A review of buyer-supplier relationship typologies: progress, problems, and future directions

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Abstract

Purpose – The purpose of this study is to review the existing typologies of buyer-supplier relationships (BSRs) in the literature, to critically assess their dimensions and underlying assumptions, and to propose a more complete BSR typology and future directions for BSR typology research.

Design/methodology/approach – This study takes a conceptual approach in highlighting the limitations of existing BSR typologies and synthesizing their key typology-defining variables when proposing an alternative BSR typology.

Findings – The proposed BSR typology is based on alternative behavioral assumptions: bounded rationality and choice-determinism, and uses relationalism, supplier dependence and buyer dependence as the typology-defining variables. This BSR typology captures four prominent BSR types in the extant literature (i.e. market/discrete relationship, captive-buyer/supplier-dominant relationship, captive-supplier/buyer-dominant relationship and strategic/bilateral partnership) and four new BSR types developed in this study (i.e. supplier-led collaboration, buyer-led collaboration, competitive/win–lose partnership, and free will/voluntary collaboration).

Research limitations/implications – The performance implications of the new BSR types have yet to be empirically tested; however, empirical approaches for future research are discussed.

Originality/value – As BSR typology research has been conducted over the years, a thorough review and systematic assessment of the extant research in terms of fundamental assumptions, typology-defining variables, overall progress and limitations becomes an important reflective task in guiding future research efforts toward the collective advancement in this line of inquiry. Departing from the existing literature, this study also uses more realistic BSR assumptions and a more complete set of typology-defining variables in developing an alternative BSR typology, arguably more complete and more theoretically sound than the previous BSR typologies in the literature.

Keywords Performance, Dependence, Supply chains, Buyer-supplier relationships, Relationalism, Typology

Paper type Conceptual paper

Introduction

Firms in today's business landscape continue to outsource a significant portion of primary and support activities to external vendors. Outsourcing allows firms to become less vertically integrated and more focused on their core competencies, thus enhancing their operational efficiency while preserving their organizational flexibility (Conner and Prahalad, 1996). However, outsourcing has heightened the importance of effectively managing buyer-supplier relationships (BSRs) as various critical activities of the firms reside outside their traditional organizational boundary and are executed by external suppliers (Saeed *et al.*, 2005). Therefore, many firms have taken strategic initiatives aimed at developing long-term, cooperative relationships with suppliers (e.g. Chang *et al.*, 2010; Gelderman and van Weele, 2005).

Over the years, researchers have developed various classification systems or typologies of BSRs, such as discrete versus relational exchanges (Macneil, 1980), arm's length versus close cooperative relationships (Helper and Sako, 1995), buyer-supplier power classifications (Cox, 2001), transaction-relational continuum (Palmer, 2007) and knowledge integration BSR taxonomy (Revilla and Villena, 2012), to name a few. BSR typologies help practicing managers characterize exchange relationships in their supply

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chains and provide managers with ways of understanding the complexity of emerging BSR patterns (Tangpong *et al.*, 2008). BSR typologies also improve the understanding of the outcomes of different BSR approaches, thus providing the managers with analytical tools for their BSR assessment, supplier segmentation and purchasing portfolio management, as well as managing exchange relationships in general (Tong *et al.*, 2008).

The purpose of this paper is to:

- provide an extensive review of the current stage of the BSR typology literature;
- assess the collective progress and highlight the problems in the BSR typology literature; and
- propose a more complete BSR typology and suggest future directions for BSR typology research.

In the next section, we review the BSR typology literature, assess its progress and identify the potential problems in the BSR typology literature. We then propose an improved BSR typology based on the existing literature and conclude this paper with the discussion of the possible avenues for future BSR typology research.

BSR typologies, progress and problems

BSR typologies are typically based on a few key attributes or dimensions that can characterize the exchange relationships between buyers and suppliers. The common attributes that have been used by previous BSR typology research can be divided into two major categories: relational attributes and power-dependence attributes (Tangpong *et al.*, 2008). Relational attributes used in previous BSR typologies are in various forms such as cooperative efforts, relational norms, trust, commitment and integration, whereas power-dependence attributes used in previous typologies include power-, dependence- and transaction-specific investment. Relational and power-dependence attributes are arguably important to the functioning of BSRs as they can influence dynamics critical to the performance of both buyer and supplier firms such as control, cooperation, power exploitation and opportunism prevention (e.g. Provan and Skinner, 1989; Wang and Wei, 2007; Wathne and Heide, 2000). As such, the development of extant BSR typologies tends to be based on these important attributes. However, based on our review of existing BSR typologies, while power-dependence is a reality facing most firms in their inter-firm transactions and has been a key issue in the channel marketing and industry value chain, the number of BSR typologies based on power-dependence are far fewer than those driven by relational attributes, which we review next.

BSR typologies based on relational attributes

Macneil (1980) is arguably the pioneer of relational-based BSR typologies. In his seminal work "The New Social Contract", he articulated the distinction between discrete transactions and relational exchange relationships in ways that exchange parties in discrete transactions have simple roles of buyers versus sellers, impose the terms of individual transactions and seek payoffs in each transaction; however, those in relational exchanges have established high relational norms whereby long-term cooperative relationships, complex roles beyond buyers versus sellers and continual and mutual payoffs in their relationship are espoused. Building on Macneil's work, Kaufmann and Stern (1988) operationalized relational norms and empirically examined the disputes in relational exchanges and discrete transactions. They found that even during disputes, parties in relational exchanges were less likely to perceive the other's behaviors as being unfair, thus limiting hostility after dispute resolutions.

Since the introduction of Macneil's discrete-relational BSR typology, other simple, two-polar BSR types have proliferated, an example of which is arm's length/adversarial relationships (low relational contents) versus close-cooperative/partnerial relationships (high relational contents) (e.g. Helper and Sako, 1995). Partnerial relationships have distinct benefits beyond adversarial relationships in terms of higher operational efficiency, more frequent information exchange and stronger commitment to the relationships, and suppliers in partnerial relationships tend to outperform those in adversarial relationships and are more likely to embrace just-in-time programs without an increase in costs. In the marketing literature, this two-polar BSR classification is referred to as transactional versus relational (e.g. Gronroos, 1995; Morgan and Hunt, 1994).

Subsequent research attempted to refine the two-polar BSR typologies by including the mid-level BSR types, such as "close but adversarial" BSR, in which buyers' switching behaviors are influenced by competitive factors along with transaction-specific investments (Mudambi and Helper, 1998), and "durable arm's length" BSR, in which managers align this BSR type with non-strategic but needed supplies while matching strategic partnerships with strategic inputs (Dyer *et al.*, 1998). Similarly, "sustained transactional" BSR, in which both buyer and supplier firms have little loyalty/commitment to each other, but are kept together due to the lack of choices, is placed in between the transactional-relational poles (Palmer, 2007). In addition, Bradach and Eccles (1989) classified BSRs on three governance mechanisms: price, authority and trust, and suggested that the governance choice is a function of specific exchange contexts.

Researchers further expanded BSR typologies, yielding a broader range of BSR types, capturing a variety of exchanges including discrete transactions, repeated transactions, long-term contracts, buyer-seller partnerships, joint ventures and strategic alliances, network organizations and vertical integration (Lambert *et al.*, 1996; Webster, 1992). Cannon and Perreault (1999) proposed BSR types based on different relationship connectors, labeled basic buying and selling, bare bones, contractual transaction, custom supply, cooperative systems, collaborative, mutually adaptive and customer is king. Others contend that BSR types can be condensed into fewer but more meaningful categories. For instance, Brodie, Coviello and their colleagues extensively examined contemporary marketing practices among consumer and business-to-business firms and identified five BSR types in the transactional–relational poles marketing spectrum: transaction marketing, database marketing, electronic marketing, interaction marketing and network marketing (e.g. Brodie *et al.*, 2008, 1997; Coviello *et al.*, 2002; Coviello and Brodie, 2001; Coviello *et al.*, 2001). Laing and Lian (2005) also developed a five-level BSR typology capturing elementary

relationships, interactive relationships, embedded relationships, partnering relationships and integration, while Donaldson and O'Toole's (2000) articulated four types of BSRs: discrete, dominant partner, recurrent and bilateral relationships. Lejeune and Yakova (2005) also proposed four types of relationships: communicative, coordinated, collaborative and coopetitive. Mollering (2003) argued that only three BSR types exist, based on trust, governance and performance:

1 traditional wary traders (low trust, formal governance and low performance);
2 controlled routine partners (high trust, formal governance and high performance); and
3 committed flexible partners (high trust, informal governance and high performance).

Similarly, in the context of business-to-business electronic marketplaces, Chelariu and Sangtani (2009) proposed three types of exchange relationships:

1 independent exchanges (arm's length relationships with low functional integration);
2 consortia (interimistic relationships with medium functional integration); and
3 private exchanges (relational relationships with high functional integration), which have different transactional characteristics such as product types, the number of exchange parties, efficiency focus and price elasticity.

Other BSR typologies based on relational attributes have incorporated non-relational dimensions such as technology (Kaufman *et al.*, 2000), logistic versus strategic content of BSRs (Masella and Rangone, 2000), supply importance (Svensson, 2004) and information technology pervasiveness and customization (Tong *et al.*, 2008). Finally, Revilla and Villena (2012) have extended this line of research by highlighting four types of knowledge integration in BSRs, based on joint sense meaning and joint decision-making: minimized integration, operational integration, strategic integration and balanced integration, and found that these four types were associated with varying performance levels in terms of efficiency and innovation. In short, BSR typologies based on relational attributes (summarized in Table I) generally seem to prescribe that different BSR types are suitable for different exchange circumstances.

BSR typologies based on power-dependence

Dwyer *et al.* (1987) proposed that the dynamics in a BSR where exchange partners are motivated to invest in the relationship and maintain a high-quality BSR were largely contingent on the degree to which they depend on the exchange relationship. Using the level of partners' dependence, Dwyer *et al.* proposed four basic types of BSRs: discrete exchanges, buyer's market, seller's market and bilateral relationships, and suggested that the BSR evolved from discrete exchanges to bilateral relationships as the degree of mutual dependence increased through four BSR developmental phases: awareness, exploration, expansion and commitment. Likewise, Heide (1994) proposed three categories of BSRs using the concepts of market, unilateral and bilateral governance mechanisms, and suggested that bilateral dependence increased BSR flexibility, while unilateral dependence had the opposite effect. Focusing on specific investments in BSRs, Bensaou (1999) developed a typology capturing four basic BSR types: market exchange, captive buyer, captive supplier and strategic partnership. However, he found that there was no significant performance difference among those four BSR types, prompting him to suggest that the match between the BSR type with specific exchange conditions holds the key to BSR performance.

In addition, Cox (2001) reframed the BSR typology dimensions using the concept of power, and thus proposed four power-based BSR types: independence, buyer dominance, supplier dominance and interdependence, suggesting that firms should exercise their power to increase their financial gains and should reposition themselves to maintain their power over exchange partners. Cox *et al.* (2004) further advanced the BSR typology by using the working approach (arm's length versus collaborative) and the power position in the BSR (buyer dominance, balanced power or supplier dominance) as the typology-defining dimensions. They suggested that the dominant party should use its power to attain higher financial returns, whereas the weaker party should use a cooperative working approach and comply with the dominant party's demands to sustain their relationship.

Dependence-based BSR typology research has also been developed from a purchasing portfolio management perspective in which supplies were categorized as non-critical items, leverage items, bottleneck items and strategic items based on supply risks and supply profit impact (e.g. Kraljic, 1983; Gelderman and van Weele, 2005). A key prescription of this BSR typology is that buyers should exploit their power for leverage items, form strategic partnerships with suppliers for strategic items, develop efficient processing exchanges for non-critical items and find alternative supply sources or establish supplier control for bottleneck items.

Recent research by Tangpong *et al.* (2008) attempted to integrate the dependence-based and relational content-based BSR typology approaches by using both relational contents and power-dependence in developing their typology. For simplicity, they used relationalism and supplier dependence as the two typology-defining dimensions and proposed four BSR types: market, power, autonomous link and constrained link relationships, and then used case study research to demonstrate that higher levels of operational efficiency and product innovation were associated with constrained link and autonomous link BSRs, respectively. Similarly, Clauß (2012) used relational attributes, power dimensions, contractual specificity and task diversity in BSRs in deriving four BSR types: loosely coupled commodities, relational context, tension context and formalized/dominated context, and found that relational and formalized/dominated contexts outperformed loosely coupled commodities and tension context in terms of joint innovation. In short, BSR typologies based on power-dependence (summarized in Table II) generally seem to prescribe that power-dependence positions dictate exchanges parties' strategies and action plans, as well as their performance outcomes in the relationships.

Limitations of existing BSR typologies

There are four major limitations inherent in existing BSR typologies. First, as indicated in Tables I and II, most existing BSR typologies lack the ability to explain or predict either buyer

Table I Summary of BSR typologies based on relational attributes

Study	Orientation of typology: Descriptive	Explanatory or predictive	Prescriptive
Macneil (1980); Kaufmann and Stern (1988)	Discrete versus relational exchange relationships	Explained the perception of unfairness in the dispute between parties in the exchange relationship; no direct connection to BFP or SFP	N/A
Bradach and Eccles (1989)	Price, authority, trust and plural forms of relationships	N/A	To select the choice of relationship governance based on circumstances facing buyer firms
Webster (1992)	Marketing relationship range: transactions, repeated transactions, long-term relationships, buyer-supplier partnerships, strategic alliances, network organizations and vertical integration	N/A	To redefine the role of marketing in corporations
e.g., Morgan and Hunt (1994); Gronroos (1995)	Transaction versus relationship approaches	Explained the perceived importance of relationship marketing by firms in six industry types ranging from industrial services/non-profits to commodities; no direct connection to BFP or SFP	To increase interactive marketing investment as firms embrace more relationship approach
e.g., Helper and Sako (1995)	Arm's length (exit) versus close-cooperative (voice) relationships	Explained SFP associated with each type; no direct connection to BFP	N/A
Lambert *et al.* (1996)	Arm's length, partnerships (i.e., types I, II and III), joint ventures and vertical integration	N/A	To select the type of partnership that match the combined strengths of partnership drivers and facilitators
e.g., Brodie *et al.* (1997); Coviello and Brodie (2001); Coviello *et al.* (2001); Brodie *et al.* (2008)	Transaction marketing, database marketing, electronic marketing, interaction marketing, and network marketing	Explained the association between the marketing relationship type and the market type; found that transactional marketing and interactive marketing were required for customer acquisition and sale growth while electronic marketing was associated with customer acquisition performance, which in turn influences customer retention performance	To identify the approach to marketing relationships that can challenge the firm and to as developing the relationship abilities and infrastructure for the implementation of such marketing relationship approach
Dyer *et al.* (1998)	Durable arm's length relationships versus strategic partnerships	N/A	To match durable arm's length relationships with non-strategic inputs and strategic partnerships with strategic inputs
Mudambi and Helper (1998)	Close but adversarial versus cooperative relationships	Predicted buyers' switching probability in each relationship type; no direct connection to BFP or SFP	To initiate the move from the close but adversarial relationship to the cooperative relationship by taking mutually beneficial actions or using mutual hostages
Cannon and Perreault (1999)	Basic buying/selling, bare bones, contractual transaction, custom supply, cooperative systems, collaborative, mutually adaptive, and customer is king relationships	Found that closer relationships did not necessarily result in better BFP; no direct connection to SFP	To understand how each relationship type fits in a larger portfolio of relationship types

(*continued*)

Table I

Study	Orientation of typology: Descriptive	Explanatory or predictive	Prescriptive
Donaldson and O'Toole (2000)	Discrete, dominant partner, recurrent and bilateral relationships	N/A	To manage each relationship type with a different approach: arm's length (discrete), dictate (dominant partner), operational demand (recurrent) and co-involvement (bilateral)
Kaufman *et al.* (2000)	Commodity supplier, collaboration specialist, technology specialist and problem-solving supplier	Predicted the firm size and SFP in each type; no direct connection to BFP	N/A
Masella and Rangone (2000)	Short term/logistic integration, long term/logistic integration, shor -term/strategic integration and long term/strategic integration	N/A	To use a different set of selection criteria for suppliers in each relationship type
Mollering (2003)	Traditional wary traders, controlled routine partners and committed flexible partners	Explained business benefits (i.e., cost and quality) associated with each type	To cooperate with suppliers, develop and/or use trust to become more open and flexible to suppliers in the traditional wary traders and controlled routine partners cases, and to continue open/collaborative efforts with suppliers in the committed flexible partners case
Svensson (2004)	Transactional, business partner, friendly and family relationships	N/A	To select and implement each relationship type based on the logistical flow and dependence conditions
Laing and Lian (2005)	Elementary relationship, interactive relationship, embedded relationship, partnering relationship and integration	N/A	N/A
Lejeune and Yakova (2005)	Communicative, coordinated, collaborative, and co-opetitive configurations	N/A	To identify possible types of supply chain configuration and adopt different strategies for them
Palmer (2007)	Transactional, sustained transactional, and relational relationships	N/A	N/A
Tong *et al.* (2008)	Communal sharing, authority ranking, equality matching, and market pricing relationships	Different relationship types associated with different degrees of reciprocity, embeddedness, and IT invasiveness and customization; no direct connection to BFP or SFP	N/A
Chelariu and Sangtani (2009)	Independent exchanges, consortia, and private exchanges	N/A	N/A
Revilla and Villena (2012)	Minimized integration, operational integration, strategic integration, and balanced integration	Different knowledge integration types in BSRs associated with different level of BFP in terms of efficiency and innovation; no direct connection to SFP	To select the knowledge integration type that best supports the buyer's BSR-related goals

Table II Summary of BSR typologies based on power-dependence

Study	Orientation of typology		
	Descriptive	Explanatory or predictive	Prescriptive
e.g. Kraljic (1983); Gelderman and van Weele (2005)	Non-critical items, leverage items, bottleneck items and strategic items	N/A	To match a different strategy and action plan with each relationship type, and to improve the relationship outcomes by repositioning suppliers in the portfolio
Dwyer *et al.* (1987)	Discrete exchange, buyer's market, seller's market and bilateral relationships	N/A	To progress BSR from discrete exchanges to bilateral relationships through BSR development phases of awareness, exploration, expansion and commitment
Heide (1994)	Market, unilateral and bilateral governance	Explained the effect of unilateral and bilateral dependence on flexible adjustment processes; no direct connection to BFP	N/A
Bensaou (1999)	Market exchange, captive buyer, captive supplier and strategic partnership	Found no association between relationship type and performance	To match relationship type to specific product, market and supplier conditions and to adopt an appropriate management approach for each relationship type
Cox (2001)	Independence, buyer dominance, supplier dominance and interdependence	N/A	To use leverage to improve commercial results and to reposition to improve power positions
Cox *et al.* (2004)	Buyer dominant arm's length, buyer-supplier reciprocal arm's length, supplier dominant arm's length, buyer dominant collaborative, buyer-supplier reciprocal collaborative and supplier dominant collaborative relationships	N/A	To match the arm's length or collaborative way of working with operational necessity and to align the adversarial or non-adversarial approach to commercial goals with the power scenario
Tangpong *et al.* (2008)	Market, power, autonomous-link and constrained-link relationships	Autonomous-link and constrained-link relationships associated with BFP in terms of product innovation and operational efficiency, respectively; no direct connection to SFP	To align the BSR types with the buyer's organizational objectives in terms of product innovation and efficiency
Clau β (2012)	Loosely coupled commodities, relational context, tension context and formalized/dominated context	Relational and formalized/dominated contexts outperformed loosely coupled commodities and tension context in terms of joint innovation generation in BSRs	To align the BSR type with individual innovation strategy

firm performance (BFP) or supplier firm performance (SFP) associated with different BSR types while having a strong emphasis on BSR descriptions and managerial prescriptions. More empirical evidence linking BSRs with BFP or SFP is also needed to substantiate the validity of the prescriptions suggested by the BSR typologies, given that BSRs and purchasing portfolio management are often expected to have performance implications. The lack of such empirical evidence undermines the full fruition of such BSR typologies as useful tools for executives in managing BSRs and purchasing portfolios.

Second, many BSR typologies place emphasis primarily on the relational side of BSRs, despite the inconclusive evidence linking relational contents of BSRs with either BFP or SFP. For example, Larson (1994) found that the increase in relational contents was associated with lower total costs, whereas Shin *et al.* (2000) did not. Similarly, Bessant *et al.* (2003) found that although a number of companies have recently formed cooperative relationships with suppliers, such cooperative arrangements often did not result in greater learning and innovation. Interestingly, Anderson and Jap (2005) found that long-term relationships could even have adverse consequences, such as rising costs and hindering innovation. These inconsistent findings raise a question whether resting BSR typologies largely on relational contents in BSRs is logically sound; thus, the lack of performance implications of these BSR typologies may not be surprising.

Third, BSR typologies based on power-dependence appear to make two implicit and related assumptions:

1 Economic hyper-rationality (e.g. Williamson, 1981).
2 External determinism (e.g. Pfeffer and Salancik, 1978).

The logic of economic hyper-rationality suggests that firms, with complete information available to them, will act as economic agents that seek to optimize their financial gains. Consistent with such economic rationality, external determinism further suggests that these firms will recognize external constraints and conditions being faced, such as power-dependence circumstances, and take actions that best fit the external circumstances. In the context of power-dependence and firm behaviors, when firms recognize power-dependence asymmetry in exchange relationships, they would rationally use such asymmetry toward increasing their financial gains if the asymmetry puts them in an advantageous position in the relationships and provide them with leverage. On the other hand, the firms would cope with such asymmetry to secure their survival if the asymmetry puts them at a disadvantageous position and can adversely affect them. Simply put, firms' behaviors and actions in exchange relationships will be driven by power-dependence circumstances, and firms will act in ways that yield the best possible payoffs given their specific power-dependence circumstance. When power-dependence is in their favor, firms will exploit their power over their less powerful (more dependent) exchange partners to reap financial gains; thus, only the balance of power-dependence (interdependence) in exchange relationships can breed cooperative, partnerial BSRs in which both interdependent parties seek mutual gains or limit mutual losses. However, these assumptions have been empirically challenged as research has shown:

- That power-dependence asymmetry does not necessarily lead to power exploitation of the dominant party in the exchange relationship (Kumar *et al.*, 1998); and
- That cooperative relationships can be driven by factors internal to firms such as management philosophy and firm history, independent from the power-dependence circumstances in exchange relationships (Golicic and Mentzer, 2005; Stuart, 1993).

As such, the economic hyper-rationality and external determinism assumptions may not fully reflect the BSR reality.

Finally, although BSR typologies have largely evolved around two sets of attributes: relational contents and power-dependence, the body of research within each set is fragmented with a proliferation of BSR typologies. There is a lack of consensus on what BSR variables should underlie the dimensions of a valid BSR typology. Relational variables such as relational norms, trust and collaboration have been used in BSR typologies that are developed from the relational side of exchange relationships, whereas power, dependence and transaction-specific investment have been used in the typologies that are built from the power-dependence side of the relationships. The problem is that reducing a phenomenon (i.e. BSR) to one or a few fine-grained characteristics (i.e. few relational and power-dependence attributes mentioned above) may not capture its global, overarching features, analogous to decomposing water into hydrogen and oxygen (Vygotsky, 1962). Put differently, one needs a more complete set of BSR-related variables for each key dimension of the typology to more fully capture BSR dynamics because BSR-related variables tend to act in concert in influencing the outcomes of BSRs. The existing fine-grained BSR typologies do not meet this objective. Given the limitations noted above, BSR typologies collectively have not adequately advanced in their explanatory and predictive orientation, a critical bridge between BSR descriptions and managerial prescriptions.

Proposed improvements on existing BSR typologies

To improve on existing BSR typologies, we suggest that BSR typology research should first be based on alternative assumptions that better reflect BSR realities. Second, a new BSR typology should also be conceptually complete in explaining variation between the typology categories while maintaining the fewest number possible of dimensions, as suggested in the typology development literature (e.g. Sneath and Sokal, 1973). As such, the use of global features of BSRs rather than fine-grained BSR attributes as typology-defining variables seems more appropriate. Finally, the performance implications of the typology should be empirically examined, so that the viability of the new BSR typology as an analytical tool for practicing managers can be assessed. These three suggestions are discussed in greater detail as follows.

Alternative assumptions for BSR typology research

We contend that the economic hyper-rationality assumption in BSRs should be supplanted by the well-developed assumption of bounded rationality (Simon, 1957), while the external determinism assumption should be augmented by the managerial choice assumption (Hrebiniak and Joyce, 1985).

Simon (1957) highlighted the inadequacy of the optimizing principle embedded in the economic hyper-rationality assumption, as human rationality is limited by various constraints such as incomplete information, lack of omnipresent knowledge and limited time in making decisions. Therefore, the bounded rationality assumption, with the thrust that humans possess limited cognitive capacity and are thus more driven by *satisficing* than *optimizing* principles in making decisions, better reflects the reality of human decision processes and behaviors. Similarly, Hrebiniak and Joyce (1985) articulated that external determinism and managerial choice assumptions are not mutually exclusive as firms often have varying degrees of options and choices of actions, despite the presence of external constraints. As such, firms' strategic options, political behaviors and managerial decision emphasis are influenced by both internal choice and external determinism.

In BSR contexts, we contend that the bounded rationality and choice-determinism assumptions act in tandem in permitting a wide range of firms' behaviors and actions to coexist in BSR dynamics. Specifically, this new set of assumptions allows us to explain why exchange parties in similar power-dependence circumstances take different actions regarding power exploitation and collaboration in BSRs. For example, under the bounded rationality and choice-determinism assumptions, the powerful party in the BSR does not exploit its opportunity to exert power over exchange partners to maximize financial gains as long as the current relationship structures and the terms of exchanges have already satisficed its needs. The cognitive limits inherent in bounded rationality can also lead to either:

- Power exploitation, if decision-makers do not consider negative long-term consequences of such action in terms of the loss of goodwill and reputation in future business relationships; or
- Collaboration and investment in relationships, if decision-makers do not have omnipresent knowledge about future business landscapes and want to ally with exchange partners to cope with such uncertainty.

Another example is that when under a high interdependence circumstance, developing a collaborative relationship between exchange parties would be considered a logically sound option; however, one exchange party may not choose to do so. Instead, it may decide:

- To act opportunistically to take the advantage of the exchange partner's high dependence, despite the fact that it also highly depends on the exchange partner; or
- To take strategic actions to reduce its own dependence on the other party.

In short, the bounded rationality and choice-determinism assumptions decouple power-dependence circumstances from firms' behaviors and actions in BSRs, ranging from power exploitation to collaboration/relationship development and commitment (i.e. the relational aspect of BSRs). Therefore, under this new set of assumptions, a BSR typology can be developed using both relational and power-dependence attributes of BSRs as separate typology-defining variables. A new typology based on this set of assumptions can better capture BSR dynamics in both relational and power-dependence contexts, thus reflecting a more complete picture of BSRs.

Typology-defining variables and proposed BSR typology

Whereas the proposed new set of assumptions decouples power-dependence circumstances from firms' behaviors and actions and, therefore, permits us to logically use both relational and power-dependence attributes in constructing a BSR typology, the subsequent important matter is to identify appropriate typology-defining variables. From the power-dependence aspect of BSRs, variables such as power, dependence and transaction-specific investments have been used as typology-defining variables. We advocate *dependence* as an appropriate dimension of BSR typology because it encompasses transaction-specific investments (Noorderhaven *et al.*, 1998) and determines the level of power exchange parties possess (e.g. Pfeffer and Salancik, 1978). The dependence dimension can then be further divided into two specific variables:

1 The supplier firm's dependence on the buyer firm (hereafter referred to as supplier dependence); and
2 The buyer firm's dependence on the supplier firm (hereafter referred to as buyer dependence).

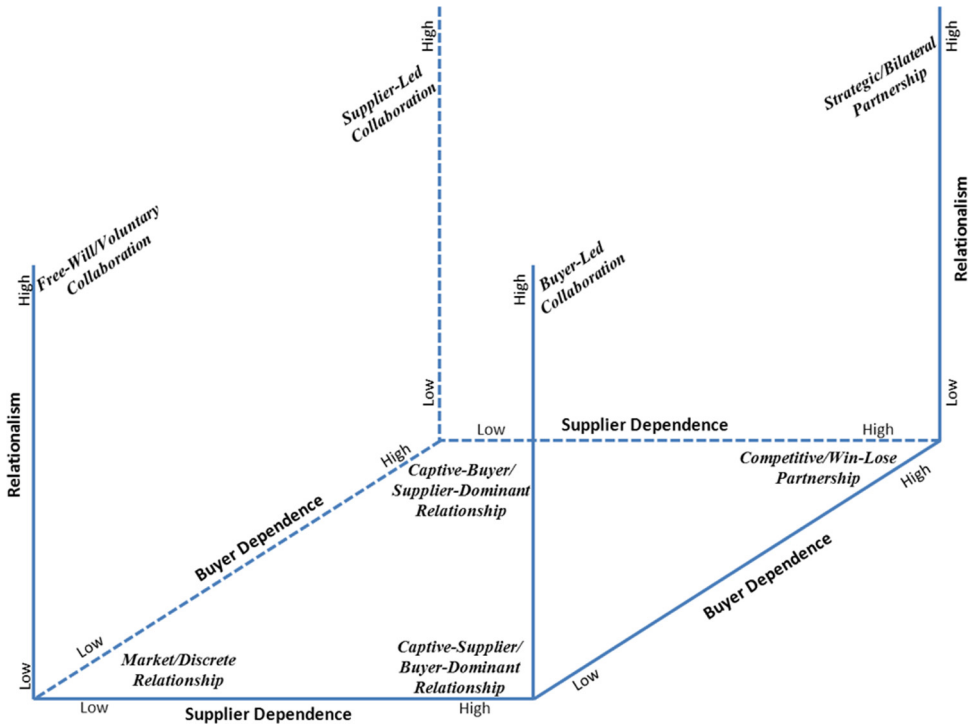
These two variables can be used as typology-defining variables, as they together represent the relative power-dependence positions of buyer and supplier firms.

From the relational aspect of BSRs, one or a few fine-grained relational attributes, such as relational norms, trust and collaboration, have been used as typology-defining variables in previous research. As Vygotsky (1962) noted, studying a phenomenon through its fine-grained attributes in isolation may not capture its global nature of the construct (i.e. BSRs). Therefore, we advocate *relationalism* as a representative higher-order construct from the relational aspect of BSRs, encapsulating various relational attributes of BSRs such as relational norms, information exchange and relationship duration (i.e. short- or long term), and highly correlated with trust and commitment (e.g. Bello *et al.*, 2003). Relationalism is defined as the degree to which buyer and supplier firms promote behaviors that maintain or improve their relationship (Noordewier *et al.*, 1990; Smith, 1998), and reflects long-term cooperative relationships as opposed to short-term discrete transactions or adversarial market relationships (e.g. Boyle *et al.*, 1992; Kaufmann and Dant, 1992). As the literature suggests that relationalism acts as a higher-order construct capturing various interrelated relational attributes of BSRs, relationalism is thus deemed an appropriate typology-defining variable representing the relational side of BSRs.

Using buyer dependence, supplier dependence and relationalism as typology-defining variables, we propose a new 2 by 2 by 2 BSR typology, as presented in Figure 1. The proposed BSR typology classifies BSRs into eight basic types:

1 Market/discrete relationship;
2 Captive-buyer/supplier-dominant relationship;
3 Captive-supplier/buyer-dominant relationship;
4 Strategic/bilateral partnership;
5 Supplier-led collaboration;
6 Buyer-led collaboration;

Figure 1 A proposed BSR typology



7 Competitive/win–lose partnership; and
8 Free will/voluntary collaboration.

The first four BSR types have been established in the previous research (e.g. Bensaou, 1999; Cox, 2001; Dwyer *et al.*, 1987; Heide, 1994) and largely reflect the key essence of various BSR typologies that have been proliferated in recent years (e.g. Clauß, 2012; Laing and Lian, 2005; Palmer, 2007; Tong *et al.*, 2008), while the other four BSR types are conceptualized in this paper and new to the current literature. The proposed BSR typology, therefore, captures both the existing BSR types prominent in the extant literature and the new BSR types deduced from the alternative assumptions and typology-defining variables. The remainder of this section focuses primarily on the characteristics and the dynamics of these eight BSR types and their performance implications.

Market/discrete relationship

This BSR type is characterized by low relationalism and low dependence between buyer and supplier firms. The exchange partners in a market/discrete relationship have very limited investment in developing specialized assets to work with each other, and can change to another exchange partner in the marketplace at low switching cost and minimal damage (Bensaou, 1999). The exchange process has very limited personal relationships and joint actions between the buyer and supplier firms, often operates with spot contracts and is largely focused on the substance of each individual transaction without considering the future prospects (e.g. Dwyer *et al.*, 1987; Macneil, 1980). Products exchanged through this BSR type tend to be highly standardized with stable or declining demand (Bensaou, 1999). This type of relationship is also labeled *independence* relationship whereby the supplier firm does not depend largely on the buyer firm for its sales, while the buyer firm has low search costs and can seek alternative suppliers with ease, given that there are many comparable buyers and suppliers in the market (Cox, 2001). The exchange relationship is, therefore, short term, arm's length and competitive in nature.

In the market/discrete relationships, buyer and supplier firms act as economic agents who seek self-gains in each transaction through market and price mechanisms (e.g. Macneil, 1980; Williamson, 1985). The exchange relationships between Norcen Industries and its customers are a typical example of market/discrete relationships. Norcen Industries has provided customers with complete precision metal and plastics machining because it was incorporated in the late 1960s. Norcen's business relationships with customer firms typically start through a competitive bidding process. In high-demand years, Norcen might bid as many as 250 requests each week with an acceptance rate of about 15 per cent. Norcen's tools and equipment are largely generic and all-purpose types, so that Norcen does not have significant specific investments to any customer, allowing it to switch customers or seek new ones as needed without major damage. Norcen operates with a number of customers, and no single customer accounts for a significant portion of Norcen's business. Likewise, Norcen's products and services do not account for a significant portion of their customers' businesses or their operations. As such, their exchange relationships are largely governed by market mechanisms.

Captive-buyer/supplier-dominant relationship

This BSR type is characterized by low relationalism between buyer and supplier firms, and the buyer firm is far more dependent on the supplier firm than vice versa. In this type of relationship, the supplier firm possesses unique capabilities

and proprietary knowledge in producing parts, supplies or components important to the buyer firm's final products, and the supply market is concentrated with a few strong established suppliers relative to the number of buyers, limiting the buyer firm's supply alternatives and imposing high search/switching costs on the buyer firm (Bensaou, 1999; Cox, 2001). Thus, the supplier firm is in a high power leverage position in this exchange relationship. Without strong relational attributes developed between the powerful supplier and the captive buyer in the exchange relationship, the supplier firm, acting as an economic agent, is likely to exert its bargaining power by unilaterally setting favorable exchange terms for its self-gain, and the buyer firm's compliance to such pre-specified exchange terms is then critical to its continuing relationship with the supplier firm (Cox, 2001; Heide, 1994). As such, the exchange relationship can be short- or long term, but it is competitive and adversarial in nature.

In the captive-buyer/supplier-dominant relationships, the powerful supplier firm typically reaps their economic returns from exercising its high bargaining power at the expense of the captive buyer firm (e.g. Porter, 1980). In other words, it is a zero-sum game. An illustrative example of this type of relationship is major movie studios (the suppliers) versus movie theaters (exhibitors). Movie studios have long been the more powerful party who dictate the term of exchanges in their favor. In the late 2000's, a relatively small number of major movie studios controlled the top 20 films, accounting for nearly half of annual box office revenue at a relatively large number of smaller exhibitors (the buyers). The movie studios reap the lion share of the return often through favorable agreements commanding a sliding percentage of box office revenues (e.g. 90:10 split during the first week – 90 per cent for the studio, 80:20 the second week, 70:30 the third week, etc.) along with the guarantee of certain minimum payouts. The resulting revenues cause some exhibitors to have negative margins on admissions but they generally recover through positive margins on concessions. Given the high-margin concessions, the exhibitors may benefit more from lower admission rates to increase patronage; however, the studios enforce admission rates to ensure their box office revenues. Thus, through the use of bargaining power, the studios gain at the expense of the exhibitors.

Captive-supplier/buyer-dominant relationship

This BSR type is also characterized by low relationalism between buyer and supplier firms. Contrasting to those in the captive-buyer/supplier-dominant relationships, suppliers in this type of relationship are far more dependent on their buyer firms than vice versa. In a captive-supplier/buyer-dominant relationship, the supplier firm has high economic reliance on the buyer firm as the business relationship with the buyer firm accounts for a significant portion of the supplier firm's outputs and sales, and there are few established buyers relative to the number of suppliers in the market (Bensaou, 1999; Cox, 2001). Thus, the buyer firm possesses high power leverage over the supplier firm in their exchange relationship. With low relationalism between both parties, the powerful buyer firm, operating primarily as an economic agent, is likely to exert its bargaining power for its unilateral gains by commanding favorable exchange terms from the supplier firm (e.g. Cox, 2001). The supplier firm's continuing relationship with the buyer firm is then contingent largely on its ability to meet the buyer firm's exchange terms (e.g. Heide, 1994), leading to the exchange relationship that can be short- or long term, but competitive and adversarial in nature.

In the captive-supplier/buyer-dominant relationships, the powerful buyer firm typically accrues economic returns from leveraging their high bargaining power at the expense of the captive supplier firm (e.g. Porter, 1980). In other words, the value created in the exchange relationship is largely captured by the powerful buyer. The relationship between Wal-Mart and Rubbermaid in the 1990s is a vivid example of this BSR type. Rubbermaid in the early 1990s had shifted its strategy to focus on supplying major discount chains. By the mid-1990s, Wal-Mart emerged as Rubbermaid's largest buyer, accounting for approximately 20 per cent of Rubbermaid's business. Rubbermaid, encountering skyrocketing resin prices at the time, tried to pass its higher production costs to Wal-Mart by increasing its plastic product prices. In response, Wal-Mart, committed to its everyday low-price strategy, refused Rubbermaid's request and dropped a number of Rubbermaid's products. Wal-Mart also dictated various exchange terms with Rubbermaid, such as two-day delivery from the ordering time with late-delivery penalties, repurchase of unsold items and certain product designs specifically for Wal-Mart. Rubbermaid subsequently suffered a major financial downturn, from which it never recovered, and was eventually acquired by Newell in the late 1990s.

Strategic/bilateral partnership

This BSR type is characterized by high relationalism and high interdependence (i.e. both buyer and supplier firms are highly dependent on each other) between buyer and supplier firms. In this type of relationship, the supplier firm has made specific investments to the exchange relationship to provide customized components, parts or supplies to the buyer firm who also has made specific investments to the relationship by tying its internal critical assets to the supplier firm (Bensaou, 1999). Thus, the number of alternative exchange partners in the market is limited, heightening switching/search costs and mutual operational dependency for both buyer and supplier firms (e.g. Cox, 2001). Realizing the importance of each other, both parties also develop a long-term, close, collaborative relationship and engage in extensive joint actions, bilateral planning and mutual adjustments for their mutual interests (Dwyer *et al.*, 1987; Heide, 1994). As such, the buyer and supplier firms in this relationship have established high mutual commitment to their relationship (Bensaou, 1999).

In short, buyer and supplier firms in strategic/bilateral partnerships are highly dependent on each other and seek mutual gains from their long-term partnership. In other words, both buyer and supplier firms strive to create a win–win situation for each other. The relationship between International Business Machines (IBM) and Ogilvy & Mather in the early 1990s is an example of this BSR type. At the time, IBM had experienced a decline and attempted to revive its brand in its turnaround process. IBM decided to make a "One Voice – One Agency" commitment to a single advertising agency, Ogilvy & Mather, who in turn resigned from several of its existing accounts to make a significant commitment to the IBM turnaround attempt. Both parties indeed bet their future

on each other, and the successful partnership between them became vital for their long-term viability. Their long-term collaborative relationship has blossomed since then and played an important role in IBM's successful turnaround and Ogilvy & Mather's eminence in the advertising industry. Another example of strategic/bilateral partnership is the Boeing–GE Aviation relationship, which dates back to the mid-1900s. Both parties have long been partners in developing military and commercial jet-powered aircrafts, ranging from the B-47 multi-engine bomber in the 1940s to the 767 commercial aircrafts in the 1970s and the 787 Dreamliner in the 2000s. Both parties recognize the mutual dependency between them because there are a limited number of available exchange partners for aircraft manufacturers and jet engine providers. Despite some occasional conflicts, both Boeing and GE Aviation have managed to foster a relationship largely characterized by various collaborative arrangements.

Supplier-led collaboration

This BSR type is characterized by strong relational attributes between buyer and supplier firms, and the buyer firm is far more dependent on the supplier firm than vice versa. The supplier firm, although in position to do so, is less likely to exploit the buyer firm's high dependency for immediate financial gains, as their strong relationalism acts as the opportunism mitigating mechanism (e.g. Wang and Wei, 2007; Wathne and Heide, 2000). The exchange relationship is cooperative and long term in nature rather than being arm's length and competitive. The supplier firm in this type of relationship has often cultivated unique expertise and capabilities in designing and developing components critical to the performance of the buyer firm's end products or services. Due to the uniqueness of the supplier firm's expertise and capabilities to design and produce such critical components, it is common that the supplier firm has access to a larger pool of alternative buyers than vice versa. As such, it gives the supplier firm the options and choices of which buyer firm(s) to collaborate with. Once supplier-led collaborative relationships are formed, the buyer firms in such relationships tend to design their products or services and structure their operations to exploit the unique expertise and capabilities of the supplier firm to gain competitive advantage in their markets. Any changes in the supplier firm's operations typically trigger the need for an alteration in the buyer firms' operations. For example, the supplier firm's efforts in improving the critical components tend to lead to the buyer firms' modification in product or service design. Likewise, changes in the supplier firm's production plan call for adjustments in the buyer firms' production plan and schedule. Information sharing from the supplier firm to the buyer firms is crucial in facilitating the buyer firms' needed adjustments in their operations.

In the supplier-led collaborative relationships, the role of the supplier firm is analogous to the "drum" setting the beat and rhythm of the entire system, and its information sharing to the buyer firms is analogous to the "rope" connecting the operations at the supplier firm's end to those at the buyer firms' end. Their collaborative efforts are often geared toward ensuring the optimal fit between the supplier firm's critical components with the buyer firms' products or services and the synchronization of their operations. In short, the critical components from the supplier firm can also be seen as external constraints of the buyer firms' operation systems, which need to be set up in ways to optimize the outcomes, given such constraints (e.g. Goldratt *et al.*, 1992). A case-in-point example of this supplier-led collaborative relationship is the Intel–Dell relationship in the 1990s when Intel's high-performance microprocessors were an industry-leading core component of personal computers (PCs). Dell formed a strong relational tie with Intel early on by single-sourcing microprocessors from Intel and collaborating with Intel to bring Intel's technology to market expeditiously. Both companies had cooperative R&D activities, so that Dell's PCs could optimize the performance of Intel's microprocessors. In addition, Dell had become Intel's strong ally and supported Intel in the Pentium flaw incident and despite Advanced Micro Devices' challenges during that time. In the late 1990s when some PC-makers such as Micron Electronics had difficulty in securing access to Intel's latest microprocessors, leading to production scheduling problems, Dell, through its strong relationship with Intel, was able to secure access to those microprocessors and seamlessly continued its operations.

Buyer-led collaboration

This BSR type is also characterized by strong relational attributes between buyer and supplier firms. However, unlike those in the supplier-led collaborative relationships, suppliers in this type of relationship are far more dependent on their buyer firms than vice versa. It is common that in a buyer-led collaborative relationship, the business relationship with the buyer firm accounts for a significant portion of the supplier firm's outputs and sales, placing the buyer firm in a powerful and authoritative position in the exchange relationship. To ensure a significant size of exchange relationship for each supplier, the buyer firm may also limit the number of suppliers for each part/supply. The buyer firm can then use the power wielded from the supplier dependency as the basis for its leadership in managing and coordinating its exchanges with various dependent suppliers instead of exercising its power for immediate financial gains. This BSR type also gives the rise of buyer-centered supplier networks (e.g. de Lurdes Veludo *et al.*, 2006) and supplier-supplier relationships in buyer-supplier triads (Wu and Choi, 2005), as the buyer firm organizes, coordinates and/or influences activities performed by its various dependent suppliers, who collectively help the buyer firm complete its operational processes in developing and producing its products or services.

In the buyer-led collaborative relationships, buyer and supplier firms seek mutual gains from their intricate collaborative arrangements, and their relationships are thus long-term-oriented in nature instead of short-term discrete transactions. The buyer firm plays the integral role in architecturing, orchestrating and over-sighting/managing the construction and evolution of its supplier networks and the relationships among its suppliers. This type of relationship has long been established in business arenas and has recently become more common in various cooperative supply chain arrangements. Dated in the early 1900s, Marks & Spencer, focusing on merchandise designs, formed strong relationships with manufacturers whose significant portion of capacity was dedicated to producing Mark and Spencer's merchandises.

Marks & Spencer took the leadership role in coordinating various dedicated manufacturers in the supply chains. A more recent example of this relationship type is the relationships between McDonald's and its suppliers. McDonald's has worked closely with its suppliers to enhance the quality of supplies. At an annual summit, McDonald's provides several hundreds of its approved suppliers with information on McDonald's plans for the next three to five years, allowing the suppliers to understand what is expected of them. McDonald's also uses this annual event as a venue where its suppliers share information and best techniques/practices, which in turn increase suppliers' overall capabilities.

Competitive/win–lose partnership

This type of BSR is characterized by high interdependence between buyer and supplier firms, leading to the necessity for their continuing exchange relationship. Unlike those in the strategic partnership (e.g. Bensaou, 1999) where their high interdependence between buyer and supplier firms leads both firms to develop strong relational attributes between them (i.e. relational norms, cooperative arrangements and joint actions) and strives for mutual gains, buyer and supplier firms in the competitive/win–lose partnership tend to differ in their expectations and agenda. Each of them attempts to exert its control over the other to achieve its own agenda. As both firms highly depend on each other and are in a power balance circumstance, when one attempts to exploit the dependency circumstance, it is at risk of retaliation from the other. Although their relationship can potentially be long term due to the necessary interdependence, it is marked by episodic self-interest-seeking maneuvers. When possible, each of the firms attempts to reduce its dependence on the other party, so that it will attain the unilateral power and control over the other. This competitive/win–lose partnership can thus evolve into the captive-buyer/supplier-dominant relationship if the supplier firm succeeds in reducing its dependence on the buyer firm, or the captive-supplier/buyer-dominant relationship if the buyer firm successfully reduces its dependence on the supplier firm.

In short, buyer and supplier firms in the competitive/win–lose partnerships, although highly dependent on each other, aim to achieve their own agenda through the exchanges. This type of relationship is, therefore, close but adversarial (Mudambi and Helper, 1998) in nature. The strategic or tactical maneuvers taken by one party for its own self-gains prompt the other to respond competitively. As such, reducing the dependence on the other to gain the unilateral control in the exchanges becomes an important strategic consideration of both buyer and supplier firms in the competitive/win–lose partnership, thus potentially making this form of BSR less stable. A case-in-point example of this BSR type is the relationships between Motorola and its carrier partners such as Bell Atlantic and Ameritech Cellular in the mid-1990s when both parties were highly dependent on each other and mutually benefited from their exchange relationships. Motorola, a dominant wireless phone producer, was known for its cutting-edge technology and its high-demand wireless phones, commanding approximately 60 per cent of the US market share, whereas Bell Atlantic and Ameritech Cellular were its major carriers and accounted for a significant portion of Motorola's business. At the time, because Motorola only offered analog phones, its carrier partners were concerned with the emergence of digital phones and requested Motorola to develop and offer them digital phones. The requests were largely neglected by Motorola, as Motorola's agenda to protect its analog phone business sharply diverged from those of its carrier partners that attempted to address the digital trend. To protect its analog phone business, Motorola mandated its carrier partners to buy approximately 75 per cent of their wireless phones from Motorola and to promote Motorola's phone features in stand-alone displays, otherwise Motorola would not distribute its design-marvel StarTAC analog phones to them. In the late 1990s, the carrier partners decided to reduce their dependency on Motorola by increasing their business exchanges with other phone producers and eventually sourcing digital phones from them.

Free will/voluntary collaboration

This BSR type is characterized by high relationalism between buyer and supplier firms that are self-contained/autonomous and have low dependence on each other for their survival. In other words, their collaborative relationship is formed on a voluntary basis rather than a strategic necessity, which is a clear distinction from necessity-based strategic partnership (e.g. Bensaou, 1999). Unlike supplier-led and buyer-led collaborative relationships in which one party assumes the leadership role in the relationships, free will/voluntary collaborative relationships are made of equal exchange partners who have high degrees of freedom in their business operations. The partners typically contribute their unique strengths to the partnership, and the leadership in this BSR type is often shared between the partners. Being self-contained and autonomous, both exchange partners are less vulnerable to the power-dependence exploitation from each other. Also, being governed by relational norms, both exchange partners are less likely to engage in opportunism. The unique mix of high operational freedom, shared leadership, low vulnerability to power-dependence exploitation and high relational norms mitigating opportunism in the free will/voluntary collaborative relationships results in a true partnership of equal that promotes the full extent of bilateral and open communication, idea generation, knowledge sharing and team orientation between buyer and supplier firms.

In short, buyer and supplier firms in a free will/voluntary collaborative relationship, despite having a low degree of dependence on each other, make their conscious choice to form a collaborative relationship and foster a strong relational tie between them. While this type of BSR has not gained much investigative efforts from management and supply chain scholars, it continues to emerge in today's landscape of business and industrial exchanges. An example of this type of relationship is the relationship between Nestle and Ocean Spray that started off in the early 2000s as an outsourcing relationship between two largely independent parties and has prospered into broader collaborative arrangements encompassing various aspects of operations such as procurement of common raw and packaging materials and sharing of distribution centers. Another example is the supply chain partnership between Owens & Minor and its alpha vendor, Virginia Mason, in the mid-2000s. Both companies do not have high degrees of dependence on each other, but have collaboratively developed an activity-based pricing model, which can help both companies to more efficiently

streamline their distribution activities and reduce the total supply chain costs.

Performance implications of BSR typology and future empirical investigations

Based on the unique dynamics between buyer and supplier firms in different BSR types captured by the proposed BSR typology in this paper, we postulate that each BSR type has its own performance-influencing mechanisms (summarized in Table III), which consequently lead to variation in performance outcomes. In market/discrete relationships, buyer and supplier firms enjoy low-coordination costs as they rely on market mechanisms and spot contracts in governing their exchanges. However, they forgo the potential synergy and learning opportunities that can be gained from their collaborations and joint actions. Both parties in this BSR type also encounter potentially high-transaction costs if operating under high-uncertainty conditions because their ability to adjust to new conditions is bounded by the contractual limits (e.g. Williamson, 1985). In captive-buyer/supplier-dominant and captive-supplier/buyer dominant relationships, the dominant party reaps economic rewards from exercising its bargaining power (e.g. Porter, 1980) at the expense of the captive party, whose performance is sub-optimized as a result. A negative consequence of the dominant party's power exploitation can come in the form of a poor reputation in relationship management practices, thus potentially dissuading prospective exchange partners in the future. The captive party's ongoing viability hinges on its efforts to maintain the exchange relationship with the dominant party from which critical resources and supplies can be secured in the captive buyer case and a significant portion of sales can be generated in the captive supplier case. In strategic/bilateral partnerships, buyer and supplier firms espouse mutual trust, commitment and bilateral gains (e.g. Bensaou, 1999; Dwyer *et al.*, 1987). They share risks and rewards in their exchange relationship. Bilateral communication, cooperation and mutual adjustment between buyer and supplier firms are critical to incremental and continuous improvement, thus optimizing their overall performance.

Regarding supplier-led/buyer-led collaborations, exchange partners in these type BSRs seek mutual gains from their long-term collaborative relationships. In supplier-led collaborations, the supplier firm, bestowed the leadership role by power-dependence asymmetry in the BSR, can enhance its performance through directing the joint design and development efforts with the buyer firm to optimize its product/technology performance and leveraging the buyer firm as a vehicle to expeditiously bring its new products/technology to the market. In return, the buyer firm can enhance its performance through supplier-enabled innovations and secured access to critical components or supplies, as well as leveraging the supplier firm's unique expertise/capabilities in general. In buyer-led collaborations, the buyer firm, assuming the leadership role in the BSR and being specialized in certain key supply chain activities, delegate various activities to its supplier network. As such, the buyer firm's performance depends largely on its ability to control and coordinate a broad range of supply chain activities executed by its suppliers to achieve incremental and continuous improvement over time. Similarly, the supplier firm's performance can be strengthened as it becomes more effective in production planning with access to the buyer firm's demand information and learns from the buyer firm, as well as other suppliers in the network to incrementally and continuously improve its overall capabilities.

In contrast, buyer and supplier firms in competitive/win–lose partnerships, lacking relational norms and mutual commitment, episodically engage in self-interest-seeking maneuvers and pursue their own agenda in a zero-sum game, despite high interdependency between them. Therefore, they periodically encounter unproductive and disruptive conflicts in their exchanges, leading to sub-optimal levels of their overall performance. Finally, in free will/voluntary collaborations, self-contained/autonomous buyer and supplier firms voluntarily foster their collaborative relationship whereby they cross-fertilize their unique strengths, promote team orientation and engage in bilateral open communication, idea generation, knowledge sharing and shared leadership. Such operating condition can enable both buyer and supplier firms to discover breakthrough solutions and attain a drastic improvement in their overall performance.

Despite the logical reasoning on the performance-influencing mechanisms of different BSR types discussed above, systematic empirical investigations on the performance implications of the proposed BSR typology is still needed to assess whether the BSR typology is valid and can be a useful analytical tool for practicing managers. The remainder of this section discusses empirical approaches for examining the performance implications of the proposed BSR typology.

Qualitative versus quantitative research

Although quantitative research using large samples is ultimately needed to test the performance implications of the BSR typology, exploratory qualitative research could prove useful in developing the theoretical foundation for future quantitative research, given that the relationship between BSRs and performance (BFP and SFP) in the literature is not clear. One possible qualitative method is case study research, which is particularly useful in exploring relationships between constructs that are not clear in the literature, and thus is a powerful tool for theory-building research (e.g. Yin, 1994). The empirical feedback emerging from the case data can lead to new theoretical propositions or revisions in the existing ones. Using case study research to longitudinally examine a relatively small number of firms over time and to observe the change in patterns of their BSR associated with the change in their performance level can be useful in empirically deriving theoretical BSR-performance propositions. Cross-sectional case study research, investigating different levels of firm performance associated with different types of BSRs, is another theory-generating approach. Finally, the process research approach (e.g. Mackenzie, 2000) is another viable alternative. In the process framework, each path in the BSR process is treated as a unique case and can be examined separately, thus maximizing the empirical observations from a limited sample of firms. This approach is useful in unveiling time-dependent event sequences in dynamic BSR processes that evolve over time. These types of qualitative research can yield theoretical models and propositions for subsequent quantitative research using large samples.

Table III Summary of BSR types and performance-influencing mechanisms

BSR type	Relationalism	Supplier dependence	Buyer dependence	Buyer's performance-influencing mechanisms	Supplier's performance-influencing mechanisms
Market/discrete relationship	Low	Low	Low	Using market mechanisms and spot contracts to govern exchange relationships, resulting in low coordination costs Only able to make adjustments within the limits of contracts, thus susceptible to high transaction costs under the condition of high uncertainty	Using market mechanisms and spot contracts to govern exchange relationships, resulting in low coordination costs Only able to make adjustments within the limits of contracts, thus susceptible to high transaction costs under the condition of high uncertainty
Captive-buyer/supplier-dominant relationship	Low	Low	High	Leveraging the supplier's expertise/capabilities and securing access to critical components to prevent supply disruption Sub-optimizing the overall performance due to ongoing power exploitation for self-interests by the supplier	Reaping financial gains through the exercise of bargaining power at the buyer's expense Developing a poor reputation and negative track record in relationship management practices, thus potentially discouraging prospective buyers in the future
Captive-supplier/buyer-dominant relationship	Low	High	Low	Reaping financial gains through the exercise of bargaining power at the supplier's expense Developing a poor reputation and negative track record in relationship management practices, thus potentially discouraging prospective suppliers in the future	Dedicating efforts to maintain the ongoing relationship with the buyer, which accounts for a significant portion of outputs and sales Sub-optimizing the overall performance due to ongoing power exploitation for self-interests by the buyer
Strategic/bilateral partnership	High	High	High	Sharing risks and rewards with the supplier and adjusting the internal assets and operations to fit the supplier's customized parts and components Promoting bilateral communication and cooperation to achieve incremental and continuous improvement in overall performance of both parties	Sharing risks and rewards with the buyer and adjusting the customized parts and components to fit the buyer's internal assets and operations Promoting bilateral communication and cooperation to achieve incremental and continuous improvement in overall performance of both parties
Supplier-led collaboration	High	Low	High	Leveraging the supplier's expertise/capabilities and securing access to critical components to prevent supply disruption Strengthening its competitive position through supplier-enabled innovations	Leveraging the buyer as a vehicle to bring its new products/technology to the market expeditiously Optimizing its product/technology performance through joint design/development efforts with the buyer
Buyer-led collaboration	High	High	Low	Being specialized in certain key supply chain activities and delegating other activities to its supplier network Controlling and coordinating a broad range of supply chain activities to attain incremental and continuous improvement in overall supply chain performance	Having access to the buyer's demand information, thus making its production planning more effective Learning from the buyer as well as other suppliers in the network to incrementally and continuously improve its overall capabilities
Competitive/win-lose partnership	Low	High	High	Sub-optimizing the overall performance due to episodic self-interest seeking maneuvers by the supplier Breeding periodic unproductive conflicts in the BSR, as each party attempts to exert control over the other and pursue its own agenda in a zero-sum game	Sub-optimizing the overall performance due to episodic self-interest seeking maneuvers by the buyer Breeding periodic unproductive conflicts in the BSR, as each party attempts to exert control over the other and pursue its own agenda in a zero-sum game
Free will/voluntary collaboration	High	Low	Low	Cross-fertilizing or synergizing its unique strengths with those of the supplier to attain a breakthrough improvement in overall performance Promoting bilateral and open communication, idea generation, knowledge sharing and team orientation in the BSR through the equal status, autonomy and shared leadership between both parties	Cross-fertilizing or synergizing its unique strengths with those of the buyer to attain a breakthrough improvement in overall performance Promoting bilateral and open communication, idea generation, knowledge sharing and team orientation in the BSR through the equal status, autonomy and shared leadership between both parties

Data collection methods

As BSRs are a complex phenomenon involving dynamic interactions between buyer and supplier firms, we suggest that future empirical research should triangulate across multiple data collection techniques (i.e. interviews, surveys, content analysis of reports and secondary/archival data, etc.) to more fully capture the complexity of BSRs. While interview-based BSR data can be in-depth, they are often based on a limited number of interviews with one or few executives per company. Survey-based BSR data often lacks the requisite richness to address the complexity inherent in BSRs and are typically collected from only one individual within an organization. Finally, secondary/archival data (i.e. company annual reports and industry reports), which are broadly available and have a good degree of richness, can be content-analyzed and quantified into meaningful data for statistical analysis; however, this type of data may not directly address all BSR-related issues, limiting researchers' flexibility in posing research questions. Thus, data triangulation helps overcome weaknesses inherent in individual data collection techniques, and ultimately strengthen the validity of BSR empirical investigations. The use of multiple data sources has also been espoused by scholars in various business disciplines (e.g. Boyer and Swink, 2008; Woodside and Wilson, 2003).

Performance measures

Operational efficiency and financial outcomes have long been the focus of previous BSR-performance studies (e.g. Carr and Pearson, 1999; Kim and Michell, 1999). Because these are important performance measures across various firms, we anticipate their continued use in future BSR research. However, as supplier and buyer firms increasingly work together in new product development (NPD) processes and product innovations. Managing and fostering BSRs has become crucial to buyer firms' product innovativeness and supplier firms' innovative capacity. Recent studies have begun to focus on this important BSR-innovation relationship (e.g. Clauß, 2012; Revilla and Villena, 2012), and more research is still needed to examine how each BSR type influences buyer and supplier firms' NPD and product innovations. Moreover, because product innovations can be categorized as incremental, modular, architectural and radical innovations (Henderson and Clark, 1990), future research can also assess how each BSR type associates with these categories of product innovations.

Industry contexts

As proven to be an important issue in various business disciplines, industry context could influence the dynamics of each BSR type, in turn affecting firm performance. As Fine (1999) articulated, various industries have different clock speeds, reflecting different rates of changes in the market, with which firms need to cope. Future research could thus compare BSR dynamics in fast-cycle and slow-cycle industries to help us better understand how each BSR type enhances or hinders buyer and supplier firms' strategic competitiveness in different industry contexts. Depending on the strategic fit between the BSR type and industry context, BSRs can be a vehicle for buyer and supplier firms to explore new competencies and exploit existing competencies in such context; thus, this line of research can provide an interesting bridge between BSR research and competency-based advantages.

Conclusion

This study makes important contributions for BSR theorists and empiricists. For theorists, this study synthesized and categorized existing BSR typology research in terms of its descriptive, exploratory/predictive and prescriptive orientations. In the process, we highlighted critical limitations inherent in the BSR literature, which could help to explain why existing tests of the BSR-performance relationship were inconclusive. These limitations provided the backdrop for proposing a new BSR typology development approach. First, we developed alternative behavioral assumptions: bounded rationality and choice-determinism in BSRs. Then, we identified three key typology-defining variables, buyer dependence, supplier dependence and relationalism, and proposed an alternative BSR typology, which is arguably more complete than existing typologies in the literature.

For the empiricists, we discussed empirical approaches for investigating the performance implications of BSR typologies. This involved different research approaches (i.e. qualitative versus quantitative), data collection methods (i.e. interview, survey and content analysis of secondary/archival data), performance measures (i.e. operational efficiency, financial outcomes and product innovations), and industry contexts (i.e. fast-cycle versus slow-cycle industries). Ultimately, rigorous empirical research producing reliable and valid findings will be the foundation for managerial prescriptions regarding BSR management and purchasing portfolio analysis, which will prove useful to supply chain managers and purchasing professionals.

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