, pp. 1-16.

Oxley, J.E. and Sampson, R.C. (2004), "The scope and governance of international R&D alliances", *Strategic Management Journal*, Vol. 25 Nos 8/9, pp. 723-749.

Palmatier, R.W. (2008), "Intrfirm relational drivers of customer value", *Journal of Marketing*, Vol. 72 No. 3, pp. 76-89.

Paulin, M., Perrien, J. and Ferguson, R.J. (1997), "Relational contract norms and the effectiveness of commercial banking relationships", *International Journal of Service Industry Management*, Vol. 8 No. 5, pp. 435-452.

Poppo, L. and Zenger, T. (2002), "Do formal contracts and relational governance function as substitutes or complements?", *Strategic Management Journal*, Vol. 23 No. 8, pp. 707-725.

Powell, W.W. (1998), "Learning from collaboration: knowledge and networks in the biotechnology and pharmaceutical industries", *CA Management Review*, Vol. 40 No. 3, pp. 228-240.

Prahalad, C.K. and Ramaswamy, V. (2000), "Co-opting customer competence", *Harvard Business Review*, Vol. 78 No. 1, pp. 79-87.

Reinartz, W., Thomas, J.S. and Kumar, V. (2005), "Balancing acquisition and retention resources to maximize customer profitability", *Journal of Marketing*, Vol. 69 No. 1, pp. 63-79.

Roberts, P.W. and Amit, R. (2003), "The dynamics of innovative activity and competitive advantage: the case of Australian retail banking, 1981 to 1995", *Organization Science*, Vol. 14 No. 2, pp. 107-122.

Rousseau, D.M., Sitkin, S.B., Burt, R.S. and Camerer, C. (1998), "Not so different after all: a cross-discipline view of trust", *Academy of Management Review*, Vol. 23 No. 3, pp. 393-404.

Ryssel, R., Ritte, T. and Gemunden, H.G. (2004), "The impact of information technology development on trust, commitment and value creation in business relationships", *Journal of Business & Industrial Marketing*, Vol. 19 No. 3, pp. 197-207.

Saarijärvi, H., Kannan, P.K. and Kuusela, H. (2013), "Value co-creation: theoretical approaches and practical implications", *European Business Review*, Vol. 25 No. 1, pp. 6-19.

Sanchez, J.A.L., Vijande, M.L.S. and Gutierrez, J.A.T. (2010), "The impact of relational variables on value creation in buyer-seller business relationships", *Journal of Business-to-Business Marketing*, Vol. 17 No. 1, pp. 62-94.

Selznick, P. (1957), *Leadership in Administration*, Harper & Row, New York, NY.

Shepetuk, A.J. (1991), "Is product development process a tortoise or a hare?", *Management Review*, Vol. 80 No. 3, pp. 25-27.

Slater, S.F. and Narver, J.C. (1995), "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59 No. 2, pp. 63-74.

Spring, M. and Araujo, L. (2013), "Beyond the service factory: service innovation in manufacturing supply networks", *Industrial Marketing Management*, Vol. 42 No. 1, pp. 59-70.

Steinman, C., Deshpande, R. and Farley, J.U. (2000), "Beyond market orientation: when customers and suppliers disagree", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 109-119.

Takeuchi, H. and Quelch, J.A. (1983), "Quality is more than making a good product", *Harvard Business Review*, Vol. 61 No. 4, pp. 139-145.

Tang, X. and Rai, A. (2012), "The moderating effects of supplier portfolio characteristics on the competitive performance impacts of supplier-facing process capabilities", *Journal of Operations Management*, Vol. 30 Nos 1/2, pp. 85-98.

Teece, D.J. (2007), "Explicating dynamic capabilities: the nature and microfoundations of sustainable enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-1350.

Tzokas, N. and Saren, M. (1999), "Value transformation in relationship marketing", *Australasian Marketing Journal*, Vol. 7 No. 1, pp. 52-62.

Ulaga, W. and Eggert, A. (2006), "Relationship value and relationship quality: broadening the nomological network of business-to-business relationships", *European Journal of Marketing*, Vol. 40 Nos 3/4, pp. 311-326.

Walter, A., Muller, T.A., Helfert, G. and Ritter, T. (2003), "Functions of industrial supplier relationships and their impact on relationship quality", *Industrial Marketing Management*, Vol. 32 No. 2, pp. 159-169.

Walter, A. and Ritter, T. (2003), "The influence of adaptations, trust, and commitment on value-creating functions of customer relationships", *Journal of Business & Industrial Marketing*, Vol. 184 No. 5, pp. 353-365.

Wang, Q., Xu, J. and Weitz, B. (2008), "Creativity in buyer–seller relationships: the role of governance", *International Journal of Research in Marketing*, Vol. 25 No. 2, pp. 109-118.

Wathne, K.H. and Heide, J.B. (2004), "Relationship governance in a supply chain network", *Journal of Marketing*, Vol. 68 No. 1, pp. 73-89.

Williamson, O.E. (1985), *The Economic Institutions of Capitalism*, The Free Press, New York, NY.

Wilson, D.T. and Jantrania, S. (1995), "Understanding the value of a relationship", *Asia-Australia Marketing Journal*, Vol. 2 No. 1, pp. 55-66.

Yang, J., Wong, C.W.Y., Lai, K. and Ntoko, A.N. (2009), "The antecedents of dyadic quality performance and its effect on buyer-supplier relationship improvement", *International Journal of Production Economics*, Vol. 120 No. 1, pp. 243-251.

Yeung, A.C.L. (2008), "Strategic supply management, quality initiatives, and organizational performance", *Journal of Operations Management*, Vol. 26 No. 4, pp. 490-502.

Yu, C.M.J., Liao, T.J. and Lin, Z.D. (2006), "Formal governance mechanisms, relational governance mechanisms, and transaction-specific investments in supplier-manufacturer relationships", *Industrial Marketing Management*, Vol. 35 No. 2, pp. 128-139.

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