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Relationship between routines of supplier selection and evaluation, risk perception and propensity to form buyer–supplier partnerships

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ABSTRACT

Supply chain partnership is viewed as an important contributor to superior competitiveness; yet, the knowledge of ex-ante factors contributing to the deployment of supply chain partnership is nascent. This article examines the influence of the current supplier selection routines, supplier evaluation routines and managerial attitude towards relational and performance risks on the future intention to form buyer–supplier partnerships, based on relational and evolutionary economics theory. The analysis is based on 156 questionnaires received from senior executives and supply/logistics managers of UK firms. We found that partner selection routine positively influences firms' propensity (future intention) to form buyer–supplier partnerships, unlike the supplier evaluation routine and perceptions of both relational risk and performance risk, which were not found to have a significant role. Our findings suggest that firms wishing to initiate buyer–supplier partnerships can increase the likelihood of doing so by ensuring that their supplier selection routines incorporate efforts to establish potential suppliers' inclination for openness in a relationship, to establish their track record of demonstrating a high degree of integrity with other buyers and to confirm that potential suppliers have a deep knowledge and understanding of the buyer's business, a recognized strong reputation, and demonstrable financial stability.

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Propensity to form buyer–supplier partnership; supplier selection and evaluation routine; relational risk; performance risk

1. Introduction

Effective management of the supply chain – a set of three or more entities directly involved in the upstream and downstream flow of products, services, finances and information from a source to customer (Mentzer et al. 2001) – enhances competitiveness (Li et al. 2006; Prajogo, Oke, and Olhager 2016; Shao, Moser, and Henke 2012). Conversely, its poor management negatively impacts performance. For example, following announcements of a major supply chain problem, share prices are typically eroded by an average of 10% (Hendricks and Singhal 2009), and the significant delays, cost overruns and quality problems suffered by the Boeing 787 Dreamliner were attributed to the inadequacies of the supply chain management (Denning 2013). It is no wonder that scholars argue that today competition is between supply chains rather than individual firms (Boyer, Frohlich, and Hult 2005; Ketchen and Hult 2007). This explains the interest shown to supply chain issues by academics and practitioners alike. An EBSCO search revealed that between 2010 and 2017 some 11,582 articles (6,811 in peer-reviewed journals and 4,771 in practitioner journals) contained 'supply chain' in their title.

According to the extant literature, upstream buyer–supplier interactions are critical determinants of the overall supply chain performance (Anderson, Hakansson, and Johanson 1994; Chen and Paulraj 2004; Lee, Lee, and Jeong 2010; Yang et al. 2008). The purchasing routines deployed by a firm are vital upstream activities (Fung 1999; Gadde and Hakansson 1994). For example, the German steel conglomerate ThyssenKrupp has used purchasing strategy not only as a strategic driver and an enabler of cost reduction, but also as a source of improvement for speed of delivery, for innovation and for embedding its ethics capabilities (McGee 2018). Moreover, Dey et al. (2015) reported on a UK carpet manufacturer with facilities in the UK, India and Portugal whose strategic focus on their evaluation of suppliers had had a positive impact on their operational performance and had helped to facilitate market expansion. Kannan and Tan (2002) empirically examined the relationship between supplier selection and assessment routines and performance of US manufacturing firms. They found a positive relationship between supplier selection and assessment routine and firm performance. Furthermore, they showed that soft evaluation criteria had a greater impact on performance than the hard evaluation criteria. In another study, Shiva et al. (2016) demonstrated the positive impact of supplier evaluation on

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process improvement achieved by a steel pipe manufacturer. A firm's purchasing strategy is shaped by its supplier selection routine, supplier evaluation routine, supplier risk and supplier relationship routine (Cheng and Chen 2016; Nair, Jayaram, and Das 2015). The extant literature addresses each of these routines extensively, as we discuss later.

In this article, we examine whether firms' existing upstream purchasing routines (supplier selection and evaluation routines) and attitude towards performance and relational risk influence their intention to form a supply chain partnership. This is an area in which there is a paucity of research. We develop our hypotheses drawing on evolutionary economics and relational theories. Supply chain partnership is important because the extant literature suggests that its deployment enables firms to extract superior rent (Carr and Pearson 2002; Kache and Seuring 2014; Prajogo and Olhager 2012). The alternative 'arm's length market relationship' on the other hand is unlikely to generate superior rent (Dyer and Singh 1998). Therefore, isolating antecedent constructs promoting deployment of supply chain partnership is of interest from both the theoretical and practical perspectives.

The prior research effort has mainly focussed on ex-post formation of supply chain partnership (Monczka et al. 1998; Ramanathan and Gunasekaran 2014; Whipple, Frankel, and Daugherty 2002; Yang et al. 2008), whilst ex-ante factors encouraging the formation of supply chain partnership have received little attention (He, Ghobadian, and Gallear 2013; Kannan and Tan 2003; Liu, Ding, and Lall 2000; Prajogo et al. 2012). We add to the literature by addressing this gap. Apart from making a theoretical contribution – developing hypotheses isolating the antecedent of intention to form supply chain partnership and testing it empirically – we contribute to practice by identifying characteristics of selection and evaluation routines, and the types of attitude towards risk management that are more likely to lead to the introduction of supply chain partnership. From a practice point of view, this is important because, as stated previously, supply chain partnership is a source of superior competitiveness.

In this article, we use propensity (future intention) to form buyer–supplier partnerships as the dependent variable. Our independent variables are as follows: (a) the configuration of the supplier selection routine; (b) the configuration of the evaluation routine (i.e. the 'retain or discard' decision); and (c) the perceived performance and relational risk. The selection routine enables a focal firm to systematically assess and screen potential suppliers to gauge complementarity and cultural fit, both of which are critical to generating relational rent (Dyer and Singh 1998). Evolutionary economics suggests that such a routine can potentially generate knowledge which in turn is a source of endogenous change (Becker et al. 2005). Supplier evaluation routines complement supplier selection routines by assessing actual performance. They are part of the governance structure, playing a critical role in the generation of relational rent (Dyer and Singh 1998). From an evolutionary economics perspective, a supplier evaluation routine provides critical insight, which in turn encourages managers to act (Nelson and Winter 1982).

We have extended Dyer and Singh's (1998) theory, adding perceived performance and perceived relational risk because managers need to balance the benefit of the 'profit' gained from any single transaction (ad hoc relationship) against the benefits of an 'average profit' that accumulates over time (Smith 2002).

The remainder of the article is structured as follows. First, we develop our conceptual framework and the research hypotheses drawing on the extant literature. Next, we describe our methodology followed by the presentation of findings. The final section is devoted to the discussion of the findings, their managerial implications and the directions for future research.

2. Literature review, theory and research framework

The extant literature points to the paramount importance of the buyer–supplier relationship when it comes to the effective management of supply chains (Anderson and Narus 1999; Chen and Paulraj 2004). Firms enjoy significant latitude in how they select their suppliers, evaluate their performance and manage their relationship with suppliers (Narayanan, Narasimhan, and Schoenherr 2015). Effective management of suppliers by buyers is challenging (Liou 2015) and is considered one of the most difficult facets of supply chain management (Johnson et al. 2004).

Developing a long-term relationship and partnership with suppliers is increasingly considered advantageous (Cannon et al. 2010; Prajogo and Olhager 2012) and a key feature of high-performing firms (Paulraj, Lado, and Chen 2008). Buyer–supplier partnership reduces focal firms' risks and uncertainty of access to important resources/supplies, enhancing their competitive performance through shortening cycle times, improving the quality of outcomes, enhancing flexibility, reducing costs, boosting market share and increasing profitability (Carr and Pearson 2002; Kache and Seuring 2014; Prajogo and Olhager 2012). Consequently, partnering and strategic supplier selection and evaluation are amongst the key modern managerial challenges (Kelly, Wagner, and Ramsay 2018; Koufteros, Vickery, and Dröge 2012). Prior research on supply chain partnership has focussed mainly on ex-post formation of partnership (Monczka et al. 1998; Ramanathan and Gunasekaran 2014; Whipple, Frankel, and Daugherty 2002; Yang et al. 2008). Despite the appeal of buyer–supplier partnerships, our knowledge of the antecedent prompting their deployment is nascent (He, Ghobadian, and Gallear 2013; Kannan and Tan 2003; Kelly, Wagner, and Ramsay 2018; Liu, Ding, and Lall 2000; Prajogo et al. 2012).

This research is timely because buyer–supplier partnerships lie at the heart of strategic supply chain management (Li et al. 2006; Nudurupati et al. 2015), and partnership can enhance firms' competitiveness (Qrunfleh and Tarafdar 2013), but there is little systematic research identifying the potential precursors to the formation of buyer–supplier partnerships (He, Ghobadian, and Gallear 2013; Kannan and Tan 2003; Liu, Ding, and Lall 2000; Prajogo et al. 2012). Here, we

examine whether the existing purchasing routines (supplier selection routines and supplier evaluation routines) and attitude towards relational and performance risk influence the intention to introduce a buyer–supplier partnership, drawing on two important theoretical perspectives – evolutionary economics and relational view.

2.1. Dependent variables

To develop our dependent variable, we relied on the supply chain typology. Typology is a descriptive tool that differentiates amongst a number of effective configurations (Doty, Glick, and Huber 1993). A typology offers a clear point of reference for examining different supply chain relationships (Bailey 1994; Lejeune and Yakova 2005). We identified a number of supply chain typologies (Bensaou 1999; Donaldson and O' Toole 2000; Lejeune and Yakova 2005; McDonald 1999; Mollering 2003; Tang 1999; Tangpong et al. 2015). Following careful consideration, we used the typology suggested by McDonald (1999) because its configurational structure offered a clear distinction between the arm's length and the supplier partnership approach. Furthermore, by juxtaposing the other prevalent typologies with McDonald (1999), the key configurational structure of the buyer–supplier partnership was extracted. This includes long-term commitment to achieve mutually acceptable goals (Bensaou 1999; Donaldson and O' Toole 2000; Lejeune and Yakova 2005; McDonald 1999; Tang 1999; Tangpong et al. 2015), considerable engagement in a two-way exchange of (important/technical) information (Bensaou 1999; Donaldson and O' Toole 2000; Lejeune and Yakova 2005; McDonald 1999; Mollering 2003; Tang 1999; Tangpong et al. 2015), regular involvement of suppliers in joint product/service (research) development (Bensaou 1999; McDonald 1999; Mollering 2003; Tangpong et al. 2015), providing hands-on cooperative help to solve problems (Bensaou 1999; Lejeune and Yakova 2005; McDonald 1999; Tang 1999), willingness to devote extra effort to the relationship (Bensaou 1999; Donaldson and O' Toole 2000; McDonald 1999; Mollering 2003; Tangpong et al. 2015), viewing suppliers as providers of capabilities beyond just products/services (Bensaou 1999; Mollering 2003), and joint sharing of the benefits from problem-solving/cooperation (Bensaou 1999; Lejeune and Yakova 2005; Mollering 2003; Tang 1999; Tangpong et al. 2015). The above were used to operationalize the supply chain partnership.

In the remainder of this section, we first offer a rationale for drawing on evolutionary economics and relational view, as well as the inclusion of perceived risk as an antecedent of intention to deploy supply chain partnership. Following this, we draw on the extant literature to develop our theory and hypothesis, culminating in a model that is empirically tested.

2.2. Evolutionary economics and upstream supply chain routines

According to evolutionary economics, routines are temporal organizational processes used to accomplish organizational

work and are an important element of organizational behaviour (Feldman 2000). They are fundamental to organizational change because in some cases they are designed to produce change – such as new product development routines – and because in other cases they encompass and provide analytical access to sources of endogenous change (Nelson and Winter 1982, 128–134). Routines are a repository of organizational capabilities (Cyert and March 1963; Nelson and Winter 1982), paving the way for deliberate endogenous learning, and thereby shaping the future development of the firm through altering or creating new routines (Winter 2000; Zollo and Winter 2002). Feldman and Pentland (2003) later distinguished between ostensive and performance aspects of the organizational routine. They suggest that the relationship between the ostensive aspect (the schematic form of a routine) and the performance aspect (the enactment of the routine) creates an on-going opportunity for variation, selection and retention of new practices and patterns of action within routines and allows routines to generate a range of outcomes, from apparent stability to considerable change. Drawing on these arguments, it is rational to theorize that the current supplier selection and evaluation routines influence firms' future behaviour towards forming supplier partnerships.

2.3. Relational theory and upstream supply chain routines

The buyer–supplier partnership that operates cooperatively across vertical interfaces (Maloni and Benton 1997; Mentzer, Min, and Zacharia 2000) is the cornerstone of strategic supply chain management (He, Ghobadian, and Gallear 2013; Lemke, Goffin, and Szwajczewski 2003; Liu and Ngo 2005). Partnering is widely considered to be a strategic decision (Qrunfleh and Tarafdar 2013). According to the relational theory, idiosyncratic inter-firm linkages are a critical source of relational rent and competitive advantage (Cao and Zhang 2011; Dyer and Singh 1998; Palmatier et al. 2013). The central proposition of relational theory is that a pair or network of firms can develop relationships that result in sustained competitive advantage (Cao and Zhang 2011; Dyer and Singh 1998; Palmatier et al. 2013). Dyer and Singh (1998) argue that arm's length market relationships are incapable of generating relational rents because there is nothing idiosyncratic about an exchange relationship that enables the two parties to generate profits above and beyond what other seller–buyer combinations can generate. To generate relational rents, partners must find each other (Dyer and Singh 1998; Palmatier et al. 2013).

It is our contention that the configuration of the supplier selection routine plays an important role in enabling the focal firm to identify appropriate suppliers for partnership. The extant literature distinguishes between the likely potential of generating relational rent and the realized relational rent (Cao and Zhang 2011; Doz 2007; Dyer and Singh 1998; Kanter 1994; Prajogo and Olhager 2012). A supplier selection routine helps a firm to identify suppliers with relational-rent-generating potential – that is, expected rent but not realized

rent. A supplier evaluation routine, on the other hand, enables a firm to assess the extent to which relational rent is realized and whether or not it is prudent to continue with the particular supplier. We therefore theorize that supplier evaluation routines play a critical role in differentiating between the potential and actual benefits offered by a supplier as well as critical information informing supplier partnership decisions.

2.4. Role of perceived risk

The extant literature posits that supply-side risks have a major impact on the supply chain outcome (Chen, Sohal, and Prajogo 2014; Kelly, Wagner, and Ramsay 2018; Li, Kang, and Haney 2017; Spekman and Davis 2004; Wagner and Bode 2008; Zsidisin, Panelli, and Upton 2000). For example, Chen, Sohal, and Prajogo (2014), in their case-based analysis, found that a high level of supply-side risk brought about by lack of information and knowledge sharing and a weak relational approach from a supplier resulted in late delivery, delivery uncertainty and lack of trust. Li, Kang, and Haney (2017) argued that opportunistic behaviour by suppliers can harm long-term cooperative relationships, finding in their study that opportunism risk was negatively associated with outsourcing performance, which could lead to failure in the supply arrangement. Supply chain risk is defined as a 'variation in the distribution of possible supply chain outcomes, their likelihood and their subjective value' (Juttner, Peck, and Christopher 2003). They are presented as a negative deviation from the expected value of a certain performance measure, resulting in an undesirable consequence(s) for the focal firm (Wagner and Bode 2008). In this article, we theorize that management's current attitude towards two dimensions of partnership risk – relational risk and performance risk – influences its future propensity to form supplier partnerships.

2.5. Supplier selection routines

The basic objective of a supplier selection routine is to achieve alignment between the buyer firm's needs and the supplier's capability (Petersen, Handfield, and Ragatz 2005). Supplier selection routines potentially follow different paths and their significance is attracting researchers' attention from various perspectives (e.g. Gheidar Kheljani, Ghodspour, and O'Brien 2009; Golmohammadi and Mellat-Parast 2012; Lee, Lee, and Jeong 2010; Meschnig and Kaufmann 2015; Pedraza-Acosta, Pilkington, and Barnes 2016). Pedraza-Acosta, Pilkington, and Barnes (2016), for example, examined supplier selection from the technological (production system) compatibility perspective. Noting that establishing the suitability of suppliers in the supply chain has become a key strategic consideration, Lee, Lee, and Jeong (2010) chose to propose a mathematically based supplier selection approach, namely a 'high-quality-supplier selection' model. As highlighted previously, according to evolutionary economics, supplier selection configuration is a potential source of endogenous change, hence we theorize that its configuration

may encourage a change to supplier relation routine, moving it towards supplier partnerships (Becker et al. 2005).

Relational theory, on the other hand, suggests relational rents are generated if a supplier's capabilities complement a purchasing firm's capabilities (Dyer and Singh 1998; Palmatier et al. 2013). Dyer and Singh (1998) argue that the creation of relational rent is contingent on a firm's ability to find a partner with complementary resources and relational capability. Rigorous supplier selection routines that take into account both tangible and intangible factors are more likely to succeed in attaining alignment between the purchasing firm's needs and the supplier's technical and relational capability (Petersen, Handfield, and Ragatz 2005). Identifying suppliers with capabilities that are a good match with the purchasing firm's needs will improve supply chain performance, and speed the move towards supplier partnership routine (Petersen, Handfield, and Ragatz 2005). We conceptualize the supplier selection routine as comprising two sets of decision factors: tangible measures coalesced around performance expectations, and intangible measures coalesced around relational supplier attributes.

Tangible measures (performance expectations) refer to the expected competitive and financial performance improvements that a compatible supplier will generate. If both buyer and supplier draw economic benefits, such as stable supply prices and stable supply order, lower transaction costs or enhanced competitiveness, then the likelihood of developing a partnership increases (Ellram 1990; Gallear, Ghobadian, and Chen 2012; Li et al. 2006). We therefore theorize that a firm's propensity to form a partnership for strategic purchases is positively influenced by the assessment of tangible outcome-based performance criteria within its supplier selection routine. This is because improved competitiveness is a critical consideration in adopting a buyer-supplier partnership, arising from the complementarity of resources and sharing routines (Dyer and Singh 1998). This leads to our first hypothesis:

HYPOTHESIS 1. Assessment of tangible performance expectations in supplier selection routines is positively related to the propensity to form buyer-supplier partnerships.

The routines used for selecting suppliers normally focus on tangible, hard, quantitative performance-related expectations (Cummings and Holmberg 2012; McCutcheon and Stuart 2000), often ignoring intangible relational attributes that signal cultural compatibility and complementarities (Slowinski, Seelig, and Hull 1996). The intangible relational attributes are likely to influence the level of socialization between the buyer and supplier, increasing social capital and relational stability (Yang et al. 2008). Relational stability in turn is likely to enhance relational capability, leading to greater relational rent and, ultimately, closer partnership (Dyer and Singh 1998). From the evolutionary economics stance, the change in routines occurs at the instigation of management or the activities of agents internal to routines (Becker et al. 2005). The increased socialization due to closer relational fit is likely to increase understanding and knowledge exchange between the buyer and supplier, as well as their absorptive capacity, encouraging management or

agents internal to the routine to instigate changes in the routine as well as the related routines (Becker et al. 2005). Creating trust also aids this process. In this regard, the ability to demonstrate a high degree of honesty and integrity in past dealings with the buyer or other firms known to the buyer is an important attribute (Bell, Oppenheimer, and Bastien 2002; Blonska et al. 2013). These arguments lead us to theorize that firms' propensity to establish buyer–supplier partnerships is positively influenced by including a range of intangible relational criteria in their supplier selection routines. This leads to our second hypothesis:

HYPOTHESIS 2. Assessment of intangible relational supplier attributes in supplier selection routines is positively related to the propensity to form buyer–supplier partnerships.

2.6. Supplier evaluation routines

The self-enforcing nature of the buyer–supplier relationship, including partnership where no third-party intervenes to determine whether a violation has taken place (Telser 1980), requires a mechanism that removes the temptation for the supplier to take advantage (Spekman, Kamauff, and Myhr 1998). Supplier evaluation routines – a systematic attempt to ensure suppliers meet the current and future business needs and that the realized benefits equate to the promised benefits – provide such a mechanism and are a critical component of an effective supply management system (Prahinski and Benton 2004). Their importance in managing the downstream purchasing process has attracted significant attention (e.g. Ghobadian et al. 2016; Seth et al. 2018; Simpson, Siguaw, and White 2002; Winter and Lasch 2016; Wu and Blackhurst 2009). This was noted by Seth et al. (2018), for example, in the context of the construction industry, who highlighted the added pressure on evaluation routines for many firms associated with increasing levels of competition and more intricate supply chains/networks. The literature supports the proposition that partnerships take time to develop and the passing of time fosters mutual trust or relational capital (Blonska et al. 2013; Kale, Singh, and Perlmutter 2000). A good indicator of whether or not a firm takes a long-term view is whether criteria pertaining to relational capital are included in its ongoing supplier evaluation routines that result in keep/drop decisions. Moreover, firms that include relational performance factors in their supplier evaluation routines are more likely to develop relational capital (Cao and Lumineau 2015). Equally important, supplier evaluation routines are likely to reduce opportunistic behaviour in a supplier (Spekman and Davis 2004). Elimination of poorly performing or opportunistic suppliers leaves the buyer firm with a pool of effective and trusted suppliers, which is an important precedent to forming supplier partnerships (Handfield et al. 2006; Kelly, Wagner, and Ramsay 2018; Krause 1999). In relation to evolutionary economics, supplier evaluation routines that assess relational capital generate insights into the capabilities of the supplier and its ability to consistently perform effectively, which in turn may promote managers to modify the routine, as well as related routines (Becker et al. 2005).

Relational performance refers to proven supplier performance against the central behavioural traits of reliability and consistency (Christopher and Jüttner 2000; Ellram and Edis 1996; Gunasekaran, Patel, and McGaughey 2004; Yu, Cadeaux, and Song 2013) and, moreover, the flexibility demonstrated by the supplier (Blonska et al. 2013; Ellram and Edis 1996; Gulati and Sytch 2007) during the elapsed supplier relationship. Flexibility coupled with the ability to handle conflict is a positive success factor (Niederkofler 1991). As Maloni and Benton (1997) argue, partners need to develop a deep sense of awareness of each other's routines and willingness to share. Learning from each other and adapting processes and/or products can bond the partners into a stronger relationship (Wilson 1995; Yu, Cadeaux, and Song 2013). Thus, we theorize that firms' propensity to establish buyer–supplier partnerships is positively influenced by assessing suppliers' performance against the factors that express the relational performance of the supplier as a part of supplier evaluation routines. This leads to our third hypothesis:

HYPOTHESIS 3. Assessment of the relational performance in supplier evaluation routines is positively related to the propensity to form buyer–supplier partnerships.

2.7. Partnership risk

According to Wagner and Bode (2008), risk deriving from various supply chain sources undermines supply chain performance. Risk is also recognized as a key factor in strategic decision-making (Merigó 2014), and the desire to reduce risk is amongst the key drivers of the formation of inter-organizational partnerships (Nicolaou and Christ 2012). Consequently, partnerships are based on a sharing of the risks of relational outcomes (Ellram 1995). Partnership formation involves a process of give and take (Ramsay 1996); however, such relationships are often characterized by instability arising from uncertainty, for example in the partner's future behaviour (Delerue 2004). They may, for example, entail an increase in supply risk for the buyer, or a net transfer of power to the supplying partner (Ramsay 1996). Consequently, when firms adopt a partnership strategy, they are confronted by a relational risk (Delerue 2004).

In this study, we were concerned with risks attributable to the existence of the buyer–supplier partnership. Drawing on the work of Das and Teng (1996, 2001), we adopt a broad definition of partnership risk as risks associated with the existence of the partnership relationship. Within 'partnership risk', we distinguish between two components: the partnership's performance risk (risk associated with negative or unwanted performance outcomes) and the partnership's relational risk (risk primarily associated with the behaviour of partners) (Das and Teng 2001). This is in line with previous studies on supply chain risk in which it is framed as a negative deviation from the expected value of a certain performance measure (Chen, Sohal, and Prajogo 2014; Wagner and Bode 2008).

Given that one of the chief objectives of forming a partnership is to improve performance, it would be surprising if

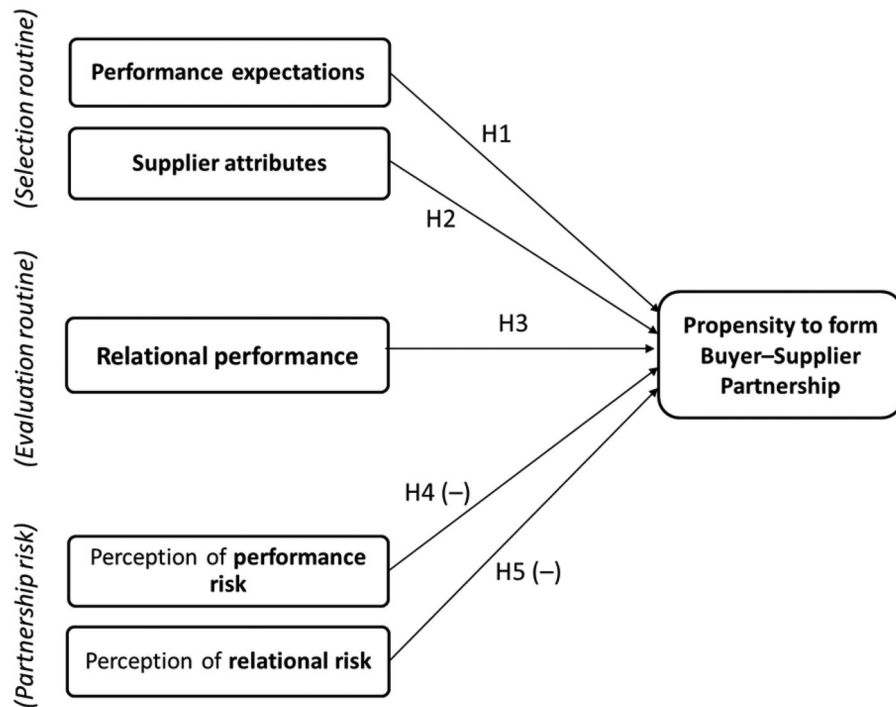


Figure 1. Research framework.

managers did not assess the partnership's performance risks. Maloni and Benton (1997) identify performance risks in terms of loss of competitiveness (e.g. when partners have become complacent) (Eltantawy et al. 2015) and in terms of partners not meeting expectations (Ross 2013). Hendricks and Singhal (2009) further note the risk of disruptions in supply, exacerbated by recent trends and practices, including complexity due to global sourcing. Uncertainties in the performance of the partnership will reduce the incentive of managers to invest in the relationship and could instead encourage managers to put more emphasis on costly/unwanted performance monitoring of partners.

Delerue (2004) notes that relational risk is concerned with the probability and consequence of either not having satisfactory cooperation with a partner (Das and Teng 1996) or of opportunistic behaviour by a partner (Cheng and Chen 2016). The latter is evident when skills and know-how of the firm are appropriated by the partner, who can use them to enhance their individual gain. Relational risk also refers to unfavourable imbalances in behaviour and/or relational capital between the partners, such as resource imbalances within the partnership (Hale and Mauzerall 2004), imbalances in the sharing of information and, ultimately, imbalances in the benefits accruing to the respective partners. The presence of reciprocal, clear, and transparent communication between partners at senior management and lower organizational levels is frequently cited as essential to reduced relational risk and partnership success (Cheng and Chen 2016; Ellram 1991, 1995). On the other hand, a lack of alignment in understanding of what the scope of the partnership should entail, or indeed a lack of agreement, implies little incentive to commit resources and to build up a governance structure to prolong the relationship's viability (Hale and Mauzerall 2004; Wilson 1995).

In this article, we are concerned with managers' perception of risk. The managerial cognition literature indicates that perception is extremely important in arriving at key decisions (Narayanan, Zane, and Kemmerer 2011). Managerial perceptions of risk can shape strategic choices, including a preference for a strategy of partnership over non-partnership in the supply chain, or vice versa. Therefore, managers who perceive a higher level of risk (performance risk or relational risk) involved in a partnership will be more likely to refrain from partnership arrangements. As a result, we theorize that a firm's propensity to form a buyer-supplier partnership is likely to be negatively impacted by heightened perception of both performance risk and relational risk associated with entering into a partnership with suppliers.

HYPOTHESIS 4. Perceived performance risk is negatively related to the propensity to form buyer-supplier partnerships.

HYPOTHESIS 5. Perceived relational risk is negatively related to the propensity to form buyer-supplier partnerships.

Our research framework is presented in Figure 1.

3. Methodology

3.1. Sample

A self-reporting questionnaire was used to gather data. The size of the sample and its cross-sectional nature represent an important empirical contribution, as discussed earlier. The unit of analysis was the firm. The sample frame was determined, with the help from the Chartered Institute of Logistics and Transport (CILT), as UK firms with supply chain purchasing as an important part of their strategy and with managers registered as CILT members. The target respondents were senior executives and supply/logistics managers of

UK firms. There was a single informant in each firm in line with other studies (Artz and Brush 2000; Taylor 2005). Care was taken when selecting the target respondents to only include named personnel in the target sample who had a job title representing a senior executive or supply/logistics management position (e.g. Managing Director, Supply Chain Director, Purchasing Director/Manager or Logistics Director/Manager). To boost the response rate, respondents were promised and received a summary of our findings. Moreover, we carried out a repeat mailing of the instrument. We received 156 usable responses, representing a 16% response rate, which is in line with the 10%–20% response rate typical of surveys targeting senior personnel (Das and Teng 2001; Kumar et al. 2015; Li et al. 2006). The job roles of the respondents were as follows: senior executives (37%); supply/logistics managers (43%); operations managers (9%); and other senior managers (11%). By employee numbers, 61.5% of the respondent firms were classified as large organizations (250 or more employees) and 38.5% were classified as small- and medium-sized enterprises (SMEs) (fewer than 250 employees). In terms of ownership, 46% of the firms were independently owned while 54% were part of a larger group. The business activity categories represented by the firms in the sample were: manufacturing (45.5%); logistics (36.5%); and service (18%).

3.2. Measures

3.2.1. Dependent variable – propensity to form buyer–supplier partnership

We used McDonald's (1999) typology as the basis to operationalize buyer–supplier partnership propensity, developing seven measures from McDonald (1999) and the other relevant supply chain typology literature (Bensaou 1999; Donaldson and O' Toole 2000; Lejeune and Yakova 2005; Mollering 2003; Tang 1999; Tangpong et al. 2015) as already detailed in Section 2, to assess it (see Appendix 1). Furthermore, following Javidan et al. (2006), we used a scale that assessed propensity to form buyer–supplier partnerships in terms of actual behaviours and actions. The seven items identified were consistent with this perspective. A focus group of academics with experience in supply management was used to refine the scale.

3.2.2. Independent variables

Although Feldman and Pentland (2003) differentiate between the ostensive and performance aspects of the organizational routine, in this study, we focus on the ostensive aspects (i.e. perceptions of the supplier selection and evaluation routines) to examine how performance expectations, intangible supplier attributes and relational performance will affect the propensity to form supply chain partnerships. Measurement items for tangible performance expectations and intangible supplier attributes, and relational performance were developed specifically for the study. In a first step, we used a focus group of six academics with experience in supply chain management to generate lists of decision factors for

selection routine and evaluation routine. Expert consultation through researchers knowledgeable in the specific topic is widely considered to be essential in establishing content validity (Forza 2002). Moreover, the focus group technique is known to facilitate in-depth discussions due to the largely unconstrained interaction amongst the participants (Greenbaum 1998).

As recommended by Krueger (1998), we selected a moderator who was an experienced member of the research team and therefore was well-informed of the goals of the research project, and possessed the skills to engage all participants and move the discussion comprehensively through the construct areas. The focus group was split into two parts: generation and review. There are a number of common factors that are important in the selection/evaluation routines under any circumstances, such as quality, total cost, and cycle time (Ellram 1990; Narasimhan and Nair 2005). In this study, it was important to use selection/evaluation routine decision factors unique to the partnership characteristic of the buyer–supplier relationship. Guided by this distinction, in the first part the moderator combined general questions about the nature of the constructs to allow the participants to guide the identification of the items, with probes to establish their veracity and explore any differences in opinion/experience. Once the discussions and generation were complete, after a short break the focus group reconvened, and an item review (part two) was undertaken, observing recommended procedures (Haynes, Richard, and Kubany 1995) whereby the content validity experts were able to iteratively examine items and to re-examine revised items until a full consensus was reached. This approach ensured that revisions made to one item did not cause an unresolvable problem with another.

An in-depth review of the literature was then undertaken to verify the proposed conceptualizations of the item sets of the three constructs. The item pools proposed by the focus group were verified by individually reviewing each item against the literature for relevance and clarity. Again, this was an iterative process initially using the items as search terms, examining the literature returned, and following-up on any potential supplemental items identified, whilst taking care not to introduce any redundancy. This process progressed until the three lead researchers were satisfied that the item sets provided a robust assessment of the three constructs. Accordingly, tangible performance expectations were measured with five items substantiated from Ha and Krishnan (2008), Hashemi, Karimi, and Tavana (2015), Kannan and Tan (2002), Lee, Ha, and Kim (2001), Liu and Zhang (2011), Petersen, Handfield, and Ragatz (2005) and Verma and Pullman (1998), and intangible supplier attributes were measured with five items substantiated from Bai and Sarkis (2010), Ellram (1990), Hashemi, Karimi, and Tavana (2015), Kannan and Tan (2002), Lienland, Baumgartner, and Knubben (2013), Min (1994) and Sevkli et al. (2007) (see Appendix 1). Relational performance, our supplier evaluation routine construct, was measured using two items substantiated from Choi and Hartley (1996), Gosling, Purvis, and Naim (2010), Hashemi, Karimi, and Tavana (2015), Kannan and Tan (2002)

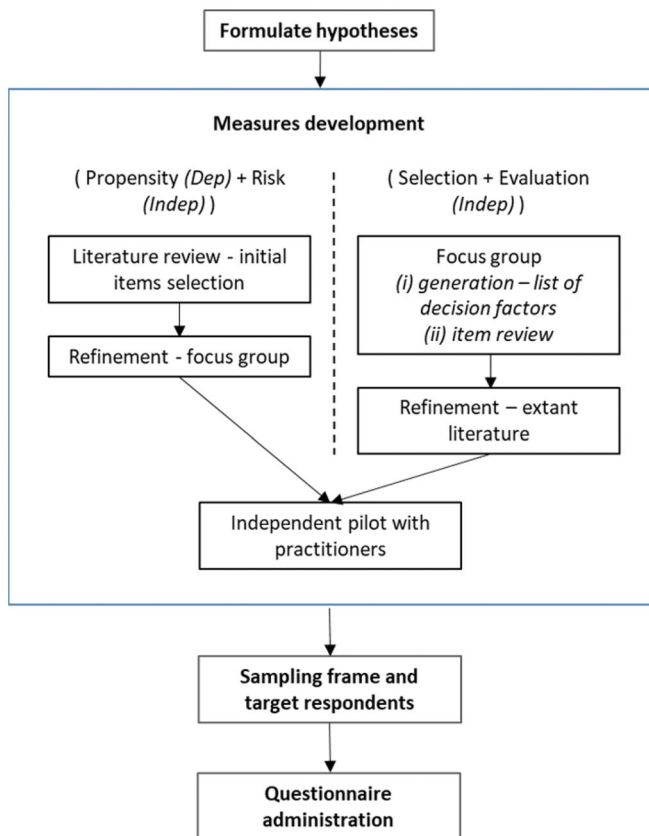


Figure 2. Research methodology.

and Verma and Pullman (1998) (see Appendix 1). We asked the respondents to rate the importance of these items.

Our two other independent variables, perceived performance risk and perceived relational risk, were measured with three and six items respectively. These measures were likewise substantiated through a careful analysis of the supply chain risk-related literature, namely Das and Teng (2001), Delerue (2004), Ross (2013), and Zsidisin, Panelli, and Upton (2000).

Having developed the initial measures for each of the study constructs, a panel of industry representatives with the same credentials as the target participants was used as an independent pilot group to screen the research instrument for relevance, clarity, and content validity. The instrument was subsequently administered, asking respondents to rate each item on a five-point Likert scale, with anchors of 1 = 'not at all', and 5 = 'to a very great extent'. The measures used in this study are shown in Appendix 1. The research methodology is illustrated in Figure 2.

3.2.3. Control variables

Firm size and the sector of the supply chain firms may affect the expectations of the buyer-supplier partnership performance and the perception of risks, as well as the nature of inter-firm relationships. As such, in this study, firm size and the industrial sector of the firm were introduced as control variables in the statistical analysis.

We assessed non-response bias statistically by comparing early and late responses for all variables using a multivariate

Table 1. Rotated factor matrix of all original measures.

	Factor					
	1	2	3	4	5	6
PBSP1	0.527	–	–	–	–	–
PBSP2	0.756	–	–	–	–	–
PBSP3	0.786	–	–	–	–	–
PBSP4	0.747	–	–	–	–	–
PBSP5	0.823	–	–	–	–	–
PBSP6	0.738	–	–	–	–	–
PBSP7	0.699	–	–	–	–	–
PEREXP1	–	–	0.489	–	–	–
PEREXP2	–	–	–	–	–	0.567
PEREXP3	–	–	–	–	–	0.712
PEREXP4	–	–	0.401	–	–	–
PEREXP5	–	–	0.450	–	–	–
SUPATR1	–	–	0.627	–	–	–
SUPATR2	–	–	0.469	–	–	–
SUPATR3	–	–	0.630	–	–	–
SUPATR4	–	–	0.453	–	–	–
SUPATR5	–	–	0.638	–	–	–
RELPERF1	–	–	–	0.823	–	–
RELPERF2	–	–	–	0.719	–	–
PERRISK1	–	–	–	–	0.702	–
PERRISK2	–	–	–	–	0.619	–
PERRISK3	–	–	–	–	0.526	–
RELRISK1	–	0.604	–	–	–	–
RELRISK2	–	0.691	–	–	–	–
RELRISK3	–	0.698	–	–	–	–
RELRISK4	–	0.659	–	–	–	–
RELRISK5	–	0.624	–	–	–	–
RELRISK6	–	0.655	–	–	–	–
Factor with eigenvalues > 1	7.199	4.028	2.117	1.527	1.397	1.135
% of variance explained	25.711	14.386	7.560	5.454	4.988	4.055

Notes: Extraction method: maximum likelihood; rotation method: varimax. Loadings with absolute value <0.40 were suppressed.

t-test (Lehman et al. 2013). The results provided strong evidence that non-response bias was not present (Wilks' lambda = 0.934, $p=0.46$). Using self-report data from single respondents can introduce the possibility of common method variance (CMV). Following Fuller et al. (2016), we also tested for the presence of CMV by employing a one-factor test, entering the dependent and independent variable indicators into a single-factor analysis. The emergence of a single factor, or if one factor accounts for a disproportionately large variance, signals CMV issues. Our analysis returned a multifactor solution explaining 65.8% of the variance, leading us to conclude that CMV was not a problem.

3.3. Validity and reliability

To evaluate the reliability and validity of the survey instrument, we followed a two-step process involving exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Hair et al. 1998). First, EFA was conducted for all indicators of the six constructs (propensity to form buyer-supplier partnership (PBSP); performance expectations (PEREXP); supplier attributes (SUPATR); relational performance (RELPERF); performance risk (PERRISK); and relational risk (RELRISK)), with varimax rotation being used. The result showed that some indicators had factor loadings smaller than 0.5, which suggests they are not loaded consistently with other related indicators (see Table 1). PEREXP1, PEREXP4, PEREXP5, SUPATR2, and SUPATR4 were evaluated against the meaning of their associated construct and underlying theory, and

Table 2. CFA of the refined measures.

Construct	Number of items	Cronbach's alpha	Composite reliability	AVE	Squared factor correlations					
					PBSP	PER-EXP	SUP-ATR	REL-PERF	PER-RISK	REL-RISK
PBSP	6	0.89	0.89	0.58	1	–	–	–	–	–
PEREXP	2	0.73	0.76	0.62	0.14	1	–	–	–	–
SUPATR	3	0.73	0.73	0.48	0.13	0.35	1	–	–	–
RELPERF	2	0.86	0.86	0.75	0.03	0.19	0.44	1	–	–
PERRISK	2	0.72	0.72	0.57	0.03	0.19	0.06	0.12	1	–
RELRISK	5	0.83	0.83	0.50	0.00	0.19	0.14	0.20	0.31	1

Goodness of fit: Satorra–Bentler Scaled $\chi^2 = 190.49$; $df = 155$; $p < 0.05$, S-B $\chi^2/df = 1.23$; IFI = 0.99; CFI = 0.99; RMSEA = 0.038.
 Notes: $n = 156$. PBSP = propensity to form buyer–supplier partnership; PEREXP = performance expectations; SUPATR = supplier attributes; RELPERF = relational performance; PERRISK = performance risk; RELRISK = relational risk.

were subsequently deleted for the second round of EFA. The second EFA showed that all loadings were greater than 0.5 (with the majority greater than 0.6) for all of the remaining indicators in relation to the corresponding factors, thus indicating that the six study constructs can be explained by six separate underlying factors.

To confirm the convergent and discriminant validity, CFA was conducted with the remaining indicators. Following the approach suggested by Fuller et al. (2016) and Wallace, Keil, and Rai (2004), the measurement model was constructed using LISREL 8.7, following a robust maximum likelihood (RML) approach as the main estimation method (Browne 1987). RML adjusts the normal theory of maximum likelihood chi-square estimate for the presence of non-normality (which is most likely to occur in survey-based scales) using the asymptotic covariance matrix provided (Boomsma and Hoogland 2001), and therefore generates more accurate test statistics (Curran, West, and Finch 1996). The six latent variables – propensity to form buyer–supplier partnership (PBSP); performance expectations (PEREXP); supplier attributes (SUPATR); relational performance (RELPERF); performance risk (PERRISK); and relational risk (RELRISK) – were used to construct the measurement model. To assess the fit of the measurement model to the data, multiple fit indices were examined, including the Satorra–Bentler scaled χ^2/df ratio, incremental fit index (IFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) (Bentler and Bonett 1980; Kline 2011; Kumar et al. 2015).

The initial CFA results suggested that one of the standardized factor loadings (PBSP1, $\lambda = 0.57$) was not above the satisfactory threshold proposed by Wallace, Keil, and Rai (2004) of 0.6. Standardized factor loadings for two other indicators (PERRISK3, $\lambda = 0.61$ and RELRISK1, $\lambda = 0.61$) were substantially lower than other related indicators. These three indicators were subsequently dropped after careful review and scrutiny against the associated construct and underlying theory. The remaining indicators were subject to a second CFA, which returned good factor loadings and model fit (Satorra–Bentler Scaled $\chi^2 = 190.49$, $df = 155$, $p < 0.05$, S-B $\chi^2/df = 1.23$, IFI = 0.99, CFI = 0.99, RMSEA = 0.038) (see Table 2).

The convergent and discriminant validity of the refined instrument were examined following the approach of Byrne (2013) and Fornell and Larcker (1981). First, the standardized factor loadings were examined. As shown in Table 3, all the factor loadings were significant and are above the acceptable level of 0.6. The majority of the factor loadings were above the

Table 3. CFA factor loadings of refined measures.

	PBSP	PEREXP	SUPATR	RELPERF	PERRISK	RELRISK
PBSP2	0.75	–	–	–	–	–
PBSP3	0.79	–	–	–	–	–
PBSP4	0.75	–	–	–	–	–
PBSP5	0.82	–	–	–	–	–
PBSP6	0.76	–	–	–	–	–
PBSP7	0.70	–	–	–	–	–
PEREXP2	–	0.64	–	–	–	–
PEREXP3	–	0.91	–	–	–	–
SUPATR1	–	–	0.64	–	–	–
SUPATR3	–	–	0.81	–	–	–
SUPATR5	–	–	0.61	–	–	–
RELPERF1	–	–	–	0.84	–	–
RELPERF2	–	–	–	0.89	–	–
PERRISK1	–	–	–	–	0.65	–
PERRISK2	–	–	–	–	0.86	–
RELRISK2	–	–	–	–	–	0.69
RELRISK3	–	–	–	–	–	0.78
RELRISK4	–	–	–	–	–	0.74
RELRISK5	–	–	–	–	–	0.66
RELRISK6	–	–	–	–	–	0.64

PBSP = propensity to form buyer–supplier partnership; PEREXP = performance expectations; SUPATR = supplier attributes; RELPERF = relational performance; PERRISK = performance risk; RELRISK = relational risk.

ideal level of 0.7. The composite reliability and Cronbach's alpha values were all above the acceptable 0.7 level (Byrne 2013; Kumar et al. 2015) (see Table 2). Furthermore, the average variance extracted (AVE) by each construct was evaluated (see Table 2). Most of the AVEs were greater than 0.5, suggesting variance captured by the construct exceeds the variance due to measurement error (Byrne 2013; Fornell and Larcker 1981). Two constructs, SUPATR and RELRISK, had AVEs slightly smaller than or equal to 0.5. However, as suggested by Fornell and Larcker (1981), AVE is a more conservative measure; provided the composite reliability is satisfactory (both above 0.7), the convergent validity of the construct is still adequate. Therefore, the convergent validity of the instrument is established. To examine the discriminant validity, Fornell and Larcker (1981) recommend that AVE for each construct should exceed the squared factor correlations between that and other constructs. As shown in Table 2, the squared factor correlations between all the constructs are below the corresponding AVEs, thus supporting the discriminant validity of these constructs.

4. Results

Following construct reliability and validity verification, hierarchical multiple regression (ordinary least squares) was employed to examine the hypothesized relationships

Table 4. Ordinary least squares (OLS) regression results for propensity for buyer–supplier partnership.

Variables	Propensity for buyer–supplier partnership			
	Model 1 <i>B</i>	Model 2 β	Model 3 β	Model 4 <i>B</i>
Firm size	0.055	0.069	0.064	0.062
Industrial sector	−0.069	−0.070	−0.073	−0.059
Performance expectations	–	0.199*	0.204*	0.217*
Supplier attributes	–	0.232**	0.246**	0.252**
Relational performance	–	–	−0.033	−0.010
Performance risk	–	–	–	0.060
Relational risk	–	–	–	−0.130
R^2	0.007	0.136	0.136	0.149
Adjusted R^2	−0.006	0.113	0.108	0.109
<i>F</i>	0.565	5.926***	4.740***	3.699***
Change in R^2	0.007	0.128	0.001	0.012
Change in <i>F</i>	0.565	11.213***	0.133	1.081

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, $n = 156$.

specified in Figure 1. First, summations of related indicators were performed to obtain the independent and dependent variables. Two dummy variables, firm size (0 for large; 1 for SME) and industrial sector (0 for manufacturing; 1 for service), were constructed as control variables. Appendix 2 provides the means, standard deviations and zero-order correlation matrix of all the variables.

Second, because there are significant correlations amongst the variables, the potential issue of multicollinearity was checked. None of the correlations appeared to be sufficiently high to suggest problems of multicollinearity (all below 0.5). Moreover, the tolerance and variance inflation factors (VIFs) of the independent variables (including control variables) were also evaluated. The tolerance values range from 0.703 to 0.961, indicating that none were sufficiently low to indicate multicollinearity issues. Similarly, VIFs for all the independent variables range from 1.041 to 1.543, indicating all were well below the level of 10 used to test for multicollinearity (Neter, Wasserman, and Kutner 1985).

Third, independent variables were entered into the regression model stepwise. Firm size and industrial sector were entered into the first model as control variables. The two selection routine variables (performance expectations and supplier attributes) were entered next. Relational performance (the supplier evaluation routine variable) was then entered. Finally, the two partnership risk variables (performance risk and relational risk) were entered into the model.

As shown in Table 4, the non-significant *F* value and beta for model 1 suggests that firm size and industrial sector do not predict the dependent variable well ($R^2 = 0.007$, $F = 0.565$, $p > 0.05$). The significant *F* value and *F* value change and increase in R^2 in model 2 ($R^2 = 0.136$, $F = 5.926$, $p < 0.001$) as well as the significant beta values suggest that performance expectations ($\beta = 0.199$, $p < 0.05$) and supplier attributes ($\beta = 0.232$, $p < 0.01$) have a significant positive relationship with the propensity to form a buyer–supplier partnership. The non-significant *F* value changes in models 3 and 4 from model 2, suggesting that adding relational performance, performance risk, and relational risk do not improve the model prediction significantly. Moreover, the beta values for these three variables are non-significant, whilst beta

values of performance expectations ($\beta = 0.217$, $p < 0.05$) and supplier attributes ($\beta = 0.252$, $p < 0.01$) remain significant (model 4), thus confirming that performance expectations and supplier attributes are positively related to the propensity to form a buyer–supplier partnership. The relatively low R^2 value ($R^2 = 0.149$ for model 4), however, suggests that there are more factors beyond the coverage of this study that influence the propensity to form partnerships. This is recognized as a limitation of this study. Overall, hypotheses 1 and 2 are supported, and firm size and sector do not influence the modelled relationship.

5. Discussion and conclusions

As was pointed out earlier, our understanding of antecedents to forming supply chain partnership is nascent and partnership with suppliers is an important source of competitive advantage. We fill this gap by examining the relationship between firms' propensity (future intention) to instigate supply chain partnership and the current supplier selection routine, supplier evaluation routine, and two dimensions of perceived partnership risk (relational risk and performance risk). Based on the responses of senior executives and of supply and logistics managers, it is clear from the results of our study that the supplier selection routine plays a decisive role in firms' intention to form buyer–supplier partnerships, unlike the supplier evaluation routine and perceptions of partnership risks. Our findings therefore support the work of Cummings and Holmberg (2012) and McCutcheon and Stuart (2000), who argue that relational expectations are a core factor driving a firm's appetite to form partnerships. Thus, while causality cannot be directly inferred from the findings, the research contributes to the body of knowledge, substantiating the theory that propensity to form buyer–supplier partnerships is cultivated through an appreciation and clear understanding of relational supplier attributes, as well as of the potential performance benefits that could be accrued from the supplier.

It is accepted that hypotheses 1 and 2 support the evolutionary economics perspective that an appropriately configured supplier selection routine can generate knowledge that, in turn, is a source for endogenous change (Becker et al. 2005) – in this case, towards partnership formation. However, whilst the supplier selection routine does pave the way for deliberate endogenous learning, thereby shaping the future development of the firm (Winter 2000; Zollo and Winter 2002) through proclivity towards buyer–supplier partnership formation, this is not the case for the supplier evaluation routine. Considering the relational theory perspective, it appears that an appropriately configured supplier selection routine is sufficient in order to screen potential suppliers and to access the complementary/overlapping knowledge base that is critical to motivating change towards relational rent generation (Dyer and Singh 1998) through buyer–supplier partnerships. The results are stable across different sectors and amongst SMEs and large firms, thus suggesting that this is a common occurrence amongst a wide range of firms in their buyer–supplier partnership formation. The more

significant influence of intangible supplier attributes compared with tangible performance expectations also highlights the danger of ignoring intangible relational attributes that signal cultural compatibility, complementarities and socialization potential, within the supplier selection routine.

The lack of support for hypothesis 3 concerning supplier evaluation routines, an important element of Dyer and Singh's (1998) governance structure, was unexpected, particularly given the natural attraction and attention of managers to indicators of past performance when considering any future developments for their firm. It suggests that the development of relational capital, which is an indicator of whether or not a firm takes a long-term relationship view (Cao and Lumineau 2015), commensurate with the buyer–supplier partnership approach, is not dependent on the inclusion of relational performance indicators in supplier evaluation routines. Moreover, it suggests that contrary to the evolutionary economics perspective (Becker et al. 2005), generating insights into the capabilities of an existing supplier and its ability to consistently perform, again commensurate with the buyer–supplier partnership approach, is also not necessarily dependent on assessing relational performance in the evaluation routines for existing suppliers. In other words, firms are not necessarily more likely to develop the relational capital that underpins buyer–supplier partnership propensity just because they assess relational performance as part of an existing supplier evaluation routine. Accordingly, it also follows that the assessment of relational performance in supplier evaluation routines need not always be a necessary contributor to generating the pool of effective and trusted suppliers that is important for forming buyer–supplier partnerships.

The lack of support for hypotheses 4 and 5 was also unexpected. It implies that managerial perceptions of partnership performance risk or relational risk do not reduce or compromise the propensity to form supplier partnerships. The finding contributes to the perspective that the propensity to form buyer–supplier partnerships is not necessarily enhanced by expending effort trying to minimize the chances of not achieving a properly balanced mode of working and balanced relational exchange. It appears, therefore, that appropriately configured supplier selection routines compensate for, or indeed override, the influence of managerial perceptions of performance or relational risk on the propensity to form buyer–supplier partnerships, possibly by providing the necessary confidence, even at this very early relationship stage, that suppliers will properly share the risks associated with relational outcomes.

With the collective results of the study in mind, an important conclusion that emerges is that providing a firm's supplier selection routine comprises a range of both tangible performance expectations and intangible supplier attribute indicators, the firm is more likely to be able to initiate buyer–supplier partnership development unencumbered by the need to evaluate existing suppliers or by concerns over performance and relational risks normally associated with partnerships.

Guided by the relational theory (Dyer and Singh 1998; Patnayakuni, Rai, and Seth 2006) and evolutionary economics (Nelson and Winter 1982), this study has provided empirical evidence of factors that contribute to the propensity to form buyer–supplier partnerships, evidence that has been fragmented and lacking in the literature. As such, we have responded to calls that have stressed the need for empirical research that helps us extend our understanding of the issues that influence the deployment of different types of inter-firm collaborative relationships – in our case, buyer–supplier partnerships.

Our conceptualization incorporates intangible partner attributes and tangible performance expectations in the supplier selection routine as separate constructs. In doing so, we provide researchers wishing to better understand the influences on buyer–supplier partnership formation with a framework to examine the discrete influence of behavioural traits, on the one hand, as distinct from the influence of business results and performance prospects, on the other.

Our study also provides further support for Dyer and Singh's (1998) general partnership theory that for the specific case of buyer–supplier partnership, the primary motivator is securing competitive advantage. It is also in line with arguments proffered in favour of entering into partnership, such as better coordination and less redundancy, more efficient management of inventories, cost reduction and dispersion of risks (Smith 2002).

5.1. Managerial implications

Our findings provide an indication of where firms might wish to concentrate their efforts in order to improve the likelihood of initiating and developing buyer–supplier partnerships. Efforts to maximize the depth of understanding of (and hence confidence in achieving) the competitive performance improvements derivable from a possible partnership during supplier selection are more important, for example, than investing specifically in means to help to deliver a reliable and flexible mode of working with existing suppliers. Our findings imply that firms wishing to initiate buyer–supplier partnerships can increase the likelihood of doing so by ensuring that their supplier selection routines incorporate efforts to establish positive intangible attributes of potential suppliers. These include their inclination for openness in a relationship, their track record of demonstrating a high degree of integrity with other buyers, and to confirm that they have a deep knowledge and understanding of the (buyer) firm's business (see also Chen, Sohal, and Prajogo 2014). Moreover, the likelihood can be increased by selecting potential suppliers who have a recognized strong reputation and who have demonstrated financial stability.

From a buyer's perspective, our findings can raise awareness amongst practitioners and highlight that understanding of suppliers' intangible attributes is essential in partnership formation. Such an understanding, which is often likely to be ignored in practice or at best only implicitly embedded in supplier selection routines, should be more formalized in practice. From a supplier's perspective, the supported

hypotheses infer that should a supplier be seeking to form a partnership with one or more existing customers as part of its business strategy, it is those customers who apply a comprehensive range of indicators, encompassing both tangible performance expectations and intangible relational partner attributes, during supplier selection routines, who will be more predisposed to develop a partnership. It is therefore in such suppliers' interest to view such selection routines positively and to engage with them to enhance their own future partnership potential, especially by establishing positive intangible attributes, such as reputation, integrity, level of openness, and very importantly, knowing their buyers' business.

A salient implication for managers derives from our finding that the propensity to form partnerships is not predicated on managerial perception of partnership risk. This finding implies that managers striving for partnership formation should not overly base their decisions to progress based on their view regarding partnership risks; but instead, resources and effort should be deployed on close assessment of relational risk factors as part of the partner selection routine. Likewise, in relation to unsupported hypothesis 3, supply managers and firms wishing to develop buyer–supplier partnerships need not over-rely on the reliability and flexibility demonstrated by the supplier when undertaking their supplier evaluation routines, despite how intuitively logical or appealing a focus on these relational performance dimensions may seem.

Above all, our findings imply that if the supplier selection routine is comprehensive, through the inclusion of the consideration of both tangible relational performance expectations and less tangible supplier attributes, there is less need for managers to subsequently invest potentially costly resources in supplier evaluation routines in order to develop new buyer–supplier partnerships. That it is the supplier selection routine rather than the supplier evaluation routine that influences propensity to form supplier partnerships clearly indicates that if firms invest in and get the supplier selection routine right, partnership is more likely to follow.

5.2. Limitations and future research

Like other exploratory studies, this study has its limitations. The partially random sample of respondents was obtained from a single institutional database (CILT), thus potentially limiting the generalizability of the findings. Nevertheless, using a professional organization substantially increases the likelihood of access to knowledgeable respondents – critical in studies of this kind – and improves the response rate. Furthermore, the reported data are, unavoidably, based on management perceptions (the ostensive aspect of the organizational routine) that may not fully reflect the actual practice (the performance aspect of the organizational routine) as Feldman and Pentland (2003) have theorized, but there are no real alternatives where a study requires a large data set. The main emphasis of this study has been on decision-making criteria, that is to say, the criteria for selecting and the

criteria for evaluating suppliers, and the decision-influencing perceptions of partnership risks. Although our study reinforces the contention that, from the standpoint of the buyer, the development of a propensity to form partnerships is a function of at least two factors relating to how firms select suppliers, additional factors (for example, the actual techniques and activities deployed for supplier selection and evaluation) should be explored in future research. Moreover, what has not been examined in this study (or elsewhere, to our knowledge), for example, is the potential moderating effect of overarching business strategies of firms, as well as possible contingency factors such as ownership and environment.

Whilst this article has adopted a cross-sectional approach to examine the influence of a set of organizational routines on the propensity to form partnerships, future research could extend these analyses through in-depth qualitative approaches. It could explore the fact that the propensity to form a buyer–supplier partnership is predicated on certainty in the behaviourally grounded attractiveness of potential suppliers. Similarly, future research might ask what kind of a relationship with the supplier might the buyer deliver at the outset. Yet, foremost amongst directions for further research is that which addresses the question of how, in practical terms, suppliers can maximize the breadth and depth of their evidence about the intangible relational supplier attributes and the tangible performance expectations derivable from a relationship when entering the selection routine. Moreover, future research could adopt an experimental or vignette-based design to offer more micro-level understanding of the preconditions and antecedents that may trigger the propensity to form supply chain partnerships.

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Appendix 1. Self-reporting questionnaire measurement items

Propensity to form buyer–supplier partnership

- PBSP1: we view our key suppliers as suppliers of capabilities, not just products/services
- PBSP2: engage extensively in two-way exchange of important/technical information with key suppliers
- PBSP3: regularly involve suppliers in new product/service development
- PBSP4: make long-term commitment to suppliers to achieve mutually acceptable outcomes
- PBSP5: the benefits from problem-solving with main suppliers are always shared jointly
- PBSP6: we are willing to devote extra effort to our relationship with key suppliers
- PBSP7: we provide hands-on help to solve problems that are identified in the supplier’s production/service delivery and logistics processes

Performance expectations

- PEREXP1: the partnership enables visible costing
- PEREXP2: to improve our competitive market position
- PEREXP3: the partnership has the potential to offer both parties economic benefits
- PEREXP4: to provide effective central coordination
- PEREXP5: the partnership helps us to achieve workforce cost reduction

Supplier attributes

- SUPATR1: their openness
- SUPATR2: they have a strong reputation
- SUPATR3: they demonstrate a high degree of integrity
- SUPATR4: their financial stability
- SUPATR5: they know our business

Relational performance

- RELPERF1: has been reliable and consistent in dealing with us
- RELPERF2: has been flexible in dealing with us

Performance risk

- PERRISK1: partners failing to meet expectations
- PERRISK2: loss of competitiveness
- PERRISK3: risk of supply disruptions

Relational risk

- RELRIK1: absorption of skill base by partners
- RELRIK2: imbalance in resources
- RELRIK3: imbalance in information sharing
- RELRIK4: imbalance in accruing benefits
- RELRIK5: conflict over the scope of the partnership
- RELRIK6: premature trust

Appendix 2. Means, standard deviations and correlations for variables in the study

	Mean	Std. deviation	PBSP	PEREXP	SUPATR	RELPERF	PERRISK	RELRIK	Firm size	Industrial sector
PBSP	18.915	5.822	1	–	–	–	–	–	–	–
PEREXP	8.251	1.678	0.297**	1	–	–	–	–	–	–
SUPATR	12.166	2.088	0.295**	0.381**	1	–	–	–	–	–
RELPERF	8.874	1.230	0.150	0.337**	0.493**	1	–	–	–	–
PERRISK	7.582	1.773	0.132	0.387**	0.179*	0.299**	1	–	–	–
RELRIK	16.205	3.851	0.026	0.337**	0.264**	0.366**	0.437**	1	–	–
Firm size	0.385	0.488	0.051	–0.006	–0.055	–0.178*	–0.025	–0.059	1	–
Industrial sector	0.545	0.500	–0.066	–0.140	0.122	–0.062	–0.078	0.052	0.061	1

** Correlation is significant at the 0.01 level (two-tailed). * Correlation is significant at the 0.05 level (two-tailed).