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ORIGINAL EMPIRICAL RESEARCH

Institutions and opportunism in buyer–supplier exchanges: the moderated mediating effects of contractual and relational governance

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Abstract
The marketing channel literature has paid limited attention to institutional environments that constrain buyer–supplier exchanges, though such institutions are fundamental determinants of transaction costs, and thus of the occurrence of opportunism in the buyer–supplier dyads. Drawing on transaction cost economics and institutional theory, this study uncovers the critical influence of formal and informal institutions (i.e., legal effectiveness and networking expenditure) on the use of governance in deterring opportunism, as well as the moderating role of government support on the efficacy of governance mechanism. The findings from a buyer–supplier dyadic survey and 2 secondary datasets reveal that legal effectiveness mitigates opportunism through increased use of both contractual and relational governance; in contrast, networking expenditure reduces opportunism through relational governance, yet increases opportunism via lowering contractual governance. In addition, contractual governance is more efficient in constraining opportunism when government support is high, whereas relational governance deters opportunism more when government support is low. These findings offer important implications for academic research and managerial practice.

Keywords Institutional theory · Legal effectiveness · Networking expenditure · Government support · Opportunism · Buyer–supplier exchanges · Contractual governance · Relational governance · China

With the globalization of business activities, marketing scholars have long called for more attention to the role of macro-level institutions in the global marketplace (Carson et al. 1999; Grewal and Dharwadkar 2002). Carson et al. (1999) propose a theoretical framework to articulate the impact of institutions on governance arrangements for marketing value systems, and Grewal and Dharwadkar (2002) offer a political economy paradigm to tackle firms' interactions with regulatory and normative institutions. Taking institutions into consideration is especially critical for studies in emerging markets, where underdeveloped institutional frameworks and rapid institutional changes generate severe challenges for business operations (Handley and Angst 2015; Sheng et al. 2011; Sheth 2011). Specifically, the underdeveloped and unstable institutional environments in emerging markets make marketing channels more vulnerable to opportunism due to the high cost of detecting and punishing opportunistic behaviors (Hoskisson et al. 2000; Zhou et al. 2017). Because institutional environments determine a firm's strategic choices and costs in coordinating economics exchanges (Cao and Lumineau 2015; North 2005; Zhou et al. 2017), it is critical to account for institutional environments when contemplating how to curtail opportunism in buyer–supplier relationships.

Although marketing scholars have explored how institutional environments affect buyer–supplier relationship management

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and performance (Cao et al. 2018; Sheng et al. 2011; Yang et al. 2012), few studies have examined their impact on opportunism (Wang et al. 2016b). Building on transaction cost economics (TCE), marketing scholars have extensively investigated how firms choose alternative governance mechanisms to mitigate opportunism (Cao and Lumineau 2015; Rindfleisch and Heide 1997). However, because interfirm exchanges are embedded in a broad institutional environment, and institutions define transaction rules and determine transaction costs (Carson et al. 1999; North 1990), the choice of governance mechanisms is a function of external institutional environments (Grewal and Dharwadkar 2002). Underdeveloped, however, is how alternative governance mechanisms mediate the impact of institutions on opportunism in buyer–supplier relationships.

Moreover, the efficacy of alternative governance mechanisms is conditional on exchange and environment factors (Poppo et al. 2016; Raassens et al. 2012). The transaction costs associated with governance mechanisms reflect institutional impacts, especially in emerging markets where market-supporting institutions are underdeveloped (Handley and Angst 2015; Sheth 2011; Wang et al. 2016b). As buyer–supplier relationships are embedded in the macro institutional context, organizational behaviors and actions must be deemed proper according to the socially constructed system of norms, values, and beliefs (Suchman 1995). Thus, the efficacy of governance mechanisms is bounded by surrounding institutional environments. However, prior studies have primarily focused on the contingent role of environmental uncertainty (Cao and Lumineau 2015), with limited attention given to how institutional forces moderate the effects of governance mechanisms on opportunism (Wang et al. 2016b).

To address these research gaps, we build on TCE and institutional theory, such that we model the mediating role of governance in bridging the link between institutions and opportunism in buyer–supplier exchanges as well as the moderating effect of government support on the relationship between governance and opportunism (Fig. 1). We explicate formal and informal institutional forces, manifested as legal effectiveness and networking expenditure, respectively. We consider both contractual and relational governance mechanisms (Brown et al. 2000; Cao and Lumineau 2015; Poppo and Zenger 2002), and their interactions with government support. Thus we can assess how institutional factors influence opportunism through alternative governance mechanisms and moderate their impacts on partner opportunism.

The empirical results from a primary dyadic survey and 2 secondary datasets provide strong support for our predictions.

With these insights, this study makes several important contributions to the buyer–supplier management literature. First, by uncovering the mediating roles of contractual and relational governance through which institutions influence opportunism, we bridge the missing link between the macro-level institutional environment and micro-level buyer–supplier relationship outcome. Second, our findings reveal that legal effectiveness and networking expenditure influence opportunism through different mediating fashions. Third, we demonstrate that the efficacy of buyer–supplier relationship governance is contingent on government support, which enriches our understanding of the proper alignment between governance and institutional environments. Overall, our study complements prior TCE-based marketing channel studies with an institutional view, demonstrating the salient role of institutions in buyer–supplier exchanges.

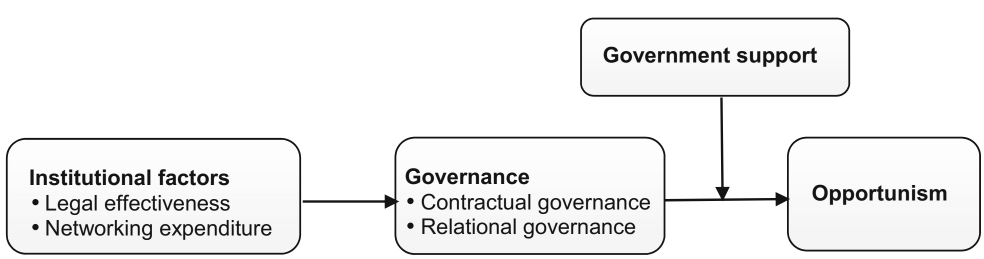
Conceptual development

TCE view of interfirm governance and opportunism

Opportunism refers to "self-interest seeking with guile," as manifested in behaviors such as cheating, shirking, and agreement breaching (Williamson 1985, p. 47). According to TCE, opportunistic behaviors are induced by exchange hazards, such as transaction-specific assets (TSAs, assets invested particularly for a relationship) and performance ambiguity (Poppo and Zenger 2002; Rokkan et al. 2003). Contractual and relational governance are two primary mechanisms to safeguard exchanges and curtail potential opportunism in the transactional–relational continuum of exchange governance (Heide and John 1992; Johnson and Sohi 2016; Poppo and Zenger 2002; Rindfleisch and Heide 1997; Williamson 1996). These two types of governance coexist and coordinate interfirm exchanges and deter opportunism via different mechanisms (see Cao and Lumineau 2015 for a review).

Contractual governance refers to the explicit use of formal written contracts to coordinate interfirm cooperation (Jap and Anderson 2003; Lusch and Brown 1996; Poppo and Zenger 2002). As formal contractual clauses specify each party's rights and responsibilities and prescribe procedures to deal

Figure 1 The conceptual model



with contingencies, they reduce ambiguity in interpreting information and safeguard TSAs in interfirm exchanges (Reuer and Ariño 2007; Rindfleisch and Heide 1997). *Relational governance* refers to the use of shared social norms to guide acceptable or desirable behaviors between exchange partners (Brown et al. 2000; Heide 1994; Rokkan et al. 2003; Zhou and Xu 2012). Among various social norms, flexibility, information sharing, and solidarity are most critical ones in buyer–supplier relationships (e.g.Heide and John 1992; Jap and Ganesan 2000; Lusch and Brown 1996). Following these studies, we operationalize relational governance as a second-order construct consisting of norms of *flexibility*, *information sharing*, and *solidarity*.

Institutional view of buyer–supplier exchanges

Institutional theory stems from two distinct roots: economics and sociology. Institutional economics defines institutions as "humanly devised constraints that structure human interaction" and emphasizes their roles in shaping corporate strategic choices and performance (North 1990, p. 3; North 2005). The new institutionalism movement from sociology instead defines institutions as "regulative, normative, and cognitive structures and activities that provide stability and meaning to social behavior" (Scott 1995, p. 33), such that it highlights how organizations should conform to institutional pressures (DiMaggio and Powell 1983). Scholars in turn have developed an institutional view derived from both roots, because the two approaches are largely complementary (Peng et al. 2008). Institutions can be formal (e.g., laws and regulations) or informal (e.g., cultures and values) (North 1990). Enforced through official, coercive means such as courts and legal regulations, formal institutions exert regulatory pressures on organizations, and noncompliance leads to legal sanctions and penalties (Peng 2003). Informal institutions are enforced through private, network-based means, which create normative and cognitive pressures for firms to engage in socially acceptable or desirable practices. Normative pressures shape firm behaviors through social beliefs that define what organizations should or should not do, and cognitive pressures reflect how individual managers' internalized beliefs affect firm actions (Scott 2008). Noncompliance with the institutional pressures causes external constituents to question or defy the firms' social validity (Grewal and Dharwadkar 2002; Scott 2008).

Recent studies have explored the impact of institutional environments on buyer–supplier relationship management (see Table 1 for a review). These studies mainly focus on how institutions affect buyer–supplier relationship outcomes, including information sharing and trust development (Cai et al. 2010), contract ineffectiveness (Shou et al. 2016), role hazards (Dong et al. 2016), request of quotation (Lanzolla and Frankort 2016), channel performance (Yang et al. 2012), and the manufacturer's dependence on foreign distributors (Zhang et al. 2003). Another set of studies explore the contingent effects of institutional factors. For instance, Bai et al. (2016) find that legal enforceability and unilateral government support moderate the effect of contract on conflict. Sheng et al. (2011) show that the effect of business ties on firm performance is a function of enforcement inefficiency and government support. Wang et al. (2016a) examine how government intervention and *guanxi* importance moderate the effect of mutual learning on product co-development between the buyer and supplier.

However, despite that institutions largely determine the cost of detecting and punishing opportunism (North 2005), few studies have investigated their impact on opportunism, never to mention the underlying mechanisms through which institutional forces may attenuate or increase opportunism. In addition, the proper alignment between governance mechanisms and the institutional environments is an important factor in restraining opportunism. Yet prior studies have paid scant attention to the contingent effect of government role on the efficacy of governance mechanisms. These research gaps warrant a simultaneous examination of the mediating role of governance and their interplay with institutions in constraining opportunism in buyer–supplier dyads.

Subnational institutional variations in emerging markets

In emerging markets, an underdeveloped legal system and a pervasive reliance on social networks represent the most salient formal and informal institutional factors respectively (Hoskisson et al. 2000; Peng 2003). In many emerging countries, even if legal codes and court systems seem well defined, their implementation and enforcement remain problematic (Acquaah 2007; Hoskisson et al. 2000). Although the de jure judiciaries are usually universally- and well-defined at the national level, the de facto judiciaries are often subordinated to political power (Carson et al. 1999). In China for example, despite continuous legal reforms over the past several decades, legal enforceability continues to be a major business hurdle due to intensive government interventions (Zhou and Poppo 2010). In Africa, legal institutions are widely undermined by poor enforcement capacity (Acquaah 2007). Therefore, we focus on *legal effectiveness*, or the extent to which the regulatory and court systems can enforce laws and protect a firm or an individual's property and interests (Zhou and Poppo 2010).

Moreover, companies in Brazil, China, India, and Russia have long traditions of using network-based, informal institutions to conduct business (Hoskisson et al. 2000; Li et al. 2008; Peng 2003). These social networks shape dyadic interfirm relationships, because the "individual relationships are embedded in a context of other relationships that could have governance implications" (Heide 1994, p. 81). By securing scarce resources and coordinating exchanges, a firm's managerial

Table 1 Summary of selected studies of institutions in buyer–supplier exchanges

Reference	Sample	Independent variable	Dependent variable	Role of institutions	Key findings
Bai et al. (2016) JOM	436 buyer–supplier dyads	Output-based 'contract, behavior-based contract	Conflict	Legal enforceability and unilateral government support moderate the effect of contract on conflict.	The interaction between legal enforceability and contract attenuates conflict, while the interaction between unilateral government support and contract increases conflict.
Cai et al. (2010) JOM	398 manufacturing firms	Legal protection, government support, *guanxi* importance	Information sharing and collaborative planning between buyer and supplier	The institutional factors are antecedents of trust, information sharing and collaborative planning.	Trust partially mediates the effects of government support and *guanxi* importance on information integration.
Dong et al. (2016) JOM	141 buyer–supplier dyads	Sub-national institutional distance	Supply chain performance	Institutional distance is antecedent of role hazards (role ambiguity and conflict), which in turn jeopardize channel performance.	Subnational institutional distance is positively related to role hazards, and these positive relationships are moderated by information sharing and dynamic adaptation.
Lanzolla and Frankort (2016) AMJ	438 requests for quotation submitted by 34 buyers to 301 sellers (online B2B marketplace)	Local institutional quality and legal status of the seller and that of the seller relative the buyer	Request for quotation	Sellers' local institutional quality and legal status influence the likelihood that a buyer contacts that seller.	Both sellers' local institutional quality and their legal statuses affect a buyer's likelihood of contacting a seller. A buyer is also more likely to contact sellers with higher local institutional quality relative to the buyer.
Sheng et al. (2011) JM	241 manufacturing firms	Business ties and political ties	Firm performance	Enforcement inefficiency and government support moderate the effect of business ties and political ties on firm performance.	Business ties are more beneficial when legal enforcement is inefficient. Political ties lead to greater performance when general government support is weak.
Shou et al. (2016) JOM	187 distributors	Information transparency and legal enforceability	Efforts to seek business and political ties	Institutional factors are antecedents of contract ineffectiveness.	Institutions determine how effectively a firm designs and enforces a contract, which in turn prompts a firm to seek social ties.
Wang et al. (2016a) JOM	323 buyer–supplier dyads	Knowledge commonality and goal compatibility between the buyer and supplier	Product co-development	Institutional factors moderate the link between mutual learning and product co-development.	Government intervention weakens, whereas *guanxi* importance strengthens the positive effect of mutual learning on product co-development.
Wang et al. (2016b) JOM	293 buyer–supplier dyads	Contract and trust	Supplier opportunism	Regulatory uncertainty and ownership structure moderate the effects of contracts and trust on supplier opportunism.	Contracts are more effective in deterring supplier opportunism when regulatory uncertainty is high. Contracts help curtail opportunism more in domestic, compared with international relationships, whereas trust is more effective in restricting supplier opportunism in international relationships.
Yang et al. (2012) JM	205 export manufacturing firms	Institutional distance in 3 dimensions: regulatory, normative, and cultural-cognitive	Channel performance: strategic performance; selling performance; economic performance	Institutional distance determines legitimacy pressures for acceptable business practice and market ambiguity in foreign environment.	Firms can use contract and relational governance to deal with legitimacy and efficiency issues caused by institutional distance and safeguard channel performance.
Zhang et al. (2003) JIBS	142 exporting manufacturers	Cultural distance Hostility of legal and institutional environment	Manufacturer's competitiveness in the export market	Hostility of the legal and institutional environment determines the manufacturer's dependence on foreign distributors.	Hostility of the legal and institutional environment increases manufacturer's relative dependence on foreign distributors, which reduces the use of relational norms.
Zhou and Poppo (2010) JIBS	399 buyer–supplier exchanges	Exchange hazards, including asset specificity, environmental uncertainty, and behavioral uncertainty	Explicit contracts and relational reliability	Legal enforceability moderates the relationship between exchange hazards and governance mechanisms.	When legal system is effective, firms use explicit contracts rather than relational reliability to safeguard transaction hazards.

AMJ = Academy of Management Journal; JIBS = Journal of International Business Studies; JM = Journal of Marketing; JOM = Journal of Operations Management.

networks improve firm performance (Gu et al. 2008). In China, economic exchanges tend to be built on networks (i.e., *guanxi*) that rely on special favors and obligations in business relationships (Greif and Tabellini 2010). Therefore, we consider *networking expenditure*, the resources a firm uses to build its social networks; the higher the expenditure, the more important networking is in the society (Hutchings and Murray 2003; Lin et al. 2016).

Unlike governments in developed countries that regulate economic activities mostly through established and transparent legislations, governments in emerging economies such as China often directly intervene into business operations and influence firm decisions by allocating scarce resources and guiding industrial development (Cai et al. 2010). Local governments in China can provide direct support such as valuable information and financial resources to individual firms, as well as indirect support such as implementing policies or programs that are beneficial to individual firms (Li and Atuahene-Gima 2001; Pistor et al. 2000). Accordingly, we consider *government support*, defined as the extent to which governments provide regulatory resources and help to individual firms (Cai et al. 2010; Li and Atuahene-Gima 2001).

Emerging markets also possess noticeable subnational institutional variations, due to uneven economic development and different cultural traditions across regions (Chan et al. 2010; Chang and Wu 2014; Jia 2014). For example, the 33 provinces in China (similar to the states in the U.S.) differ widely in their economic development levels, with the highest GDP per capita of more than US$17,000 in Tianjin and Beijing and the lowest of less than US$4,800 in Yunnan and Gansu in 2016. With such variations, although China has strived to establish an effective legal system nationwide, legal enforcement varies widely across regions (Chan et al. 2010; Zhou and Poppo 2010).[1] Such legal variation is evident even in Italy, a developed country, where the legislative institutions demonstrates large heterogeneity across its 20 regions (Lanzolla and Frankort 2016).

Informal institutions, including culture and social values, also vary greatly across provinces due to historical traditions and uneven development (Meyer and Nguyen 2005). In China, the role of informal institutions in business operations, such as managerial networks, is historically and culturally divergent across different regions (Li et al. 2008). Uneven regional economic development also prompts regional difference in social values, including networking expenditure (Tung et al. 2008). Compared with the coastal regions of China, which have enjoyed a much faster growth rate, western inland provinces tend to host business operations that are embedded in social relationships (Jia 2014).

Government support also exhibit significant heterogeneity in China. During China's economic reform, the Chinese central government has shifted a large portion of its power to local governments, which can develop specific policies to cater local business environments or regional development priorities (Cai et al. 2010). Accordingly, local governments may provide different levels of support to firms, such as state-owned enterprises (Zhou et al. 2017) or firms with political connections (Gu et al. 2008).

Hypotheses

Mediating role of governance mechanisms

Prior studies have extensively examined the role of contractual and relational governance in deterring partner opportunism (Cao and Lumineau 2015; Rokkan et al. 2003; Wuyts and Geyskens 2005). By explicating the responsibilities of each party, performance outcomes to be delivered, and processes for resolving contingent issues, contractual governance provides clear guidelines for the transaction parties to follow, so it should narrow the potential for opportunistic behaviors (Wuyts and Geyskens 2005). Moreover, the procedures and performance standards specified in the contract provide the basis for courts to clarify responsibility, should breaches occur, which reduces the costs of contract enforcement (Klein 1996). Penalties for noncompliance and compensation for the aggrieved party, as specified in the contract, also provide means for the aggrieved party to protect its interests from being opportunistically appropriated (Poppo and Zenger 2002). Thus, contracts mitigate interfirm opportunism.

By nurturing shared values and congruent goals, relational governance motivates exchange parties to cooperate and value mutual interests, which reduces incentives to behave opportunistically (Rokkan et al. 2003; Wuyts and Geyskens 2005). Also, relational governance promotes expectations of continuity, which create a future time horizon for exchange relationships (Carson et al. 2006). Accordingly, the potential loss of future business outweighs the current gain from opportunistic conduct (Poppo et al. 2008). In addition, relational governance encourages information sharing and cultivates trust between the channel members, which reduces tendencies to exercise opportunistic behaviors (Morgan and Hunt 1994).

Given the abundant literature on the roles of contractual and relational governance in reducing opportunism, we treat such roles as the foundation of the mediating effects. Our logic is that as institutions determine the transaction costs and

[1] The World Bank's *Doing Business Survey* (2008) investigates the effectiveness of legal enforcement in the capital cities of 26 provinces and 4 centrally administered municipalities in China. The average number of procedural steps required to investigate a commercial dispute is the same (31 steps) for all 30 cities, because these steps follow a national, standardized, written code. However, the efficiency of the courts varies significantly across cities: The average number of days to solve a commercial dispute ranges from 112 (Nanjing) to 540 days (Changchun), with a mean of 319.07 and a standard deviation of 89.33. Average court and attorney fees, expressed as a percentage of the claim value, swing from 9.00% (Shanghai) to 41.80% (Hefei), with a mean of 21.78% and a standard deviation of 9.04%.

legitimacy of a firm's choice of actions (North 2005; Scott 1995), governance mechanisms are endogenous to legal effectiveness and networking expenditure and thereby mediate their effects on interfirm opportunism.

We predict that legal effectiveness will increase the use of contractual governance. The power of the legal system emanates from its capability to make the threat of sanctions or rewards credible (Greif 2005). Because an effective legal system strengthens the predictability of the law and enforcement of contracts (Zhou and Poppo 2010), firms have higher confidence that the provisions specified in the contracts will be enforced. In return, firms are more likely to enlarge the scope, explicitness, and completeness of their contracts to coordinate economic transactions (Carson et al. 1999; Peng 2003). Also, an effective legal system reduces the costs of litigation and contractual enforcement (Greif 2005), so firms can protect their interests and obtain credible compensation, should litigations occur. As a result, exchange parties have more incentives to stipulate rewards or compensations in details. In addition, because an effective legal system coercively delineates what each party can or cannot do, and noncompliance leads to legal sanctions (Scott 2008), exchange partners are motivated to specify the responsibilities and obligations of each party in the contract.

Extant literature offers conflicting views regarding the relationship between legal effectiveness and relational governance. Some researchers predict that an efficient legal system decreases the relative enforcement costs of contractual versus relational governance, yet relational governance is more costly and slower to develop and maintain; thus, legal effectiveness should decrease the use of relational governance (Greif 2005; Peng 2003). In contrast, other researchers emphasize the enduring nature of informal governance mechanisms despite the institutional transition, perhaps because "the movement from personal to impersonal exchange … requires fundamental rethinking at odds with our genetic heritage" (North 2005: 84). In reality, relational governance is common in the U.S., despite its strong litigation tradition (Poppo and Zenger 2002; Uzzi 1997); the use of relational governance is also extensive in Japan, although an effective legal system has been established over time (Cao and Lumineau 2015; Ginsburg and Hoetker 2006).

We agree that the substitutive view may be too simplistic, as economic activities are deeply embedded in institutional settings (Carson et al. 1999). As an effective legal system ensures the transaction order and pre-specified obligations, it increases predictability in behavior and thus serves as an institutional foundation to develop relational governance between the transaction parties (Poppo and Zenger 2002). Consistent with this logic, Zhang et al. (2003) reveal that the perceived hostility of legal and institutional environment in foreign markets increases manufacturer's dependence on foreign distributors, which in turn reduces the flexibility norms. Lanzolla and Frankort (2016) find that a better institutional quality increases the likelihood of partner contact and information sharing, as the quality of institutional environment conveys credible information on economic agents' behaviors. Greif and Tabellini (2010) report that Asian businessmen perceive Westerners as more trustworthy due to the advanced legal system in the Western countries, which helps build solidarity norms. Johnson et al. (2002) show that the effectiveness of legal system has a significant, positive effect on relational norms (i.e., trust and information sharing) between exchange parties in a study of Vietnamese firms. Zhou et al. (2014) document the persistent role of business ties in Chinese societies during the institutional development. Because relational governance consists of norms of flexibility, information sharing, and solidarity, we predict that legal effectiveness likely supports the use of relational governance.

Taken together, given the positive effect of legal effectiveness on contractual and relational governance, and the latter's role in constraining opportunism, we hypothesize that:

H1a: Legal effectiveness mitigates opportunism through increased use of contractual governance.

H1b: Legal effectiveness mitigates opportunism through increased use of relational governance.

Next, we expect networking expenditure to inhibit the use of contractual governance. According to the institutional view, organizations must devise strategic choices, including relationship governance mechanisms, to conform to the normative and cognitive pressures of informal institutions, such as social and cultural values (DiMaggio and Powell 1983). Compliance with cultural values allows firms to obtain positive social evaluations and establish social status (Oliver 1991). When networking is important, cultural values place great normative pressure on economic agents to use social connections to coordinate business relationships (Xin and Pearce 1996). Accordingly, firms must comply with these values to obtain social legitimacy (Oliver 1991). However, if partners rely heavily on explicit contracts, such reliance goes against the prevalent cultural values and is perceived as a signal of distrust (Jap and Ganesan 2000). Because escalated distrust deviates from the values of network-based institutions, exchange partners will have less incentive to use detailed and explicit contracts when networking expenditure is high.

In contrast, networking expenditure fosters relational governance through both normative and cognitive pressures. A network-based society emphasizes social relations, moral obligations, and reputational incentives (Greif and Tabellini 2010). These values define what practices are socially acceptable or desirable (Scott 1995). Relational norms of flexibility, information sharing, and solidarity get enforced through ongoing cooperative interactions and reputational threats (Plambeck and Taylor 2006), which are highly consistent with the normative values of a network-based society. Because the values of cooperation and collectivization are widely diffused among economic agents (Oliver 1991), channel managers comply with this cognitive pressure by internalizing beliefs and assumptions within channel dyads to guide everyday operations and routines (Scott 1995). Managers thus may develop stronger relational norms, which are congruent with the network values. Overall, because networking expenditure is negatively associated with contractual governance but positively associated with relational governance, we hypothesize that:

H2a: Networking expenditure increases opportunism through reduced use of contractual governance.

H2b: Networking expenditure mitigates opportunism through increased use of relational governance.

Moderating role of government support

By providing regulatory information, scarce resources, and preferential programs, government support plays a critical role in shaping the efficacy of firm strategies (Li and Atuahene-Gima 2001; Sheng et al. 2011). We suggest that government support may enhance the role of contractual governance in mitigating opportunism. First, government support can facilitate contractual enforcement. Given the overall underdeveloped institutional frameworks in emerging economies, contractual enforcement in general is problematic and subject to the interpretation and intervention of local government officials (Luo 2007). Accordingly, local government officials play a significant role in facilitating the litigation process as well as speeding up the execution of judicial ruling. For instance, according to the statistics from the World Bank's *Doing Business Survey* (2008), nearly half of the civil cases with effective rulings in China had not been executed by the year end. Government officials can use their political power to execute the ruling in a timely manner. As a result, opportunistic contract breach or violation can be deterred if firms can obtain strong support from local governments.

Second, government support can help firms fulfill their contractual obligations. When firms cannot deliver the outputs as prescribed in the contracts due to uncontrollable factors, opportunistic shirking or evasion of obligations arises (Wathne and Heide 2000). If firms can obtain resource or policy support from the government, they can deal with the uncontrollable factors so as to fulfill its contractual obligations and avoid potential opportunistic behaviors. As a result, contractual governance is more effective when government support is strong. The case of Fosunny (Fu Chang) Electronic Technology Co. in China illustrates the important role that governments play to help firms fulfill their contractual obligations. With more than 100 upstream suppliers, Fosunny is a Shenzhen-based electronics manufacturer that provides smartphone components and accessories for telecoms giants, including Huawei Technologies and ZTE Corporation. In 2014, Fosunny experienced its hardest time and filed a bankruptcy and reorganization case. The local governments in Shenzhen provided intensive support to Fosunny in the reorganization process by providing unemployment benefits to its employees, coordinating creditors and suppliers, and bringing in new strategic investors, and etc. These efforts helped Fosunny to avoid potential breach or violation of its contracts with upstream suppliers (China Daily 2015; Wall Street Journal 2015). Overall, we predict:

H3: The negative relationship between contractual governance and opportunism is stronger when government support is high than when it is low.

In contrast, relational governance may be less effective in constraining opportunism when government support is high. Relational governance coordinates exchanges through information and resource sharing, which nurtures mutual benefits and suppresses opportunism (Cao and Lumineau 2015; Rindfleisch and Heide 1997). However, when firms have strong government support, they can obtain critical information and scarce resources from the governments (Li and Atuahene-Gima 2001; Pistor et al. 2000; Sheng et al. 2011). As Zhou et al. (2017) reveal, state-owned enterprises in China have the privilege of securing low-cost loans from the big-four banks, which are directly controlled by the government. In such case, relational governance becomes less effective in suppressing opportunism because government support reduces firms' dependence on partners for resources.

The role of relational governance in constraining opportunism also relies on social reputation (Sheng et al. 2011). Opportunistic behaviors are perceived by the members of the business society as a noncompliance or violation of relational norms (Zhou and Xu 2012). The loss of a trustworthy reputation due to opportunistic behaviors can lead to ostracism or exclusion from business loops, which helps curb opportunistic intentions (Gu et al. 2008; Milgrom and North 1990). Meanwhile, given the strong power of governments in emerging markets (Sheng et al. 2011), government support reflects the backup and favor from the administrative agencies, which helps build and signal a firm's social legitimacy (Li and Atuahene-Gima 2001). Such legitimacy implies that the firm's activities and behaviors are consistent with government expectations and standards (Zimmerman and Zeitz 2002). As social legitimacy enables a firm to earn acceptance and support from stakeholders in the business network (Suchman 1995), the opportunism-constraining role of relational governance declines for firms with strong government support.

H4: The negative relationship between relational governance and opportunism is weaker when government support is high than when it is low.

Method

Sample and data collection procedures

To test the hypotheses, we examined buyer–supplier exchanges of manufacturing firms in China by combining a primary dyadic survey and 2 secondary datasets. In China, institutional development varies significantly across different provinces, so a province is a meaningful level to measure the legal effectiveness and networking expenditure (e.g., Chan et al. 2010; Chang and Wu 2014; Jia 2014). We assessed province-level *legal effectiveness* with an archival dataset provided by the National Economic Research Institute (NERI) in China. We measured province-level *networking expenditure* with data from the World Bank "Investment Climate Survey." We conducted a primary survey of buyer–supplier dyads to measure a firm's perception of government support and other exchange-level variables. The survey was conducted 2 year after the secondary data collection (i.e., information about legal effectiveness and networking expenditure), which helped establish causal links between the institutional environments and the governance mechanisms. We combined the 3 datasets by attributing the scores of legal effectiveness and networking expenditure to the individual firms based on their home provinces.

For the primary survey, we used a directory provided by the China Statistics Bureau to draw a random sample of 1,200 manufacturing firms that operated within the four-digit Chinese Industrial Classification codes 1311–4290. These firms spanned diverse industries (e.g., chemicals, computer equipment, electronics, mechanics, materials, plastics, apparel, furniture, food) and regions, such that they offer significant variation in their institutional environments.

The survey instrument was developed in English, translated into Chinese by independent translators, and then translated back into English to ensure conceptual equivalence (Hoskisson et al. 2000). To ensure the content and face validity of the measures, we conducted 10 in-depth interviews with senior purchasing managers, who affirmed their relevance and completeness. On the basis of their responses, we also revised a few questionnaire items. We then conducted a pilot study with 20 purchasing professionals and 20 supplier managers, who answered all the items and provided further feedback about the design and wording of the questionnaire. We finalized the questionnaire according to the results of this pilot study.

We collaborated with a national marketing research company and trained interviewers to administer the survey on-site. On-site surveys are critical for obtaining reliable, valid data in emerging markets, because interviewers can reach the right respondents and explain the survey questions if necessary (Hoskisson et al. 2000; Li et al. 2008). In each firm, a senior purchasing manager served as the key informant; our interviews revealed that they were the most knowledgeable about their firms' relationships with suppliers. Managers were first contacted by telephone to solicit their cooperation. To motivate participation, the interviewers informed them of the academic nature of the study and the confidentiality of their responses and offered an incentive, in the form of a summary report. In total, 583 purchasing managers agreed to participate, 463 of whom were successfully surveyed on-site. Informants selected one of their firms' major suppliers and answered the survey questions with regard to their exchanges with that supplier. After the survey, we asked the managers to provide contact information for their counterparts in the supplier companies.

Next, we contacted the supplier managers to solicit their cooperation. At this stage, we used multiple methods (i.e., on-site visits, mail, and fax) to collect the data. After excluding firms with extensive missing values, we successfully obtained 420 valid responses from suppliers. Our final sample thus consists of 420 matched buyer–supplier dyads, representing an effective response rate of 35%. The sample firms were located in 18 provinces or province-level municipal cities; 71.7% buyers and suppliers were located in the same province or province-level municipal cities, and 28.3% dyads were comprised of buyers and suppliers from different locations. Since we used the buyer's opportunism as the dependent variable, we used the buyer province's institutional environments in the analyses when the buyer and the supplier were not located in the same province.

After this fieldwork, one of the authors randomly contacted 45 respondents to confirm that the interviews had been conducted properly; we found no problems in the data collection procedure. A comparison of the responding and non-responding firms from the sampling frame indicated no significant differences in terms of key firm characteristics (t = 0.21, p = 0.83 for number of employees; t = 0.52, p = 0.61 for total assets), so non-response bias was not a major concern.

Measures

To avoid common method bias, we separated the information sources of independent and dependent variables. In particular, the information of province-level institutional variables (legal effectiveness and networking expenditure) was obtained from the secondary data; the information of government support and interfirm governance mechanisms (i.e., contractual and relational governance) was collected from buyer managers; the information of opportunism and control variables was from supplier managers. In the survey, the perceptual measures of latent constructs used 7-point Likert scales.

Opportunism To avoid potential response bias associated with self-reported opportunism, we asked the supplier to rate the buyer's opportunism. These items, adapted from Rokkan et al. (2003), assessed the extent to which the buyer firms engaged in opportunistic behaviors such as lying, violating contracts, breaking promises, breaching informal agreements, or hurting the supplier's interest (see the Appendix).

We measured *contractual governance* with items adapted from Lusch and Brown (1996). These items assessed the degree to which the channel members relied on written contracts (cf. shared understanding) to specify roles, responsibilities, task performance, or appropriate responses to unplanned events, as well as to resolve disagreement. We operationalized *relational governance* as a second-order factor of 3 relational norms: flexibility, information sharing, and solidarity (Heide and John 1992; Jap and Ganesan 2000; Lusch and Brown 1996; Zhang et al. 2003).

We adapted the measure of *government support* from Li and Atuahene-Gima (2001). The scale contains four items that reflect the local governments' effort and activities to support individual firms' operations in various perspectives, including supportive projects, policies, information, and resources.

The measure of *legal effectiveness* is from the NERI index that indicates each province's level of economic, financial, political, and legal development, which has been widely used in economics, finance, and strategy research (e.g., Chang and Wu 2014; Jia 2014). The index contains five sub-indices: (1) the relation between government and the market, (2) the development of the non-state economy, (3) the development of the product market, (4) the development of the factor market, and (5) the development of the legal environment and market intermediaries. We used the fifth sub-index to measure legal effectiveness. It contains four indicators: (1) development of market and legal intermediaries, such as lawyer and accountant services, (2) legal protection of corporate property and interests, (3) legal protection of intellectual property, and (4) legal protection of consumer interests and rights. The level of legal effectiveness exhibits significant variation across different provinces, ranging from 3.20 (Shaanxi province) to 13.87 (Shanghai), with an average of 11.88.

We obtained the measure of *networking expenditure* from the World Bank "Investment Climate Survey." In China, firms devote substantial resources to business entertainment, such as karaoke, performances, travel, and banquets, to build managerial networks (Sheng et al. 2011; Xin and Pearce 1996); networking expenditure reflects the importance and value of social networks (Lin et al. 2016; Hutchings and Murray 2003). The World Bank Survey collected information of annual corporate expenses on business entertaining. We used the annual entertaining expenses as a percentage of firm revenue to measure networking expenditure. Similarly, Lin et al. (2016) use this ratio to measure firms' investment on network connections, which reflects the importance and value of network in business operations in China.

The World Bank Survey sampled 12,400 firms in China. To assess networking expenditure at the provincial level, we used the average score across all individual sample firms in each province, with the assumption that firms in a specific province share similar cultural values (Klein and Kozlowski 2000). Following Klein and Kozlowski (2000), we examined within-unit agreement and between-unit differences when aggregating firm-level data to the provincial level. We generated the intraclass correlation coefficients ICC (1). The ICC (1) is greater than 0, and the group effect (i.e., F-value in the analysis of variance [ANOVA], with province as the independent variable and the ratio as the dependent variable) is significant ($p < .001$), indicating within-unit convergence. Using the Spearman-Brown formula, we derived an ICC (2) value of 0.85, well above the 0.70 cutoff (Klein and Kozlowski 2000). These results justify the data aggregation. The level of networking expenditure (the annual entertaining expenses as a percentage of firm revenue) varies substantially, with the lowest level of 0.27 (Guangdong province) and the highest level of 0.77 (Hunan province). The average level is 0.42.

Control variables We controlled for four sources of heterogeneity. First, we controlled for exchange attributes, including *TSAs* and *performance ambiguity*. We adapted the TSAs measure from Cannon and Perreault Jr. (1999) and Jap and Ganesan (2000) and the scale of the buyer's performance ambiguity from Heide (2003) (see the Appendix).

Second, we considered focal firm characteristics, including firm *size* and *foreign ownership*. We used the logarithm of the number of employees as an indicator of firm size. Firm ownership was a dummy variable, with international joint ventures and wholly foreign-owned firms coded foreign (1) and others coded domestic (0).

Third, we noted the dyadic exchange characteristics, including *order frequency*, *exchange duration*, and *transaction size*. For order frequency, we determined how often the buyer placed orders on an eight-point scale (1 = "once a day," 8 = "once a year"). Exchange duration indicated the number of years the buyer and supplier had been doing business together. To measure transaction size, we used the natural logarithm of yearly sales (in tens of thousands of RMB) between the supplier and the buyer.

In addition, we accounted for the impacts of *industry*. We controlled for the effects of the firm's industry with 3 dummy variables: *electronics*, *mechanics*, and *chemicals*. The remaining industries represented the baseline group. Table 2 presents the descriptive statistics and correlations among all the variables.

Construct validity

We assessed the reliability and validity of latent constructs with confirmatory factor analysis (CFA). First, we ran a CFA model of the 3 first-order factors of relational governance (i.e., flexibility, information sharing, and solidarity) (see Appendix, Panel A). Then we ran an overall CFA model that includes all latent constructs, in which relational governance was treated as a second-order factor with 3 summated indicators of the first-order factors (see Appendix, Panel B).

For Models A and B, the comparative fit index [CFI] is 0.96 and 0.94; the root mean square error of approximation

Table 2 Descriptive statistics and correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Opportunism																
2	Legal effectiveness	-0.13**															
3	Networking expenditure	-0.24**	0.05														
4	Contractual governance	-0.21**	0.23**	-0.10*													
5	Relational governance	-0.34**	0.12*	0.13*	0.42**												
6	Government support	-0.26**	0.33**	0.11*	0.48**	0.47**											
7	TSA	0.07	0.09	-0.05	0.14**	0.02	0.27**										
8	Performance ambiguity	0.28**	0.01	0.01	0.13**	-0.01	-0.04	0.18**									
9	Firm size	-0.06	0.01	0.03	0.07	0.12*	0.08	-0.03	-0.04								
10	Ownership	-0.04	0.17**	0.15**	0.03	0.02	0.11*	0.01	-0.03	0.09							
11	Order frequency	0.13**	-0.04	-0.04	-0.08	-0.13**	-0.06	0.05	0.15**	0.01	-0.03						
12	Exchange duration	-0.04	-0.01	-0.01	-0.11*	0.14**	0.07	0.22**	-0.10*	0.13**	-0.12*	-0.09					
13	Transaction size	-0.32**	0.17**	0.21**	0.06	0.18**	0.21**	0.05	-0.19**	0.40**	0.08	-0.33**	0.30**				
14	Industry_electronics	0.03	-0.06	0.03	-0.02	0.00	0.05	0.08	0.06	-0.02	0.11*	0.01	-0.06	-0.02			
15	Industry_mechanics	-0.04	0.01	0.09	0.04	-0.00	0.05	0.14**	-0.02	0.04	-0.05	-0.04	0.10	0.09	-0.22**		
16	Industry_chemical	-0.03	0.05	-0.01	0.11*	0.06	0.00	-0.04	0.02	-0.01	0.07	-0.02	0.00	0.01	-0.23**	-0.21**	
	Mean	2.24	11.88	0.42	5.60	5.39	4.36	2.75	4.01	2.28	0.36	4.22	5.00	2.66	0.20	0.16	0.18
	Standard Deviation	1.17	2.33	0.08	1.13	0.72	1.53	1.25	1.28	0.57	0.48	1.10	3.19	0.82	0.40	0.37	0.39

** $p < .01$. * $p < .05$.

[RMSEA] is 0.08 and 0.08; the standardized root mean square residual [SRMR] is 0.04 and 0.08. Following Hu and Bentler's (1999) two-index approach, we used RMSEA and SRMR to evaluate the measurement model fit. The SRMR value (0.04 and 0.08) is better than the cutoff value (0.09) whereas RMSEA (0.08) is slightly higher than the cutoff value (0.06) suggested by Hu and Bentler (1999). Overall, the measurement models fit the data adequately.

As the Appendix shows, the composite reliability of each latent construct exceeded the 0.70 threshold (Bagozzi and Yi 1988); the average variance extracted (AVE) values all exceeded the 0.50 cutoff value (Fornell and Larcker 1981). We compared the AVE of each construct with the square of the construct's correlations with other factors to assess discriminant validity. All the AVEs were greater than the correlation squares, providing further support of discriminant validity (Fornell and Larcker 1981). Overall, the measures possessed adequate reliability and validity.

Analyses and results

Following previous studies (Palmatier et al. 2007), we tested our model by using structural equation modeling (SEM) with maximum likelihood estimation for 3 reasons. First, contractual governance and relational governance can coexist in a buyer–suppler relationship (Cao and Lumineau 2015); the correlation between the two types of governance can be accounted for in an SEM model by simultaneously analyzing all variables in the model instead of separately. Second, SEM uses latent variables to account for measurement errors, instead of aggregating measurement errors in a residual error term. Third, SEM is particularly effective in testing mediating models (Hu and Bentler 1999; Palmatier et al. 2007).

In the SEM model, we estimated the path links among the constructs according to the conceptual framework in Fig. 1. Legal effectiveness and networking expenditure were the exogenous constructs, with contractual governance and relational governance as the intermediate constructs, and opportunism as the outcome variable. The 10 control variables were included and linked to opportunism. Each construct with multiple measurement items was represented as a latent construct. Relational governance was configured as a second-order factor with 3 first-order reflective constructs (i.e., flexibility, information sharing, and solidarity). As shown in Table 3, the fit indexes of the mediating effect model indicated an adequate fit ($\chi^2_{(534)} = 1512.81$, $p < 0.001$; RMSEA = 0.07; SRMR = 0.07; CFI = 0.90).

Mediating effects of governance

We compared two models to test the mediating effects (see Table 3). First, we estimated a direct effect model that excluded the mediating variables (contractual and relational governance). The model shows direct negative effects of contractual governance ($\beta = -0.08$, $p < 0.10$) and relational governance ($\beta = -0.19$, $p < 0.01$) on opportunism. Second, we included contractual and relational governance into the mediating effect model. As shown in Table 3, the effect of networking expenditure on opportunism remains significant ($\beta = -0.18$, $p < 0.01$) and that of legal effectiveness becomes non-significant ($\beta = -0.02$, *n.s.*). Legal effectiveness positively relates to both contractual governance ($\beta = 0.24$, $p < 0.01$) and relational governance ($\beta = 0.14$, $p < 0.01$). Networking expenditure negatively relates to contractual governance ($\beta = -0.12$, $p < 0.05$) but positively relate to relational governance ($\beta = 0.13$, $p < 0.05$). Furthermore, both contractual governance ($\beta = -0.14$, $p < 0.01$) and relational governance ($\beta = -0.27$, $p < 0.01$) negatively relate to opportunism.

Overall, the results in Table 3 support the mediating roles of contractual and relational governance underlying effects of institutional environments on opportunism, with the effect of legal effectiveness being fully mediated and the effect of networking expenditure being partially mediated. Following Zhao et al. (2010) and Preacher and Hayes (2008), we used the bootstrapping test results to assess the significance of the indirect effects of institutional environments on opportunism. The 95% bias-corrected confidence interval for the indirect effect of legal effectiveness on opportunism is [-0.13, -0.03]. Because this interval is below 0, the indirect effect of legal effectiveness on opportunism differs significantly from 0 at the 5% significance level. In contrast, the 95% bias-corrected confidence interval for the indirect effect of networking expenditure on opportunism is [-0.07, 0.03]. Since the 0 point falls within the confidence interval, the indirect effect of networking expenditure is not significantly different from 0 at the 5% significance level (Zhao et al. 2010). However, this does not mean that there is no mediating effect from networking expenditure to opportunism through governance mechanisms, because opposite mediating effects may exist, resulting in a non-significant indirect effect (Zhao et al. 2010).

In order to test H1a-b and H2a-b, we need to isolate the indirect effects of institutional factors on opportunism through specific mediators, i.e., contractual governance and relational governance, respectively, and run the corresponding Sobel z-test (Zhao et al. 2010). As shown in Table 4, all the four isolated mediating effects are significant and consistent with our predictions. The indirect effect of legal effectiveness on opportunism through contractual governance ($\beta = -0.02$, $p < 0.05$) and relational governance ($\beta = -0.02$, $p < 0.05$) are significant and pointing in the same direction, leading to the significant indirect effect of legal effectiveness on opportunism in the bootstrapping test. However, the mediating mechanism underlying the effect of networking expenditure demonstrates a more complex fashion. The indirect effect of networking expenditure on opportunism through contract governance is positive and marginally significant ($\beta = 0.26$, $p < 0.10$), while that through relational governance is negative ($\beta = -0.52$, $p < 0.05$). As

Table 3 Standardized path estimates of the mediating effects

	Direct effect model	Mediating effect model		
	Opportunism	Contractual governance	Relational governance	Opportunism
Institutional Factors				
Legal effectiveness	-0.08† (0.02)	0.24** (0.02)	0.14** (0.02)	-0.02 (0.02)
Networking expenditure	-0.19** (0.69)	-0.12* (0.70)	0.13* (0.64)	-0.18** (0.68)
Mediators				
Contractual Governance				-0.14** (0.06)
Relational Governance				-0.27** (0.08)
Controls				
TSA	0.04 (0.04)			0.05 (0.04)
Performance ambiguity	0.22** (0.04)			0.24** (0.04)
Firm size	0.05 (0.10)			0.09† (0.10)
Ownership	0.02 (0.11)			0.01 (0.11)
Order frequency	0.01 (0.05)			-0.03* (0.05)
Exchange duration	0.05 (0.02)			0.04 (0.02)
Transaction size	-0.25** (0.08)			-0.24** (0.07)
Industry_electronics	0.00 (0.14)			0.011 (0.13)
Industry_mechanics	-0.02 (0.14)			-0.01 (0.135)
Industry_chemical	-0.02 (0.14)			0.00 (0.13)
λ^2	408.31		1512.81	
df	128		534	
CFI	0.92		0.90	
RMSEA	0.07		0.07	
SRMR	0.07		0.07	

† $p < 0.10$; * $p < .05$; ** $p < .01$. Standard errors are in the parentheses.

Table 4 Isolated mediating effects

	Indirect path	Unstandardized path coefficient		Isolated mediating effect (a x b)	Sobel z-test	*p* value
		a	b			
H1a	LE → CG → O	0.12	-0.15	-0.02	-2.33	0.02
H1b	LE → RG → O	0.06	-0.35	-0.02	-2.24	0.03
H2a	NE → CG → O	-1.72	-0.15	0.26	1.80	0.07
H2b	NE → RG → O	1.49	-0.35	-0.52	-2.07	0.04

LE = legal effectiveness; NE = networking expenditure; CG = contractual governance; RG = relational governance; O = opportunism; a denotes the path coefficient from the institutional factor to the mediator, and b denotes the path coefficient from the mediator to opportunism.

the mediation of contractual governance and relational governance coexist and point to opposite directions, a non-significant indirect effect of networking expenditure is observed in the bootstrapping test. Overall, H1a-b and H2a-b are all supported.

Moderating effects of government support

Following Palmatier et al.'s (2007) approach, we used multi-group structural analyses to test the moderating effects of government support on the relationships between governance and opportunism. First, we used median-split to divide the whole sample into two groups at the median level of government support. Observations with a value of government support smaller than the median (4.50) is grouped into the "low" group (N =194); and those with a value of government support larger than the median is grouped into the "high" group (N = 209). Then, we tested the moderating hypotheses using a series of nested models. For each moderating hypothesis, we compared the constrained model in which the path coefficient corresponding to the relationship of concern (i.e. the hypothesized moderated path) is constrained to remain equal across the two groups versus an unconstrained model in which the path is estimated freely for each group. A significantly lower χ^2 value for the unconstrained model indicates a significant moderating effect.

In line with H3, the results in Table 5 show that contractual governance plays a stronger role in constraining opportunism when government support is high (β = -0.31, $p < 0.01$) than when it is low (β = 0.01, n.s.). The chi-square difference test also suggests a significant moderating effect ($\Delta\lambda^2_{(1)} = 10.17$, $p < 0.01$). Consistent with the prediction of H4, the results in Table 5 show that relational governance is less effective in mitigating opportunism when government support is high (β = 0.11, *n.s.*) than when it is low (β = -0.23, $p < 0.01$; $\Delta\lambda^2_{(1)} = 4.19$, $p < 0.05$). These results provide support to H3 and H4.

Discussion

Echoing the call for more research into the role of institutions in marketing decisions (Cao et al. 2018; Sheng et al. 2011; Sheth 2011; Yang et al. 2012), especially in marketing channel management (Carson et al. 1999; Grewal and Dharwadkar 2002; McFarland et al. 2008), we aim to understand how institutional environments influence opportunism in buyer–supplier relationships. Our study tackles this question from an institutional view by uncovering the mediating effect of contractual and relational governance on the relationship between institutions and opportunism, as well as the moderating role of government support on the efficacy of interfirm governance. The empirical findings of this study have important implications for both marketing theory and practice.

Theoretical contributions

First, the extant governance literature, mostly rooted in TCE, has focused primarily on the task environment and economic determinants of transaction costs (Grewal and Dharwadkar 2002). However, institutions are primary macro-level determinants of the size and structure of transaction costs at the micro-level (North 1990; Williamson 1996), and they exert significant influence on strategic decisions, including interfirm governance choices, and the performance outcome of these decisions (Cao et al. 2018; Carson et al. 1999; Yang et al. 2012). This study extends the TCE-based marketing channel literature by explicitly considering the role of institutions. Because formal and informal institutional forces have distinct enforcement mechanisms (North 2005), they demonstrate differential effects on buyer–supplier opportunism. This institutional view of buyer–supplier relationship enriches the extant TCE-based marketing channel literature and demonstrates the importance of integrating macro-level institutional forces with micro-level governance mechanisms of economic exchanges (McFarland et al. 2008; Williamson 1996).

Second, our study reveals the underling mediating mechanisms through which institutions impact buyer–supplier relationships, echoing a long-standing call by Grewal and Dharwadkar (2002). Some recent studies have started to examine the effect of institutions on buyer–supplier relationship performance, including trust development (Cai et al. 2010), role hazards (Dong et al. 2016), and likelihood of transactions (Lanzolla and Frankort 2016). However, we know little about the underlying mechanisms through which institutions attenuate or nurture opportunism. Our findings indicate that the effect of legal effectiveness on opportunism is fully mediated

Table 5 Standardized path estimates of the moderating effects

	Government support		
Paths	β of low group	β of high group	$\Delta\lambda^2$
Contractual governance → Opportunism	0.01 (0.05)	-0.31** (0.12)	10.17**
Relational governance → Opportunism	-0.23** (0.08)	0.11 (0.20)	4.19*

* $p < .05$. ** $p < .01$; Standard errors are in the parentheses; $\Delta\lambda^2$ represents the difference in λ^2 between the free model and the constrained model for the path being tested with 1 degree of freedom.

by contractual and relational governance, which suggests that an effective legal system increases the use of both contractual and relational governance, which in turn mitigates partner opportunism. The finding of the enduring role of relational governance is in contrast with the conventional institutional view that governance mechanisms will shift from network-based to market-based as the formal institutions improve in emerging economies (Peng 2003). However, this finding is in line with recent evidence that an effective legal system builds up the foundation that supports the functioning of relational governance (Lanzolla and Frankort 2016; Zhou et al. 2014). These findings suggest that the establishment of effective legal system in emerging markets does not preclude the use of informal governance; rather, the pluralistic use of both formal and informal governance is more realistic. Interestingly, whereas networking expenditure decreases opportunism via relational governance, it also increases opportunism by reducing the use of contracts. Such findings show the complicated influence of institutional factors on interfirm strategies and bridge the missing link between institutional factors and relationship outcomes (c.f. Lanzolla and Frankort 2016; Shou et al. 2016).

Third, the extant marketing literature recognizes how alternative governance mechanisms curtail potential opportunism (e.g., Heide et al. 2007; Rokkan et al. 2003) and how their efficacy depends on the nature of exchange hazards (Hoetker and Mellewigt 2009; Poppo et al. 2016; Raassens et al. 2012). However, despite the long-standing call of Grewal and Dharwadkar (2002), few studies account for the interplay between governance mechanisms and institutional environments (Bai et al. 2016; Wang et al. 2016b). We extend this research stream by examining how government support differentially moderates the effects of contractual and relational governance on opportunism. Our findings reveal that contractual governance is more effective in constraining opportunism when government support is high, whereas relational governance is more effective when government support is low. These findings provide fresh insights into how to match the proper governance mechanisms with the institutional environment (Yang et al. 2012) and highlight the importance of considering the role of government in interfirm exchange studies (Bai et al. 2016; Sheng et al. 2011).

Managerial implications

This study also offers important managerial implications. Whereas emerging markets such as China offer great growth opportunities, their fast-changing social, political, and economic institutions also make opportunistic behaviors pervasive (Sheth 2011). Hence, managers must consider institutional environments when employing appropriate governance mechanisms to constrain opportunism. First, managers should understand that contractual and relational governance fully mediate the effect of legal effectiveness on opportunism. Thus, in regions with well-developed legal systems, managers should both design specific contractual clauses and develop relational norms to constrain opportunism, rather than reduce the use of relational governance.

Second, managers should understand the complicated role of social networks in deterring opportunism. Whereas managers tend to use less contractual governance in a network-based business environment, such a practice is not optimal because it leads to increased opportunism. For instance, the northeast region of China is characterized by heavy reliance on network connections in business operations. Transaction parties often downplay legal contracts to manage their relationships. This deters the development of a heathy business environment, and opportunism in business relationships is pervasive, which is considered to be an important factor leading to slow economic growth in this region in recent years. Thus, managers should realize that even if social networks are pervasive, it is not a wise choice to lessen contractual governance when opportunism is a concern.

Third, our findings indicate that the effect of governance mechanism is contingent on government support. If managers can gain strong support from the government, then they can use contractual control to suppress transaction partners' opportunistic behaviors. Conversely, if managers attempt to use contractual control, they should try to get support from the government to back it up. In contrast, when government support is unlikely, then managers should employ relational governance to constrain partner opportunism.

Limitations and further research

This study is subject to several limitations. First, our sample is limited to firms in China. Emerging markets vary in their economic development and institutional transitions, so we recommend caution before generalizing our findings. Additional research could test our framework in other emerging markets. Also, cultural differences may interfere with governance choices in the buyer–supplier dyads. Collective cultures motivate economic agents to reduce conflict and pursue common interests, whereas individualist cultures may encourage self-interest seeking (Handley and Angst 2015). Future research may explore how cultural differences influence the effects of the governance on opportunism in buyer–supplier relationships.

Second, we measure legal effectiveness and networking expenditure at the province level. Whereas the cross-province variations in China are shown in prior studies (e.g., Chang and Wu 2014; Jia 2014), the conceptual model can be tested more effectively with a cross-country dataset, which can directly measure institutional environments at the national level (Yang et al. 2012). Also, there may be many other confounding variables like urbanization and westernization due to uneven regional development in China, future research should take a longitudinal panel dataset to examine their impacts.

Third, this study investigates a limited set of institutions, in the form of legal frameworks, informal networks, and government support. A natural extension thus would be to examine whether other facets of institutional frameworks, such as political instability and government corruption, affect buyer–supplier relationship management (Cao and Lumineau 2015).

Fourth, managers have multiple goals when managing buyer–supplier relationships, such as suppressing opportunism, minimizing risk, bolstering cooperation, and maximizing profitability (Poppo et al. 2016). With our sole focus on opportunism, this study suggests the need for further research that explores the confluence of governance mechanisms and institutions in shaping other relationship outcomes. Also, dyadic variables, including order frequency, exchange duration, transaction size, and relative power, also interact with institutions to determine exchange outcomes. Additional research is encouraged to explore the dynamic interplay among institutions, exchange features, and relationship outcomes.

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Appendix 1

Table 6 Survey measures

Construct and sources	Description	Factor loadings
A. Three First-Order Factors of Relational Governance: $\chi^2_{(46)} = 170.60$, $p < 0.01$; CFI = 0.96; RMSEA = 0.08; SRMR = 0.04		
Flexibility	• Flexibility in response to requests for changes is a characteristic of this relationship.	.80
CR = .87; AVE = .64	• The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances.	.79
	• When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms.	.88
	• Changes in "fixed" prices are not ruled out by the parties, if it is considered necessary.	.82
Information sharing	• The parties will provide proprietary information if it can help the other party.	.76
CR = .85; AVE = .60.	• We keep each other informed about events or changes that may affect the other party.	.84
	• We always share supply and demand forecasts.	.93
	• Exchange of information in this relationship takes place frequently.	.89
Solidarity	• Problems that arise in the course of this relationship are treated by my firm and this supplier as joint rather than individual responsibilities.	.76
CR = .81; AVE = .52.	• Both parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties.	.87
	• Both parties in this relationship do not mind owing each other favors.	.59
	• In most aspects of the relationship, the parties are jointly responsible for getting things done.	.66
B. Overall Model: $\chi^2_{(272)} = 1036.38$, $p < 0.01$; CFI = 0.94; RMSEA = 0.08; SRMR = 0.08		
Opportunism	• This buyer lies about certain things in order to protect their interests occasionally.	.85
(Rokkan et al. 2003)	• This buyer sometimes promises to do things without actually doing them later.	.90
CR = .96; AVE = .80.	• This buyer does not always act in accordance with our contract(s).	.95

Table 6 (continued)

Construct and sources	Description	Factor loadings
	• This buyer sometimes tries to breach informal agreements between our companies to maximize their own benefit.	.92
	• This buyer will try to take advantage of "holes" in our contract to further their own interests.	.88
	• This buyer sometimes uses unexpected events to extract concessions from our firm.	.88
Contractual governance (Lusch and Brown 1996) CR = .94; AVE = .76	In dealing with this supplier, to what degree do you rely on the written contracts (as opposed the shared understanding) to specify:	
	• The role of each party.	.81
	• The responsibility of each party.	.91
	• How each party is to perform.	.93
	• What will happen in the case of events occurring unplanned.	.87
	• How disagreement will be resolved.	.87
Relational governance (Heide and John 1992) CR = .78; AVE = .56.	*Second-order factor with 3 first-order indicators*:	
	• Flexibility	.62
	• Information sharing	.83
	• Solidarity	.71
Government support (Cai et al. 2010; Li and Atuahene-Gima 2001) CR = .97; AVE = .91.	In the last 3 years, government and its agencies have:	
	• Implemented policies and programs that have been beneficial to your firm's operations.	.92
	• Provided needed information and support to your firm.	.95
	• Played a significant role in providing financial support for your firm.	.96
	• Helped your firm to obtain needed resources.	.98
TSAs (Cannon and Perreault Jr. 1999; Jap and Ganesan 2000) CR = .95; AVE = .78.	Please indicate the extent to which your firm has made investments or changes specifically to accommodate this buyer (1 = "not at all"; 7 = "high degree"):	
	• Product features.	.86
	• Personnel.	.90
	• Inventory and distribution.	.89
	• Marketing activity.	.86
	• Capital equipment and tools.	.92
Performance ambiguity (Heide 2003) CR = .84; AVE = .65.	• It is difficult to measure the collective performance of this buyer.	.89
	• Evaluating the performance of this buyer requires extensive incoming inspection.	.59
	• It is difficult to evaluate if this buyer follows our recommended operating procedures.	.92

CR = composite reliability; AVE = average variance extracted.

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